

May 7th, 9:30 AM - 4:30 PM

Celebration of Learning 2014: Full Program

Augustana College, Rock Island Illinois

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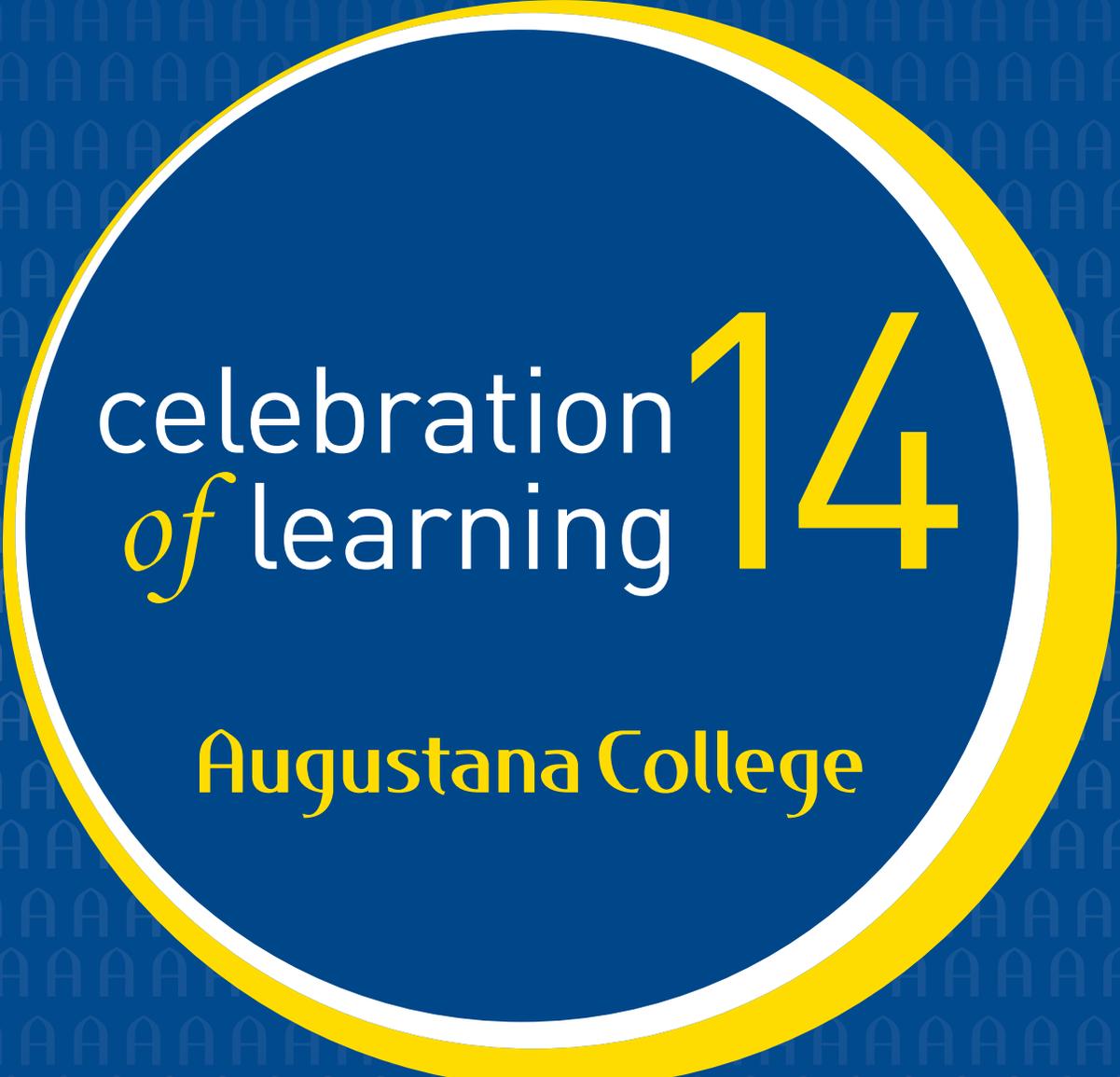


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celebration
of learning 14

Augustana College

TABLE OF CONTENTS

Schedule Overview	3
Full Schedule of Presentations	4
Presentation Abstracts and Artists' Statements	10
Feature Presentations	10
Film Presentations/Performances/Other	10
Oral Presentations	11
Research Poster Presentations	29
Senior Art Show	37
Faculty Publications	41
Student Honors and Awards (First-Years, Sophomores, Juniors)	45
Research Poster Presentation Layout	47



CELEBRATION OF LEARNING 2014 OVERVIEW

OPENING SESSIONS

CREATIVE WRITING READINGS I

9-9:50 a.m. | Old Main Forum (2nd floor)

CREATIVE WRITING READINGS II

10-10:50 a.m. | Old Main Forum (2nd floor)

RESEARCH POSTER PRESENTATIONS

9:30-10:45 a.m. | Gävle Room, CSL (4th floor)

SENIOR ART SHOW AND PRESENTATIONS

10:30 a.m.-noon | Augustana Teaching Museum of Art
(Centennial Hall)

FEATURED PRESENTATION-I

11 a.m. | Olin Auditorium



Dr. Gregory Tapis—Business Administration

*The Liberal Arts: Providing a Foundation for Diversity,
Integration, and Synthesis in an Ever-Changing World*

CONCURRENT PRESENTATIONS, SESSION I

11 a.m.-noon | Hanson Hall of Science, Old Main, Olin Center

SENIOR ART HISTORY CURATED EXHIBITION AND PRESENTATION

12:15-1:15 p.m. | Augustana Teaching Museum of Art
(Centennial Hall)

FEATURED PRESENTATION-II

12:15 p.m. | Olin Auditorium



Joshua Malone '14—Geology and Theatre Arts

Film and discussion: *Taking the Initiative*

CONCURRENT PRESENTATIONS, SESSION II

12:15-1:15 p.m. | Hanson Hall of Science, Old Main,
Olin Center

FEATURED PRESENTATION-III

1:30 p.m. | Olin Auditorium



Douglas Peters '13

*On the Shoulders of Giants: A Young Graduate's Take on
What Science Can Gain from the Liberal Arts*

CONCURRENT PRESENTATIONS, SESSION III

1:30-2:30 p.m. | Hanson Hall of Science, Old Main,
Olin Center

FEATURED PRESENTATION-IV

2:45 p.m. | Olin Auditorium



Dr. Sharon Varallo—Communication Studies

*Time for Learning, Time for Life: How Does Cultural
Time Orientation Influence Education?*

CONCURRENT PRESENTATIONS, SESSION IV

2:45 - 3:45 p.m. | Hanson Hall of Science, Old Main,
Olin Center

ICE CREAM SOCIAL

4 p.m. | On the Quad outside the Olin Center

PANEL DISCUSSION—*FINDING YOUR FUTURE CAREER*

5 p.m. | Andreen Hall (lower level)

Faculty will answer academic questions such as how to go
about picking a major, getting an internship, applying to graduate
school and more.

FULL SCHEDULE OF PRESENTATIONS

CREATIVE WRITING READINGS

9-10:50 a.m. | Old Main Forum, 2nd floor

9 a.m.—Amber Whittle, Jessica Siverly, Tyler Spellious, Kaylee Wagner, Lauren Anderson

Creative Writing Senior Inquiry-I

10 a.m.—Alexandria Petrassi, Carrie Reitz, Jaime Perpich, Gary Miller, Laura Seeber

Creative Writing Senior Inquiry-II

RESEARCH POSTER PRESENTATIONS

9:30-10:45 a.m. | Gävle Room, 4th floor, Center for Student Life

Poster #1 Mariana Noga—Theatre Arts

Modernizing Theatre: The Marriage of Figaro

Poster #2 Nick Alonso-Emanuel—Psychology

Joke Cruelty and Appreciation in Regards to Empathy and Background Incongruity

Poster #3 Katie Kornaus—Humanities

Commonly Experienced, Individually Endured: Finding Productive Components Within the Challenges of Culture Shock

Poster #4 Erin Doty—Psychology-I/O

Time Restraints on Perceptions of Fit in the Résumé Process

Poster #5 Dr. S. Fenwick—Psychology

Active and Collaborative Approaches in Core Classes

Poster #6 Leesa Potthoff, Jessica Bacon, Jackie Kreiner—

Elementary Education

Kindergarten Number Sense Project

Poster #7 Michelle Skowron—Psychology

A Cognitive Behavioral Approach To Treating Alcoholism With Co-Occurring Conditions

Poster #9 Marcela Fitzpatrick, Devon Pace, Melissa Gunlogson,

Cammie Ruhl—Neuroscience

Effects of Religiosity and an Implicit Religious Prime on Behavioral and Physiological Responses to Moral Dilemmas

Poster #10 Melissa Granados—Psychology

Mental Health Assessment: Evaluation Bias with Deaf Individuals

Poster #11 Stuart Casarotto, Mark Hoffmann, Peter Draznik—

Physics, Computer Science and Mathematics

Real Time Visualization of Music Using Arduino

Poster #12 Andy Shearouse—Computer Science, Communication

Studies and User Interface Design

Developing a Streamlined Responsive Web Design Framework

Poster #13 Sam Stewart—Neuroscience

Dose-Dependent Effects of SDPN Administration on Anxiety in Mice

Poster #14 Brittany Hite—Sociology

Technology Etiquette and Social Interactions

Poster #15 Krista Watson—Exercise Science

Fatigue Deleteriously Alters Muscle Activation Patterns during Landing and Cutting Tasks

Poster #16 Chris Petlicki—Physics

Optical Autocorrelator

Poster #17 Brian Konecke—Experimental Petrology

Solubility and Stability of Beryllium-silicates in Haplogranitic Melts

Poster #18 Diana Boudreau—Paleontology

Osteohistology of Cryolophosaurus ellioti: Tempo and Mode of Growth in a Large-Bodied Polar Dinosaur

Poster #19 Josh Brown—Biology and Religion

Genetic Piety

Poster #20 Annette Bugno, Jennifer Vanderpool, Timothy

Michaels—Biology

An Investigation of One-Component Regulators in Myxococcus xanthus

Poster #21 Joshua Eisenberg—Biology

Characterization of Transcription Factors Expressed During Chicken

Retinal Development

Poster #22 Amy Hicks—Biology

What Affects Participation in Cancer Screenings

Poster #23 Carrie Keahl, Matthew Shipon—Aquatic Biology

Population and Diversity of Phytoplankton

Poster #24 Jessica Leifheit—Aquatic Biology

Submerged Macrophytes as a Water Quality Indicator of the

Mississippi River

Poster #25 DJ Lawlor—Biology

The Characterization of Elk4 and Jazf1 During Chicken Retinal

Development

Poster #26 Kimberly Murphy—Biology

Genetic Analysis of American Toad Dispersal in Restored Wetlands

of Winnebago County, Iowa

Poster #27 Mason Robertson, John Bialek—Aquatic Biology

Alkalinity and Dissolved Oxygen Relationships in Upper Mississippi

Studies Center Watersheds

Poster #28 Christina Scribano—Biology

The Relationship Between Environment Manipulation and Breast Cancer

Cell Adhesion and Metastasis

Poster #29 Kelsey Stockert, Mallory McLain—Biology

Structure of the Forest at Collinson Ecological Preserve Based on EREN

Permanent Plots

Poster #30 Trace Wingo, Sean Walker, Justin Davidson—Biology

Structure of the Forest at Beling Ecological Preserve using EREN

Permanent Plot Protocol

Poster #31 Stephen Dempsey, Hunter Winstead—Chemistry

Synthesis of Novel TLR-7 Agonists

Poster #32 Jennifer Wood—Biochemistry

Expansion and Characterization of Autologous Natural Killer Cells from

Patients with Lymphoma

Poster #33 Grant Wick—Geology

A Forensic Geoscience Approach of Comparing Evidence and Field

Samples in Connection with a 23-Year-Old Missing Persons/Murder

Cold Case

Poster #34 Keegan Horack, William Thompson—Biology

Decomposition of Aquatic and Terrestrial Invasive Species

Poster #35 Jordan Carey—Geology

Effects of Basin Subsidence on Experimental Delta Sedimentation

Patterns and Surface Morphology

Poster #36 Lauren Kirik—Geology

Characterizing Hydrothermal Fluids of Post-Variscan Ore Deposits of

the Abandoned Domus Nieddas Mine, Sardinia, Italy

Poster #37 Cesar Lira—Geology

Phosphorus Levels in a Gravel-Hill Prairie are Remnants of Fertilizer

Runoff from Condominiums Uphill

Poster #38 Darrick McCarthy—Geology
Geochemical Analyses of the Clay/Silt Sediment of a Small Stream System That Has Been Subject to Overflow From a Sewage Treatment Plant

Poster #39 Matt Osman—Geology
Manual and Acoustic Constraints on Ebullitive Methane Fluxes from Warming Subarctic Lakes

Poster #40 Steven Ray Trent—Geology
Hydrothermal Alteration of the Butler Hill Granite, St. Francois Mountains, Southeastern Missouri

Poster #41 Michael Spehlmann—Geology
Per Plant Lead Uptake in Lemna minor (Duckweed)

Poster #42 Alexis McAdams—Geology
Exploring the Relationship Between Megathrust Earthquakes and Intraplate Stress Fields in Japanese Subduction Zones

Poster #43 Hailee De Wild, Abigail Jones—Biology
A Comparative Analysis of Groundwater, Surface Water and Surface Water with Rainwater Runoff

Poster #44 Abigail Jones—Environmental Studies
An Analysis of Groundwater, Surface Water and Surface Water Containing A Runoff Event

Poster #45 Carlisle Evans Peck—Environmental Studies
"Over the River and Through the Woods": An Analysis of Understory and Canopy Plant Diversity in Urban Riparian Forests

SENIOR ART SHOW AND PRESENTATIONS **10:30 a.m.-noon | Augustana Teaching Museum of Art, Centennial Hall**

Grace Bunderson—Art
All These Little Things

Sara Sievert—Graphic Design
True Love

Samantha Stanton—Art
Skyborne Concepts

Erin Williams—Graphic Design
Elder Futhark Rune Cards

Adrielle Canda—Art
Change Is a Clock of Inevitability

Monica Hill—Art
Family Ties

Lindsay Hohertz—Art
Farm Town Living

Rajinder Kaur—Art
A Sensory Trip to India

Christopher Andrew Madison—Graphic Design
The Alternative Route

Samantha Paddock—Graphic Design
The Modern Landscape: What Have We Given?

Liv Reinacher—Art
Moments

Amelia Ruzek—Art
Paper Improvisations on Architecture

CONCURRENT SESSIONS-I AND FEATURED PRESENTATION **11 a.m.-noon | Hanson Hall of Science, Old Main and Olin Center**

FEATURED PRESENTATION-I **11 a.m. | Olin Auditorium**

Dr. Gregory Tapis—Business Administration
The Liberal Arts: Providing a Foundation for Diversity, Integration and Synthesis in an Ever-Changing World

SESSION I-A **Old Main 117**

11 a.m. Christina Kunkel—Communication Studies
Game of Thrones: Are Women Simply Pawns?

11:15 a.m. Simone Roby—Women's and Gender Studies
Sexual Assault Prevention: Beyond What Not to Do

11:30 a.m. Jalayna Walton—English
Nikki Giovanni: Black Female Voices in Poetry of Witness

11:45 a.m. Madison Wynes—History
A 500-Year-Old Problem: Colonialism, Sexualization, and Violence Against Native American Women

SESSION I-B **Olin Center 202**

10:45 a.m. Tara Cullison—Anthropology
Residential Landowner Perceptions of Storm Water Issues: An Ethnographic Study in Rock Island and Moline, Illinois

11 a.m. Chelsea Bankes—Anthropology
Immigrant Aid and Awareness Insufficiency in the Quad Cities: The Case of Togo

11:15 a.m. Morgan Drake—Anthropology
En medio: Identity, Citizenship, and Belonging in DACA-Approved Mexican Immigrants

11:30 a.m. Elizabeth Johnson—Anthropology
The Struggles and Victories of Life as a Refugee in America as Revealed through Burmese, Nepali and Sudanese Refugees

11:45 a.m. Yasmine Nejdawi—Anthropology
The Sociocultural Experiences of Iraqi Refugees: U.S. Resettlement Post-9/11

SESSION I-C **Hanson Hall of Science 327**

11 a.m. Alex Blunier—Developmental Biology
Characterization of Transcription Factors Expressed During Chicken Retinal Development: A Focused Inquiry into the Roles of PAWR and POU6f2

11:15 a.m. Darshan Hullon—Health Science
Sleep's Effect on Heart Health

11:30 a.m. Natalie Orsi—Biochemistry
Characterization of a Potential Malarial Drug Target Molecule

11:45 a.m. James Wiebler—Biology

Characterizing the Cold-Conditioning Response in a Vertebrate Ectotherm

SESSION I-D: TEXAS MEDICAL CENTER SUMMER RESEARCH INTERNSHIP PROGRAM (TMCSRIP 1) Hanson Hall of Science 102

11 a.m. Joshua Eisenberg—Biology

Identification of Evolutionarily Conserved Proteins Required for Ras Localization

11:15 a.m. Sara Strever—Psychology

Psychosocial Functioning in Cancer Patients Prior to Facial Reconstruction

11:30 a.m. Katie Vonderheide—Elementary Education

Making Lives Better For Children With Cancer

11:45 a.m. Kelsey Winter—Biology

A Clinical, Pathological and Immunohistochemical Analysis of Low, Intermediate and High Grade DCIS

SESSION I-E

Hanson Hall of Science 305

11 a.m. Dr. Michael Reisner—Environmental Studies

Defoliation Decreases Competitive Ability of Resident Plants, Alters the Outcome of Interactions, and Increases Invader Success

11:15 a.m. Dr. Reuben Heine—Geography

Reading the Riverbed—Coaxing a 90-year Story From the Sediments in the Upper Mississippi River

11:30 a.m. Dr. Steve Hager—Biology

Evaluating the Drivers of Bird-Window Collisions Across North America

11:45 a.m. Dr. Jason Koontz—Biology

Why I Went to Southern California in the Summer, of All Times

SESSION I-F

Old Main 132

11 a.m. Phidlynn Augustin, Virginia Aumann, Alexandra Blust, Alexandria Bruozis, Sarah Colette, Elizabeth Cowan, Carlisle Evans Peck, Amy Fagan, Meghan Grahs, Isaac Lauritsen, Thanh Le, Michalina Malysz, Kirsten Mathisen, Eleanor Nolan, Anna Novotny, Vanessa Reyes, Rosalie Starenko, Clair Wright (Holden Village winter term)

Representing Learning in Community: A Holden Village Musical

SESSION I-G

Olin Center 307

11 a.m. Dr. Janis Lonergan—Business Administration

Teaching SAS to Undergraduates

11:15 a.m. Dr. Brian Katz—Mathematics

Understanding Student Inquiry

11:30 a.m. Dr. Ian Harrington—Psychology

Can You Change a Student's Mind With a Course About the Brain?

11:45 a.m. Dr. Michael Schroeder—Education

Engaging Teaching Methodologies: Advice from the Frontiers of Cognitive Science

SENIOR ART HISTORY CURATED EXHIBITION AND PRESENTATION

12:15 p.m. | Augustana Teaching Museum of Art, Centennial Hall

Jordan Kirkbride and Elizabeth Jakaitis, co-curators—
Art History

Whistler and His Contexts

CONCURRENT SESSIONS-II AND FEATURED PRESENTATION

12:15-1:15 p.m. | Hanson Hall of Science, Old Main and Olin Center

FEATURED PRESENTATION-II

12:15 p.m. | Olin Auditorium

Joshua Malone '14—Geology and Theatre Arts

Film and discussion: *Taking the Initiative*

SESSION II-A: HONORS SEMINARS A

Olin Center 201

12:15 p.m. Carlisle Evans Peck—Biology and Environmental Studies

"Heaven and Earth in Little Space:" The Crisis of Biocultural Extinction and How Saving Seeds Can Solve It

12:35 p.m. Jacob Gaier—Computer Science, Mathematics and Physics

Quantum Computing: What It Is, How It Works and Why You Should Care

12:55 p.m. Catherine McDermott and Elise McPherson—Interdisciplinary

"Something to Say": Incorporation of Chronic Illness into Adolescent Identity

SESSION II-B

Olin Center 202

12:15 p.m. Megan Bystol—Anthropology

Anyone in French Society: A Cosmopolitan Approach to Second-Generation North African Identity in French Society

12:30 p.m. Hannah Bohn—Anthropology

Telling the Story of Northern Ireland's Troubles: Tracing the Oral History of Ireland's Troubled Past Across Contexts

12:45 p.m. Emma Howes—Anthropology

Creating Multicultural Identities in a Dual-Language Classroom

1 p.m. Helen Myers—Anthropology

Religious Plurality in an Individualistic Society: Where Do We Go From Here?

SESSION II-C

Olin Center 305

12:15 p.m. Mason Broxham—Economics; Emma Cox—Biology

Air Pollution in China—Chinese NGOs

12:35 p.m. Jessica Flondro—Environmental Studies; Aubrey Waddick—Political Science

Air Pollution in China—International NGOs

12:55 p.m. Daisy Hoang—Communication Studies and Peter Siepiora—Biology

Air Pollution in China—Mass Media

SESSION II-D: TMCS RIP (2)

Hanson Hall of Science 102

12:15 p.m. Austin Anderson—Virology

Direct Measurement of Rotavirus NSP4 Viroporin-mediated Endoplasmic Reticulum Calcium Store Depletion

12:30 p.m. Megan Vander Wall—Internship

Chaplaincy: Beyond the Misconceptions

12:45 p.m. Kristen Yerkes—Communication Sciences and Disorders

Speech Pathology and the Palliative Care Patient: True Vocal Fold Augmentation for Vocal Fold Paralysis

1 p.m. Margaret Yuk—Biology

Late-radiation-associated Dysphagia (late-RAD) with Lower Cranial Neuropathies (LCNP) in Long-term Oropharyngeal Cancer (OPC) Survivors: Case Reports

1:15 p.m. Nichole Brammer—Genetics/Microbiology

Chromosome Dynamics in Live Bacterial Cells

SESSION II-E

Old Main 117

12:15 p.m. Alexandra Blust—Religion

Communes, Monasteries and Freedom

12:35 p.m. John Joyce—Religion

What Might An Athlete Mean When He or She Gives Glory to God?

12:55 p.m. Jorie Muraida—Religion

Designer Babies: An Ethical Dilemma

SESSION II-F

Old Main Forum

12:15 p.m. Carrie Reitz, Megan Boedecker, Catrina Doyle, Chrissy Kunkel, Isaac Lauritsen, Elizabeth O'Hara, Alli Petrassi, Laura Seeber, Malcolm Simon, Tyler Spellious—English

The Stories We Tell: Modernism Comes to the Tri-Cities

SESSION II-G

Olin Center 209

12:15 p.m. Alison Nelson, Amy Maplethorpe, Breann Nelson, Kaitlynn Markowski, Jessica Bacon, Alicia Hughes, Brittany Burk, Leah Baumgart, Kerry Robbins—Psychology

The Effects of Culture on Childhood Development

1 p.m. Emily Seminary—French

Heredity and Eugenics: How Our Understanding of Heredity Led to the Eugenics Movement in France

SESSION II-H

Old Main 132

12:15 p.m. Dr. Kathy Jakielski—Communication Sciences and Disorders

Who Invited You?: A Critical Look at My Service Learning Course

12:30 p.m. Lauren Williamson and Lauranne Schonne—Communication Sciences and Disorders; Mary Liles, Chase Matzinger, Samantha Swanborg and Patrick Ruddy—Secondary Education

Teaching at Schools for the Deaf and Blind; On Our Experience at FSDB

12:45 p.m. Mackenzie Ostermeier—Psychology

Volunteer Work and Intercultural Effectiveness

1 p.m. Dr. Rosita Tendall—Music

Longfellow ESL students Sing to English Literacy

CONCURRENT SESSIONS-III AND FEATURED PRESENTATION

1:30-2:30 p.m. | Hanson Hall of Science, Old Main and Olin Center

FEATURED PRESENTATION-III

1:30 p.m. | Olin Auditorium

Douglas Peters '13—Biology and Neuroscience

On the Shoulders of Giants: A Young Graduate's Take on What Science Can Gain from the Liberal Arts

SESSION III-A: HONORS SEMINARS B

Olin Center 201

1:30 p.m. Chelsea Fray—Communication Studies and English

Literature and Propaganda

1:50 p.m. Elizabeth Jakaitis—Art History

Cultural Hegemony and the Eclipse of the Sixties

2:10 p.m. Jordan Kirkbride—Art History

A Catalogue of the Furnishings of the Colonel Davenport Home

2:30 p.m. Christine Harb—Psychology

Self-Identity and Self-Esteem of Palestinian Youth in Go Palestine Camp

SESSION III-B

Olin Center 202

1:30 p.m. Katherine Boardman—Music

Ancient Greek Musical Effects in 17th-Century Italy

1:45 p.m. Kylie Koger—Classics

Delving Inside the Classical Female Body: A Study of Gynaecology within the Ancient Greco-Roman World

2 p.m. Richard Pipes Jr.—Classics

The Ancients' View of Race

2:15 p.m. Katherine Rea—Classics

The Neglected Heavens: Gender and the Cults of Helios and Selene in Bronze Age and Historical Greece

SESSION III-C

Old Main Forum

1:30 p.m. Mason Broxham—Philosophy

Exploring Dennett's Multiple Drafts Model: Abstracted Universals and Non-fixed Subjectivity

2 p.m. Nicholas Levato—Philosophy

Forums of Experience

SESSION III-D

Hanson Hall of Science 327

1:30 p.m. Stuart Casarotto—Engineering Physics and Environmental Studies

Estimating Stormwater Runoff for the City of Moline's Future Development

1:45 p.m. Erek Bell and Kelly Farina—Geography

Discussion on Food Insecurity in the Quad Cities

2 p.m. Danna Jensen—Geography and Environmental Studies

An Analysis of the Correlations Between Freshwater Mussel Species Richness and Land Use in McHenry County, Illinois

2:15 p.m. Nicole Swanberg—Environmental Studies

Assessing Augustana Faculty, Student and Staff Awareness, Attitudes and Priorities of Campus Sustainability With Respect to Environmental Worldview

SESSION III-E

Old Main 117

1:30 p.m. Rachel Przybylek—Religion

The Roman Catholic Traditions of Sex and Marriage through the Eyes of a Cafeteria Catholic

1:45 p.m. Megan Vander Wall—Religion

Confidentiality and the Client-Counselor Relationship

2 p.m. Lea Schilke—Psychology and Sociology

Attitudes Towards Mental Illness

2:15 p.m. Emily Matuseski—History

The Interstate Saga

SESSION III-F

Olin Center 209

1:30 p.m. Hannah Bohn—French

Walking with the Dead: Exploring the Relationship between Haiti's François Duvalier and Vodou's Baron Samedi

1:45 p.m. Kyle Soyer—French

Defending a Culture, Departing Tradition: The Music of Zachary Richard and the French Language in North America

2 p.m. Jennifer Evans—French

Globalization: Good for Business, Bad for Culture

2:15 p.m. Katherine Boardman—French

The Self in Troubadour Poetry

SESSION III-G

Hanson Hall of Science 305

1:30 p.m. Dr. Todd Cleveland—History

Following the Ball: African Soccer Players, Labor Strategies and Emigration Across the Portuguese Colonial Empire, 1949-75

1:45 p.m. Dr. David Ellis—History

Two Souls in One Conservative Breast: The Internecine Struggle Between the Wochenblatt and Kreuzzeitung Factions in 19th-Century Prussia

2 p.m. Dr. Ann Ericson—Business Administration

The Most Pressing Global Issue Is? Values, Attitudes and Opinions Held by U.S. and Vietnamese College Students

2:15 p.m. Sarah Berndt—Anthropology and Art History

Change Over Time: Romanesque Fieldstone Churches in the Fläming Region of Eastern Germany

CONCURRENT SESSIONS-IV AND FEATURED PRESENTATION

2:45-3:45 p.m. | Hanson Hall of Science, Old Main and Old Main Forum, Olin Center and Olin Auditorium

FEATURED PRESENTATION-IV: OLIN AUDITORIUM

2:45 p.m. Dr. Sharon Varallo—Communication Studies

Time for Learning, Time for Life: How Does Cultural Time Orientation Influence Education?

SESSION IV-A

OLIN CENTER 201

2:45 p.m. Caitlin Lawler—English and Religion

Revelation and Religious Experience in the Writings of Flannery O'Connor

3:05 p.m. Vanessa Reyes—History and Political Science

Educational Inequality and the Failed American Dream

3:25 p.m. Amelia Ruzek—Interdisciplinary

Games, Learning, and This Thing Called Fun

3:45 p.m. Joseph Wood—Political Science

Examining Contextual Determinants: Extracting Lessons on Civil War from the Case of Lebanon

SESSION IV-B

Old Main Forum

2:45 p.m. Harrison Metcalf—Philosophy

The Inadequacy of Functionalism

3:15 p.m. Kimberly Proesel—Philosophy

Breaking Down the Chinese Room

SESSION IV-C

Old Main 132

2:45 p.m. Students from Jennifer Pople's "Gender, Race and Sexuality in Popular Culture"—Women's and Gender Studies

Mixed format: *Feminist Remixes: Engaging with Popular Culture through a Feminist Lens*

SESSION IV-D

Hanson Hall of Science 304

2:45 p.m. Natalie Viscariello—Physics

Development of a High-Precision Brachytherapy System

3 p.m. Stuart Casarotto—Engineering Physics and Environmental Studies

Modeling Erickson Residence Hall and Investigating Building Sustainability

3:15 p.m. Abdul Rahman Merhi—Physics

Segmented Target Design

3:30 p.m. Deanna Rowe—Business Administration, Computer Science and Mathematics

Big Data's Big Splash

SESSION IV-E

Hanson Hall of Science 327

2:45 p.m. Dr. Sean Georgi—Biology

Characterizing the Expression of Novel Transcription Factors During Retinal Development

3 p.m. Emily Seminary—Biochemistry

Activity of Plasmodium knowlesi glutamate dehydrogenase in Saccharomyces cerevisiae

3:15 p.m. Kelsey Moon—Biology

The Role of Recq14 in Rothmund-Thomson Syndrome, Osteosarcoma and Skeletal Development

SESSION IV-F

Hanson Hall of Science 305

2:45 p.m. Kenna Rago—Sociology

The Nature of Human Nature

3 p.m. Hope Shiel—Sociology

Beyond the Bubble: Analyzing Data from the Rock Island Community Survey

3:15 p.m. Victoria Cartland—Sociology

Student Attitudes on Parental Leave Policies

3:30 p.m. Hiba Ansari—Business Administration

Analysis of the Quad Cities Muslim Population: A Geographic and Strategic Approach

SESSION IV-G

Olin Center 209

2:45 p.m. Michael Hardcastle, Erika Smolyar, Lauren Goggin, Emily Spillios—Liberal Studies

The Truth: The Search for Meaning in Deception

3 p.m. Jennifer Wood—French

The Science of Teratogeny and the Advancement of Stem Cells

3:15 p.m. Kelly Klees—French

Adaptations and Mirror Images: Jean Cocteau's "La Belle et la Bête"

3:30 p.m. Megan Bystol—French

The Creators of Monsters in French Literature: From the Mother to Technology

SESSION IV-H

Olin Center 307

2:45 p.m. Mitchell Carter—Music

"The Trees Where I Was Born"—Preparing and Programming a Recital

3 p.m. Alicia Lumberry—Music

The Interdisciplinary Voice Teacher

3:15 p.m. Kelvin Mason—Art

Thought Experiment in Counterfeiting Yields New Printing Technique for Artists

3:30 p.m. Megan Quinn—Art

What I Brought Back From the Prado on My Sabbatical

PRESENTATION ABSTRACTS AND ARTISTS' STATEMENTS

FEATURE PRESENTATIONS

Presenter: Joshua Malone '14—Geology and Theatre Arts

Film and discussion: *Taking the Initiative*

Project Advisor: Jeff Coussens

12:15 p.m. (60 min.) | Olin Auditorium

On my own, I created a short 10-minute documentary revolving around the PaleoFest at the Burpee Museum in Rockford, Ill. I took my love for geology and theatre and combined that with my interest in film to create something independently. I had gone to members of each department in hopes of doing it as an SI but had been turned down, so I ended up doing it on my own time. It is now being entered into a film competition and is one of the first features of Augustana's Black Squirrel Productions film club. In it you can see where both theatre and geology come together as well as my experience with Black Squirrel Productions and my years of work with WAUG Student Radio here at Augustana. I also explain the connections and how important it is to follow through with a vision, even though sometimes you don't have a lot of support.

Presenter: Douglas Peters '13

On the Shoulders of Giants: A Young Graduate's Take on What Science Can Gain from the Liberal Arts

1:30 p.m. (60 min.) | Olin Auditorium

As a recent Augustana graduate, I will offer my experiences and insights transitioning from the liberal arts to a highly focused graduate program at the University of Colorado at Boulder. This talk will be of particular interest to anyone thinking about a post-graduate career in the sciences, specifically biology. I am not (nor do I claim to be) an expert on the subject, but I hope to convince you that your liberal arts education can be valuable in any discipline. The currency of science is the ability to generate testable new ideas, and I know of no better training to develop this skill than a liberal arts education taken seriously.

Presenter: Dr. Gregory Tapis—Business Administration

The Liberal Arts: Providing a Foundation for Diversity, Integration, and Synthesis in an Ever Changing World

11 a.m. (60 min.) | Olin Auditorium

I will address the opportunities the liberal arts education provides for solving the complex issues facing our world from a business perspective. I will discuss how I use theories from other fields and apply them to the classroom and my individual research. Finally, I will conclude with how the liberal arts education provides students a strategic advantage in teaching students how to think and how to learn.

Presenter: Dr. Sharon Varallo—Communication Studies

Time for Learning, Time for Life: How Does Cultural Time Orientation Influence Education?

2:45 p.m. (60 min.) | Olin Auditorium

Our cultural time perceptions and philosophies are related to nearly every aspect of our lives. Indeed, scholars in several disciplines suggest that cultural patterns of time greatly influence how we structure our lives: when and how we work, play, eat, sleep, converse, relate, give birth and die—and even what happens after death. Given the perceived centrality of time to the structure and

quality of human life, understanding how we are socialized to understand time—and specifically to understand the clock—might help us be able to articulate what we hope for in our liberal arts education.

FILM PRESENTATIONS/PERFORMANCES/OTHER

Presenters: Holden Village term students—Phidlynn Augustin, Virginia Aumann, Alexandra Blust, Alexandria Bruozis, Sarah Colette, Elizabeth Cowan, Carlisle Evans Peck, Amy Fagan, Meghan Grahs, Isaac Lauritsen, Thanh Le, Michalina Malysz, Kirsten Mathisen, Eleanor Nolan, Anna Novotny, Vanessa Reyes, Rosalie Starenko, Clair Wright

Film: *Representing Learning in Community: A Holden Village Musical*

Project Advisors: Dr. Sharon Varallo, Dr. Lendol Calder, Dr. Laura Hartman

11 a.m. (60 min.) | Old Main 132

During the recent Holden Village term, all 18 students wrote, directed and filmed *We Are One: A Holden Village Musical*, an hour-long musical that sought to explain Holden Village by utilizing the course concepts from the three courses taught in the Learning Community: History of American Consumerism; Environmental Ethics; and Communication, Time and Technology. In this presentation, the Holden Village term students will explain course concepts and Holden Village by showing part of the film that they made while living and studying in the wilderness of the Cascade Mountains this past January and February.

Presenters: Jordan Kirkbride and Elizabeth Jakaitis, Co-curators—Art History

Gallery Exhibit and Presentation: *Whistler and His Contexts*

Project Advisor: Dr. Catherine Goebel

12:15 p.m. (30 min.) | Augustana Teaching Museum of Art

American expatriate James McNeill Whistler (1834-1903) was a rebel, dandy, wit, eccentric, and above all, an extraordinary artist. A pivotal figure in the cultural history of the 19th century, Whistler continues to come alive through his work and words, which display a bold artistic vision that sparked controversy in his own time, and resonate to this day. *Whistler and His Contexts*, an exhibition currently on display in the Augustana College Teaching Museum of Art, was co-curated by seniors Elizabeth Jakaitis and Jordan Kirkbride with Dr. Catherine Carter Goebel, Paul A. Anderson Chair in the Arts and Director of the Centre for Whistler Criticism. This exhibition examines the works of Whistler and the artists working before, during and after his career in an effort to understand Whistler's life and art in its context. Whistler was a very peculiar, fiery personality, who was very interested in creating his own public image. This is highlighted in the exhibition, as is the way that Whistler's contemporaries and followers imagined him and contributed to his image. The co-curators will lead an informal tour and discussion of the exhibition, and will be available for conversation and questions about Whistler, art history and the artworks.

Presenters: Students from Dr. Jennifer Popple’s “Gender, Race and Sexuality in Popular Culture”—Women and Gender Studies

Mixed format: *Feminist Remixes: Engaging with Popular Culture through a Feminist Lens*

Project Advisor: Dr. Jennifer Popple

2:45 p.m. (60 min.) | Old Main 132

Dr. Jennifer Popple’s WGST 380 Special Topics class, “Gender, Race and Sexuality in Popular Culture,” will present its culminating project: a feminist “remix” of a popular culture film or television series. The class is made up of a majority of juniors and seniors, so this project is not only the final drawing together of the theory and analysis that we have done this term, but also the example of the sort of feminist analysis that they will be capable of doing in their future work. Students, in small groups, have chosen a film or television show that has been popular in the past three years, and are “remixing” it in order to demonstrate how the popular culture item could be “healed” from a variety of wounds: misogyny, racism, materialism, homophobia, etc. The presentation will enable audience members to also see how sneaky popular culture can be in inserting problematic themes, plot lines and characters, and how we as audience members can push back against them. With the help of students in the class, Dr. Popple will introduce the class and project. The small groups will then have posters and multimedia prepared along with short presentations, which may include short performances of remixed moments, in order to engage with the audience.

Presenters: Amber Whittle, Jessica Siverly, Tyler Spellious, Kaylee Wagner, Lauren Anderson —Creative Writing

Creative Writing Senior Inquiry-I

Project Advisor: Dr. Kelly Daniels

9 a.m. (50 min.) | Old Main Forum

Studying writing is a difficult thing in a world that does not value art. We hope that our work will show how necessary literature is to society. We also hope it will show the value of this field at Augustana.

Presenters: Alexandria Petrassi, Carrie Reitz, Jaime Perpich, Gary Miller, Laura Seeber —Creative Writing

Creative Writing Senior Inquiry-II

Project Advisor: Dr. Kelly Daniels

10 a.m. (50 min.) Old Main Forum

The creative writing department presents the work of five stylistically diverse students presenting pieces from their Senior Inquiry work from throughout the school year. The reading contains original poetry and prose written by Augustana students, spanning multiple genres.

Presenters: Carrie Reitz, Megan Boedecker, Catrina Doyle, Chrissy Kunkel, Isaac Lauritsen, Elizabeth O’Hara, Alli Petrassi, Laura Seeber, Malcolm Simon and Tyler Spellious—English

The Stories We Tell: Modernism Comes to the Tri-Cities

Project Advisor: Dr. Meg Gillette

12:15 p.m. (60 min.) | Old Main Forum

During the winter of 2014, a group of English majors studying modernism started wondering about the literary history of the Quad Cities. We had heard about the Pulitzer-Prize-winning playwright Susan Glaspell—the Davenport native whom many consider one of America’s top playwrights—and, impressed that such a talent

came from our hometown, wondered if there might be other literary talents from the Tri-Cities worth recovering.

During this session, we’ll share the astonishing literature we uncovered: letters from Dakota Indians imprisoned at Camp McClellan, Alice French’s regionalist stories of same-sex desire, Buffalo Bill’s romantic vision of the American West, Arthur Davison Ficke’s satire of modern poetry, Floyd Dell’s radical writing about women and the labor movement, Susan Glaspell’s yellow journalism and existential dramas, Cornelia Meig’s Newberry-Award-winning children’s literature, and Charlotte Russell Murray’s ground-breaking mysteries. Far from the homogenous, repressive place the Midwest often is taken to be, the Tri-Cities that emerges from this body of literature is more cosmopolitan and progressive than we had ever imagined. And yet it was also a place of cleavages—of racial conflict, class divides, and changing roles for women. As we listen to the writings of these Tri-Cities writers, we’ll hear how literary artists wrote back to the challenges and fears of the day, developing their own solutions and hopes for the future. As it turns out, Quad-Citians have a lot to be proud of in their literary history, and as this literature has inspired us, we hope it will inspire others as well.

ORAL PRESENTATIONS

Presenter: Austin Anderson—Virology

Direct Measurement of Rotavirus NSP4 Viroporin-mediated Endoplasmic Reticulum Calcium Store Depletion

Project Advisor: Dr. Heidi Storl

12:15 p.m. (15 min.) | Hanson Hall of Science 102

Rotavirus is a major cause of gastroenteritis in children and annually results in more than 500,000 fatalities worldwide. Upon infection, intestinal cell cytoplasmic calcium concentrations can increase to four times the basal concentration. Rotavirus requires a high calcium environment within the cytoplasm for new viral assembly. The sole expression of rotavirus nonstructural protein 4 (NSP4) is responsible for this disruption of calcium homeostasis. NSP4 is an endoplasmic reticulum (ER) transmembrane viroporin that has been hypothesized to directly flux calcium from the ER to the cytoplasm. There currently are no employed methods for detecting direct ER calcium release from viroporin activity. To test this hypothesis, a new methodology was created to directly measure the luminal ER calcium concentrations in normal and NSP4-expressing cells. Reengineered ER-targeted Genetically Encoded Calcium Indicators (GECIs) were used to show that wild-type NSP4 directly depleted ER calcium, while a defective NSP4 mutant could not deplete ER calcium. Currently, experiments are underway to test other ER-localized viroporins including human immunodeficiency virus Vpu, human papillomavirus E5, hepatitis C virus p7, and influenza A virus M2. These studies are the first to directly measure ER calcium concentration changes in live cells expressing viroporins and represent an important step to understanding the molecular pathogenesis of rotavirus and potentially other viral pathogens.

Presenter: Hiba Ansari—Business Administration

Analysis of the Quad Cities Muslim Population: A Geographic and Strategic Approach

Project Advisors: Mamata Marmé and Dr. Christopher Strunk

3:30 p.m. (15 min.) | Hanson Hall of Science 305

This research project analyzes the place distribution and demographic characteristics of the growing Muslim population within the Quad Cities and its fringes. This information will help the established Islamic centers determine new services and initiatives to accommodate the increasingly emergent mosque attendees,

immigrants and refugees. By collecting data from Muslim community directories, private refugee/immigration organizations, government census reports and a self-administered survey, I map the resulting patterns and trends using Geographic Information Systems (GIS) and build a program to estimate the relationship between demographic variables using Statistical Analysis Systems (SAS). In culmination, my research initiative will accurately describe the details of the increasing Quad-City Muslim population and help charter innovations to address the community's surfacing needs.

Presenter: Chelsea Bankes—Anthropology

Immigrant Aid and Awareness Insufficiency in the Quad Cities: The Case of Togo

Project Advisor: Dr. Adam Kaul

11 a.m. (15 min.) | Olin Center 202

This paper looks at the Togolese community of the Quad Cities and the issues that the community faces as immigrants in a world dedicated to focusing on and assisting refugees. I write about the similarities of the issues that both immigrants and refugees experience and how these similarities suggest that more attention needs to be paid towards immigrant groups such as the Togolese. To do this, I researched Togolese history in West Africa, their independence as a nation, and immigration trends and experiences of the Togolese. This is essential context to the understanding of the motives of Togolese immigrants. My ethnographic research includes interviews of Togolese immigrants within the Quad-Cities community and their experiences, struggles with immigration, and current lifestyle in the Quad-Cities area.

Presenter: Sarah Berndt—Anthropology and Art History

Change Over Time: Romanesque Fieldstone Churches in the Fläming Region of Eastern Germany

Project Advisors: Dr. Kim Vivian and Dr. Margaret Morse

2:15 p.m. (15 min.) | Hanson Hall of Science 305

The Fläming region of eastern Germany is a rural area home to more than 100 small stone churches that date from the 11th to the early 14th century. Feldsteinkirchen, or fieldstone churches, in the Fläming have undergone roughly a millennium of history and transformation. Four weeks of onsite research in the Fläming produced field-work findings that demonstrate patterns in the architecture and ornamentation of the Feldsteinkirchen. These patterns reflect centuries of original design elements, intentional change by human hands, and circumstantial change caused by age and weathering. In many cases, the intentional alterations coincide with historical periods of political and religious change across the communities of the Higher Fläming. Presented through an art historical lens, the objectives of this presentation are to highlight patterns of architectural modification in the medieval Feldsteinkirchen and to connect those changes to historical events and religious practices in the Higher Fläming.

Presenter: Alex Blunier—Developmental Biology

Characterization of Transcription Factors Expressed During Chicken Retinal Development: A focused inquiry into the roles of PAWR and POU6f2

Project Advisor: Dr. Sean Georgi

11 a.m. (15 min.) | Hanson Hall of Science 327

The major focus of the field of developmental biology is to study the processes underlying the vast changes that occur during the growth and development of various organisms. This research examines these specific processes and mechanisms within the context of

chicken retinal development. Among the major modulators of development are proteins known as transcription factors. These bind to sequences of DNA and in doing so promote or block the expression of the genes to which they bind. In the context of this research, I have focused on PAWR and POU6f2, two transcription factors known to be influenced by the expression of microRNAs. As such, my research has utilized bioinformatics, genetic sequencing, and polymerase chain reaction (PCR) in order to examine the changing expression of these genes as chickens develop. In this presentation, I will describe the data that I have collected using the aforementioned techniques, as well as generally hypothesize as to the overall impact that POU6f2 and PAWR have on the differentiation of cells and development of the retina.

Presenter: Alexandra Blust—Religion

Communes, Monasteries and Freedom

Project Advisor: Dr. Laura Hartman

12:15 p.m. (20 min.) | Old Main 117

Often individuals who live in communes, monasteries and other intentional communities claim to live a life that is markedly more "free" than the life they could live outside of the community. This project examines freedom in a secular commune (Twin Oaks in Louisa, Va.) and a religious monastery (St. Mary's Monastery in Rock Island, Ill.) to better understand how religion in an intentional community impacts a community member's experience of freedom. A thorough analysis of freedom in each of these communities leads to the finding that what functions as religion in a community is central to members' freedom. Something that functions as religion is essential for freedom in a community. This study concludes with an examination of what members of mainstream society can learn from freedom in intentional communities. Community members' individual freedom is situated in the context of community commitment.

Presenter: Katherine Boardman—Music

Ancient Greek Musical Effects in 17th-Century Italy

Project Advisor: Dr. Randall Hall

1:30 p.m. (15 min.) | Olin Center 202

During the Renaissance, composers were fascinated by ancient Greek music, although we do not know what it sounded like. They read stories from ancient writers, including Plato, about the profoundly moving effects ancient music had had on its listeners. Although many theorists tried to reconstruct ancient Greek compositional techniques, it is music by Giulio Caccini, who was primarily a singer, which has retained more lasting interest among musicians to this day. Caccini was able to take the nebulous ideas surrounding ancient music and compose successful songs, which emphasize the performer as a means of moving the listener.

Presenter: Katherine Boardman—French

The Self in Troubadour Poetry

Project Advisor: Dr. Sarah Skrainka

2:15 p.m. (15 min.) | Olin Center 209

The development of our modern concept of the self took centuries. The troubadours, poet-musicians of the south of France during the 12th century, left a legacy of love poetry that explored the idea of *fin'amors*, which was a new way of looking at romantic love, but also was a step on the way to a more individualized concept of the self.

Presenter: Hannah Bohn—Anthropology

Telling the Story of Northern Ireland's Troubles: Tracing the Oral History of Ireland's Troubled Past Across Contexts

Project Advisor: Dr. Adam Kaul

12:30 p.m. (15 min.) | Olin Center 202

The ethno-political conflict known as the Troubles occurred in Northern Ireland from the late 1960s to the late 1990s. Community development organizations, youth services and government-funded "Peace projects" have used narrative as a tool for dealing with and remembering Northern Ireland's troubled past and working toward collective peace. This presentation examines how the Irish tell the story of the Troubles, focusing specifically on how the perspective of the narrator shapes the content and the telling. Additionally, it will discuss how community development and healing projects have dealt with the diversity of stories told about the Troubles in efforts to move forward. While state actors promote a shared narrative for peace work, the more effective approach of grassroots peacebuilders in and about Northern Ireland recognizes the necessity and value of the diversity of stories told about the Troubles.

Presenter: Hannah Bohn—French

Walking with the Dead: Exploring the Relationship between Haiti's François Duvalier and Vodou's Baron Samedi

Project Advisor: Dr. Sarah Skrinka

1:30 p.m. (15 min.) | Olin Center 209

The religion of Vodou has a prominent role in Haitian history and society. For practitioners, serving the spirits, the loa, is a lifestyle and a culture. My research concerns the relationship between Baron Samedi, the Vodou loa of death, and François Duvalier, a dictatorial president in Haiti from 1957-1971. Duvalier often would appear in public in the undertaker's suit, top hat and sunglasses attributed to Baron Samedi in order to project the image of his mysticism and power. This presentation explores Baron Samedi as he is represented in Vodou folklore and as he is perceived by Haitians as well as Duvalier's manipulation of Vodou and Baron Samedi for political gain. The poem "Baron Samedi" and the novel *le mât de cocagne*, by Haitian writer René Depestres, offers a literary basis for discussion of both Baron Samedi and François Duvalier. I argue that due to his ambiguous nature, Baron Samedi was a strategic tool used by Duvalier to maintain an environment of fear and respect for his enduring power as president for life.

Presenter: Nichole Brammer—Genetics/Microbiology

Chromosome Dynamics in Live Bacterial Cells

Project Advisor: Dr. Heidi Stortl

1:15 p.m. (15 min.) | Hanson Hall of Science 102

For the life of a bacterium to continue on, it must have the ability to replicate itself. More importantly, it needs to be able to replicate the genetic code, or chromosome, that contains its instructions for life. The steps in which the *E. coli* copies its chromosome are not completely understood. For example, for a bacterium cell to replicate, it must divide into two. Before the cell divides, it must first make two copies of its genetic information and send these copies to opposite sides of the cell. This way, when it divides, each new cell has the proper instructions. The mechanism for how a bacterium is able to move these copies to opposite sides is currently unknown. If we had a better understanding of this process, it could explain genetic disorders involving incorrect chromosome replication. My

project was to add color-coded markers to various random spots in an *E. coli* chromosome. This way, these markers could be viewed under a microscope as they were replicated and moved to their spots on opposite sides of the cell before the cell itself became two and life continued anew.

Presenters: Mason Broxham—Economics; Emma Cox—Biology

Air Pollution in China-Chinese NGOs

Advisor: Dr. Dave Dehnel

12:15 p.m. (20 min.) | Olin Center 305

Urban air pollution is one of the key aspects of the tension between economic growth and environmental health in China today. In January 2012, to the surprise of many, Beijing began releasing air quality reports based on an international standard. The move has been credited by some observers as a major breakthrough in China's environmental governance because, it is argued, environmental activists in China were the major driving force behind the release of information. Since then, the issue of urban air pollution has reemerged as one of the hottest topics in media and on the internet. At the same time, a series of new policies and standards aimed at addressing urban air pollution have been released by the central government and various local governments. To what extent was the recent attention given by the state to urban air quality prompted by Chinese environmental civil society? To what extent is government propaganda still shaping the public perception of the issue? These questions will be addressed by six Augustana students who received funding from the Freeman Foundation to spend three weeks in China this summer. Mason Broxham and Emma Cox will explore the role of Chinese Environmental Non-Governmental Organizations (NGOs).

Presenter: Mason Broxham—Philosophy

Exploring Dennett's Multiple Drafts Model: Abstracted Universals and Non-fixed Subjectivity

Project Advisor: Dr. David Hill

1:30 p.m. (30 min.) | Old Main Forum

This paper applies Daniel Dennett's Multiple Drafts (MD) model to two distinct arguments. I will argue that viewing the self as a universal rather than an individual is more coherent in light of Dennett's MD model. By highlighting Dennett's observation that any narrative of a continuous self must be an abstraction and cross-applying this with my previous discussion of the self as a universal, I will arrive at a version of the self I call an abstracted universal. These are a self-set, which believe themselves to be continuous—a conclusion drawn from consistent memory and physical structure—but are in fact instantiations of consciousness projecting a self (abstracted) that could potentially be duplicated or uploaded (universal). The first argument is central to my next claim. Relying on the first conclusion, I will argue that beyond the physical body, this abstracted self is all of us that exists. However, sometimes we psychologically include things that are not a part of our physical body as a part of our functional ones (a spider's web, the shell of a hermit crab, the clothes we wear). Here, I will propose an inclusion of these extended psychological selves as actual parts of selfhood—indeed, they are essential for it. I will argue it is better to construe physical objects with which we interact, but specifically to the extent that our interaction results in precise manipulation, as a part of the self.

Presenter: Megan Bystol—Anthropology

Anyone in French Society: A Cosmopolitan Approach to Second-Generation North-African Identity in French Society

Project Advisor: Dr. Adam Kaul

12:15 p.m. | Olin Center 202

Research performed in Dijon, France, explores naming and identity within second-generation North-Africans. Interviews and participant observation conducted at the field site will be used to analyze the participants' personal and societal identity. Through the use of cosmopolitan theory, in which global acceptance of diversity strives to create a cohabitative international community, I aim to return the agency of identity back to the individual. This study will focus particularly on Nigel Rapport's "Anyone" ideology, in which the individual has the ultimate, subjective view of his/her own self-identity. It is the intent of this paper to show how cosmopolitan perspective can be used to help reduce the *crise identitaire* amongst the second-generation North-African population in France.

Presenter: Megan Bystol—French

The Creators of Monsters in French Literature: From the Mother to Technology

Project Advisor: Dr. Sarah Skrainka

3:30 p.m. | Olin Center 209

The purpose of this presentation is to highlight society's unconscious creation of monsters through its fear of the uncontrollable and the unknown. It will compare the creation of monsters by the mother in Renaissance and Enlightenment texts in comparison to modern day's creation of monsters by technology in French comics. The comics will focus on the uncontrollable and evil nature of technology, while the earlier texts will analyze the power of the female in childbirth. This research explores the idea that society's fear of the uncontrollable and its fear of our own unknown capabilities in childbirth and scientific advancement has led to our imaginative transformation of people into monsters.

Presenter: Mitchell Carter—Music

The Trees Where I Was Born—Preparing and Programming a Recital

Project Advisor: Tony Oliver

2:45 p.m. (15 min.) | Olin Center 307

"The Trees Where I Was Born," a work by Augustana's Jacob Bancks, is a rich artistic work to digest both as a performer and an audience member. This past spring, I had the opportunity to prepare the work as part of a larger program for a senior recital. In this presentation, I'd like to dive into the artistic process of selecting, interpreting and preparing the work, and collaborating with a speaker to incorporate the poetry of Walt Whitman.

Presenter: Victoria Cartland—Sociology

Student Attitudes on Parental Leave Policies

Project Advisor: Dr. Marsha Smith

3:15 p.m. (15 min.) | Hanson Hall of Science 305

This project explores attitudes of Augustana College students toward parental leave policies. Using survey research, a representative sample of Augustana students were asked to evaluate a variety of policies that currently exist in the European Union. Hypotheses were tested to examine whether political affiliation, year in school, family background and other variables have any influence on how students made their evaluations.

Presenter: Stuart Casarotto—Geography, Urban Planning, Sustainability

Estimating Stormwater Runoff for the City of Moline's Future Development

Project Advisor: Dr. Reuben Heine

1:30 p.m. (15 min.) | Hanson Hall of Science 327

I will present my work on estimating stormwater runoff for the City of Moline's future development of the Airport South District (ASD). The purpose of this work is help the City of Moline have an estimate of stormwater that will need to be managed following the development of a large area south of the Rock River. This presentation will focus on my findings and recommendations to the City of Moline on how to best mitigate the expected stormwater runoff. This research was conducted with the help of Dr. Reuben Heine and Dr. Michael Reisner, and also Greg Swanson and Erica Williams from the City of Moline.

Presenter: Stuart Casarotto—Engineering, Sustainability

Modeling Erickson Residence Hall and Investigating Building Sustainability

Project Advisor: Dr. Joshua Dyer

3 p.m. (15 min.) | Hanson Hall of Science 304

I will present my work on investigating Erickson Residence Hall's sustainability and potential initiatives to achieve a more sustainable building. Energy efficiency of a building starts at building design but ends with building use. This presentation will focus on the process I took in creating the digital model of Erickson as well as a discussion about potential solutions for the future. This research was conducted under the guidance of Dr. Joshua Dyer and with the support of the Augustana Summer Research Fellowship.

Presenter: Dr. Todd Cleveland—History

Following the Ball: African Soccer Players, Labor Strategies and Emigration Across the Portuguese Colonial Empire, 1949-75

1:30 p.m. (15 min.) | Hanson Hall of Science 305

This talk explores those African soccer players who made their way from Portugal's colonial territories to the metropole to ply their athletic skills from the late 1940s until the conclusion of the empire in 1975. Many of these athletes performed spectacularly on the field, significantly elevating the play of their respective club teams and vaulting the Portuguese national team to unprecedented levels, even as Portugal brutally suppressed a series of nationalist insurgencies in its African territories. While many players sought to pursue their social improvement objectives on the field, many others strategically parlayed their ability to travel to Portugal to continue their studies and/or to secure long-term employment; both pursuits were intended to safeguard these athletes' futures beyond the end of their playing days. Ultimately, these players' experiences illuminate the cosmetic and limited nature of the Portuguese dictatorship's (1926-74) labor and social reforms—even when applied to the nation's highest-profile wage-earners—but also some of the ways that Africans could creatively, if carefully, exploit opportunities generated by shifts in the social, occupational and political landscape in the waning decades of the Portuguese empire.

Presenter: Tara Cullison—Anthropology

Residential Landowner Perceptions of Storm Water Issues: An Ethnographic Study in Rock Island and Moline, Ill.

Project Advisor: Dr. Adam Kaul

10:45 a.m. (15 min.) | Olin Center 202

Environmental issues in urban areas are more effectively studied using a multidisciplinary approach. To manage urban environmental issues, an overall assessment must take place in order to implement best management practices. A study of storm water in Rock Island and Moline, Ill., revealed that humans are one of the leading causes of poor water quality in urban streams. To understand this underlying behavior in the urban social sphere, we must first assess people's awareness and overall values on storm water and more generally, the health of their environment as a whole. Recent studies across income levels and ethnic groups in urban areas have found that environmental awareness and perceptions of concern are equally important to residents of all levels of socioeconomic status. A combination of a quantitative and qualitative approach is used to explain the underlying social implications driving water quality in Rock Island and Moline, Ill.

Presenter: Morgan Drake—Anthropology

En medio: Identity, Citizenship, and Belonging in DACA-Approved Mexican Immigrants

Project Advisor: Dr. Adam Kaul

11:15 a.m. (15 min.) | Olin Center 202

DACA (Deferred Action for Childhood Arrivals) is a huge milestone in immigration reform and has helped thousands of individuals. However, it is not enough, and its effects are both disparate and temporary. In researching themes of identity, citizenship and belonging in DACA-approved Mexican immigrants, I have found that while DACA-approved individuals experience a subsidence of fear and definite legal benefits, they also experience increased complexity in identity and belonging as a result of their unstable legal status. I analyze my data in terms of cultural citizenship and liminality to produce a picture of the effects of immigration reform on identity and belonging as well as to give suggestions for moving forward.

Presenter: Joshua Eisenberg—Biology

Identification of Evolutionarily Conserved Proteins Required for Ras Localization

Project Advisor: Dr. Heidi Storl

11 a.m. (15 min.) | Hanson Hall of Science 102

The Ras protein is a GTPase that acts as a switch to regulate many signaling pathways. In response to external stimuli and receptor activation, Ras can be activated through the exchange of GDP for GTP at the plasma membrane. At the plasma membrane it can interact with many effectors to mediate complex processes such as growth, differentiation and apoptosis. Ras has gained significant attention because it is mutated in about 30 percent of cancers leading to its hyperactivation and misregulation of downstream pathways. The purpose of this study was to investigate how Ras travels to the plasma membrane in order to promote its signaling pathways. Utilizing the model organism *S. Pombe*, a type of fission yeast, I searched for genes that may be responsible for the localization of Ras to the plasma membrane. Using human fibrosarcoma cells, I also investigated the role of the GCP16 gene in the localization of Ras.

Presenter: Dr. David Ellis—History

Two Souls in One Conservative Breast: The Internecine Struggle Between the Wochenblatt and Kreuzzeitung Factions in Nineteenth-Century Prussia

1:45 p.m. (15 min.) | Hanson Hall of Science 305

This paper explains why a fairly homogenous group of religiously and political conservative leaders split into two factions, and makes the case that the split contributed to the emergence of modern conservatism in 19th-century Prussia.

Presenter: Ann Ericson—Business Administration

The Most Pressing Global Issue Is? Values, Attitudes, and Opinions Held by U.S. and Vietnamese College Students

2 p.m. (15 min.) | Hanson Hall of Science 305

It depends on the topic as to whether college students in the United States and Vietnam are in agreement. Even with their cultural differences, there is commonality as to the values they believe should be instilled in children. However there is a divide as to what they feel the most pressing global issue is, possibly a result of differences in the countries' political ideology. This ideological difference could also explain why U.S. students feel more in control of their lives. Questions asked of these 18- to 22-year-old business students were from the World Values Survey.

Presenter: Jennifer Evans—French

Globalization: Good for Business, Bad for Culture

Project Advisor: Dr. Sarah Skrainka

2 p.m. (15 min.) | Olin Center 209

Over the past couple of decades, we have started to see an increase in globalization. This term refers in part to the phenomenon of businesses targeting consumers and markets across national lines. Consequently, a number of these businesses operate offices in more than one country. This requires accountants to master "fluency" in more than one set of accounting norms. Recently there have been calls for a global set of accounting standards from several countries. Although these global standards would help businesses conduct international affairs, the impact that globalization is having on cultures is of far greater concern. Globalization has started to merge languages and stimulate the assimilation of minority cultures into economically dominant ones. If we as both Americans and inhabitants of this planet are not aware of this consequence and do not address the resulting situation, we will start to lose one of the most beneficial components of living on Earth.

Presenter: Carlisle Evans Peck —Biology and Environmental Studies

"Heaven and Earth in Little Space": The Crisis of Biocultural Extinction and How Saving Seeds Can Solve It

Project Advisor: Dr. Laura Hartman

12:15 p.m. (20 min.) | Olin Center 201

The extinction of biodiversity and the loss of endangered cultures and indigenous knowledge cannot be viewed as separate phenomenon. Culture and biodiversity are inextricably linked: human systems of meaning are founded on species, and ecosystems have been managed by human societies for millennia. This project focuses on the work of three seed banks—the Millennium Seed Bank, Seed Savers Exchange and Native Seed/SEARCH—and their efforts to save rare wild and domesticated plant species along with the cultural knowledge and practice surrounding them. This suggests

a broader philosophical shift in plant conservation from plants as isolatable biological entities to beings embedded in systems of knowledge and meaning and inseparable from the human sphere.

Presenters: Kelly Farina, Erek Bell—Geography

Discussion on Food Insecurity in the Quad Cities

Project Advisor: Dr. Christopher Strunk

1:45 p.m. (15 min.) | Hanson Hall of Science 327

This presentation will be a student-facilitated discussion on hunger and food insecurity throughout the Quad-Cities area. This presentation also will focus on the presenters' reflections on research conducted for a Senior Inquiry project for the geography department and an internship with University of Illinois Extension-Rock Island. What we hope to accomplish through this presentation is to further develop the audience's understanding and knowledge of food insecurity in the Quad Cities. The Senior Inquiry project focused on the availability of hunger services (meal sites, community gardens and food pantries) based on levels of poverty in a particular area to see if people were receiving the help that they needed. The internship is centered around helping residents living in food deserts gain access to grocery stores that they otherwise would not have access to.

Presenters: Jessica Flondro—Environmental Studies; Aubrey Waddick—Political Science

Air Pollution in China-International NGOs

Project Advisor: Dr. David Dehnel

12:35 p.m. (20 min.) | Olin Center 305

Urban air pollution is one of the key aspects of the tension between economic growth and environmental health in China today. In January 2012, to the surprise of many, Beijing began releasing air quality reports based on an international standard. The move has been credited by some observers as a major breakthrough in China's environmental governance because, it is argued, environmental activists in China were the major driving force behind the release of information. Since then, the issue of urban air pollution has reemerged as one of the hottest topics in media and on the internet. At the same time, a series of new policies and standards aimed at addressing urban air pollution have been released by the central government and various local governments. To what extent was the recent attention given by the state to urban air quality prompted by Chinese environmental civil society? To what extent is government propaganda still shaping the public perception of the issue? These questions will be addressed by six Augustana students who received funding from the Freeman Foundation to spend three weeks in China this summer. Jessica Flondro and Aubrey Waddick will explore the roles of international non-governmental organizations. In their presentation, they will briefly review the literature and present their research design.

Presenter: Chelsea Fray—Communication Studies and English

Literature and Propaganda

Project Advisor: Dr. David Crowe

1:30 p.m. (20 min.) | Olin Center 201

The early 20th century saw a great deal of social change and political turmoil. While men went to fight in wars across Europe, governments charged writers with producing propaganda designed to support war aims. Intellectuals offered their support by creating propaganda, disguised as art. In the case of the Spanish Civil War, Ernest Hemingway offered his support for Republican fighters in the form of the novel *For Whom the Bell Tolls*. In fact, this novel not only meets

the criteria for propaganda, but also raises the question, is all literature propaganda?

Presenter: Jacob Gaier—Computer Science, Mathematics, Physics

Quantum Computing: What It Is, How It Works, and Why You Should Care

Project Advisor: Dr. Carroll Morrow

12:35 p.m. (20 min.) | Olin Center 201

We will discuss what quantum computing is, how it differs from classical computing, and some applications and possible implications of it. In particular, we will look at Grover's Search Algorithm, Shor's Factoring Algorithm, and Quantum Cryptography. We also will discuss the ethical and philosophical implications of high-efficiency computing and what some of the algorithms mean for the future of cyber security and privacy. Current and potential future developments in quantum computing may be discussed.

Presenter: Dr. Sean Georgi—Biology

Characterizing the Expression of Novel Transcription Factors During Retinal Development

2:45 p.m. (15 min.) | Hanson Hall of Science 327

Each cell in our body expresses different genes, and transcription factors are the proteins that control these differences, switching some genes on and other genes off. Transcription factors are particularly important during development when stem and progenitor cells have to make decisions to differentiate into specific types of mature cells. The retina is an excellent system for studying the role that transcription factors play during development because it contains only a few types of mature cells, all of which derive from a single group of progenitor cells. In previous research, I identified several dozen transcription factors that are expressed during retinal development, about which little or nothing else is known. The purpose of these studies has been to characterize the expression of these transcription factors during retinal development in chick embryos by determining when they are expressed. This talk will provide details on our progress on this project thus far, as well as propose some possible functions for these novel transcription factors during retinal development.

Presenter: Dr. Steve Hager—Biology

Evaluating the Drivers of Bird-Window Collisions Across North America

11:30 a.m. (15 min.) | Hanson Hall of Science 305

Bird-window collisions (BWCs) are an important human-related threat to bird survival in developed landscapes. BWCs are thought to be affected by building structural features and land use at local and landscape scales, but we know little about whether the drivers of BWCs are consistent among urban areas. In 2013, the EREN network enabled collaboration among 13 sites in the eastern United States and central Mexico to assess the drivers of BWCs. Our short-term goals were to complete a pilot field season in fall 2013 to (1) test project methods and protocols and (2) conduct a preliminary analysis of the data collected. Selection of study buildings, measuring environmental and structural factors, and carcass survey methods were standardized to make data comparable among sites. Carcass surveys were completed at all buildings (N = 87) for 21 consecutive days. We used generalized linear mixed models to assess the relationship between the number of carcasses resulting from window collisions and four environmental and structural factors. We found 91 bird carcasses (N = 39 species) resulting from window collisions. The most supported model explaining the number of carcasses included window area, local vegetation and broad-scale development. Thus, most BWCs occurred at large

buildings constructed in quality bird habitat (both at the local and landscape scale). Project methods and protocols performed well, but will be modified for the fall 2014 field season to include, for example, a more effective carcass survey protocol that improves detection of carcasses by field workers. Recent recruitment efforts for additional collaborators has increased participation for 2014 to 45 college/university campuses in North America. To date, the project has provided inquiry-based educational opportunities for 189 undergraduate students and 21 faculty/professional researchers at collaborator sites. Students at three campuses participated in professional development activities, e.g., poster presentations at local scientific meetings, which stemmed from their research on bird-window collisions. Results from the 2013 pilot field season are preliminary, but suggest strong potential to assess the drivers of BWCs at the continent scale in future field seasons. This information is crucial for predicting local and regional mortality, which would focus future conservation efforts aimed at reducing collision-related impacts.

Presenter: Christine Harb—Psychology

Self-Identity and Self-Esteem of Palestinian Youth in Go Palestine Camp

Project Advisor: Dr. Brian Katz

2:30 p.m. (20 min.) | Olin Center 201

This study investigates the relationship between the self-identity and self-esteem of Palestinian teenagers in a three-week camp called Go Palestine Summer Camp. Located in the Palestinian territories, the camp welcomes teenagers who were born and raised in Palestine and Palestinians from other parts of the world. At the beginning and end of the camp, two psychological surveys were simultaneously administered to the campers to measure self-esteem and self-identity. The study focuses on changes within each group of Palestinians, and the differences between them.

Presenters: Michael Hardcastle, Erika Smolyar, Lauren Goggin, Emily Spillios—Liberal Studies

The Truth: The Search for Meaning in Deception

Project Advisor: Dr. Sarah Skrainka

2:45 p.m. (15 min.) | Olin Center 209

Our presentation is a project done from our LSFY 102 class with Dr. Sarah Skrainka. It looks at government reports of controversial topics—9/11, JFK's assassination, and CIA civilian drug testing—specifically questioning the integrity and validity of official reports. The presentation aims to stress the importance of independent research and inquiry into subjects that concern and affect all individuals. The idea for the presentation came as a result of a class project instructing us to research a topic that we considered important and one that has many varying opinions regarding the truth of the subject. We developed the idea while researching popular government conspiracies and it evolved into an eye-opening revelation that the American people may or may not be receiving accurate or complete information that determines how we are expected to live our lives. We came to the conclusion that many of the events in our nation's past that have resulted in legislation which regulates our daily lives, may have been generated on purpose by those in power in order to fulfill an agenda that may not be in accordance with what we have been led to believe. The presentation aims to inspire students to inquire and investigate the information that we are given and draw conclusions based on personal knowledge rather than accepting the status quo. We believe that a well-informed and knowledgeable public is the first step toward a more progressive and successful society.

Presenter: Dr. Ian Harrington—Psychology

Can You Change a Student's Mind with a Course About the Brain?

11:30 a.m. (15 min.) | Olin Center 307

We know that our students come to us with deeply entrenched beliefs on a wide range of subjects, and that these beliefs are often difficult to change within our courses and programs. In addition to my standard assessments of course content, I also have also assessing student beliefs about course-relevant topics like the veracity of their sensory experiences, the predictability of behavior, the nature of the mind-body relationship, and others. After five years of data collection, it appears that students, on average, do tend to shift (if modestly) what they report to be their positions on issues like these, and that these changes are generally consistent with the themes of the class. However, beyond the abstract notion of a "student on average," there are many students who change profoundly and others who don't change at all. I will describe the use of these assessments in my class and how they have given me greater insight into my students as they arrive at the beginning of a term, and how they might be at the conclusion of the term.

Presenter: Dr. Reuben Heine—Geography

Reading the Riverbed—Coaxing a 90-year Story From the Sediments in the Upper Mississippi River

11:15 a.m. (15 min.) | Hanson Hall of Science 305

This research aims to understand how 90-plus years of river engineering activities have impacted the characteristics of the bed sediments of the Upper Mississippi River. This study builds upon historic bed sediment data that were published in a rare (and under-utilized) volume that is owned by Augustana College's Special Collections (Lugn, 1927). In 1925, Alvin Leonard Lugn (Augustana 1916 graduate) commissioned a small research boat to collect more than 500 sediment samples from the Mississippi River from Rock Island, Ill., to the confluence with the Ohio River at Cairo, Ill. The results were published as Augustana Library Publications Number 11 in 1927. To build upon Lugn's work, Augustana students digitized the sediment data and used modern GIS technology to geo-locate Lugn's sample sites. In the summer of 2011, samples were collected from the same locations along the 400-plus miles of river length from Rock Island to Cairo. Using modern plotting software and by isolating only main-channel samples, new patterns have been gleaned from Lugn's work, including a distinct downstream fining of sediments that was not previously recognized. In addition, our 2011 data permit site-by-site comparisons for how the sediment characteristics have changed in the 90 years in relation to the installation of lock and dams, wing dams and other river engineering modifications.

Presenters: Daisy Hoang—Communication Studies; Peter Siepiora—Biology

Air Pollution in China—Mass Media

Project Advisor: Dr. David Dehnel

12:55 p.m. (20 min.) | Olin Center 305

Urban air pollution is one of the key aspects of the tension between economic growth and environmental health in China today. In January 2012, to the surprise of many, Beijing began releasing air quality reports based on an international standard. The move has been credited by some observers as a major breakthrough in China's environmental governance because, it is argued, environmental activists in China were the major driving force behind the release of information. Since then, the issue of urban air pollution has reemerged as one of the hottest topics in media and on the internet. At the same time, a series of new policies and standards aimed at

addressing urban air pollution have been released by the central government and various local governments. To what extent was the recent attention given by the state to urban air quality prompted by Chinese environmental civil society? To what extent is government propaganda still shaping the public perception of the issue? These questions will be addressed by six Augustana students who received funding from the Freeman Foundation to spend three weeks in China this summer. Daisy Hoang and Peter Siepiora will analyze the content of social media and traditional media and explore the impact of that media on public attitudes.

Presenter: Emma Howes—Anthropology

Creating Multicultural Identities in a Dual-Language Classroom

Project Advisor: Dr. Adam Kaul

12:45 p.m. (15 min.) | Olin Center 202

In this presentation, I will discuss the effect that Latino immigration into the Quad Cities has on the public education system, as well as the development of dual-language programs in schools for students who speak English as a second language. Using Victor Turner's theory of liminality and anthropological perspectives on education and third spaces, I examine the effectiveness of the dual-language program in Ericsson Elementary School in Moline in both language acquisition and multicultural identity formation. Ultimately, I demonstrate the power that culture and language have on academic performance and self-identity.

Presenter: Darshan Hullon—Health Science

Sleep's Effect on Heart Health

Project Advisor: Rebecca Cook

11:15 a.m. (15 min.) | Hanson Hall of Science 327

Obstructive sleep apnea (OSA) has public health importance. OSA causes cylindrical, momentary cessations when the upper airway partially or completely collapses, leading to intermittent hypoxemia and sympathetic activation. These events will precipitate and/or exacerbate hypertension, atrial fibrillation (AF), coronary artery disease (CAD) and congestive heart failure (CHF). However, if OSA is screened early, then AF, CAD and CHF morbidity and mortality may decrease. This study took 300 patients with atrial fibrillation, CAD or CHF and administered the STOP-BANG survey to evaluate low, moderate or high OSA risk. Each result was sent to the patient's general practitioner (GP) where the GP could investigate further and discuss options with the patient. Every patient received a follow-up call: one, three and six months. The sample had 7%, 33% and 59% for low, moderate and high OSA risk, respectively. The high-risk group had 178 patients where 2% died, 21% already had treatment, 29% did not reply, and 48% visited a GP. Of the 85 high-risk patients who visited, 26% were investigated, 9% received treatment, and 60% did not discuss options. The diagnosis and treatment of OSA can lead to more efficient medical resource rationing and may decrease cardiovascular morbidity and mortality.

Presenter: Elizabeth Jakaitis—Art History

Cultural Hegemony and the Eclipse of the Sixties

Project Advisor: Dr. David Crowe

1:50 p.m. (20 min.) | Olin Center 201

Art historians for many decades have pondered, without final resolution, the riddle of how appearances in paintings and sculptures both contain their own distinctness and integrity and yet express, necessarily, the world out of which they were made and within which they make sense and create meanings. The art of the 1960s almost always makes connections between form

and socio-political implications, and often turns expressions of the capitalist system and its media culture against itself. Such subversive political pranks in popular art and culture offer a means to resist cultural hegemony. For instance, the use of army jackets and war medals during the psychedelic era was a mode of protesting violence and the Vietnam War. However, this countercultural trend was quickly absorbed into the status quo and fed consumer culture. This raises the question, is resistance to cultural hegemony always ultimately sold? If so, does this make the effort futile, or can popular culture accomplish change despite its eventual nullification by consumer culture?

Presenter: Dr. Kathy Jakielski—Communication Science and Disorders

Who Invited You?: A Critical Look at My Service Learning Course

12:15 p.m. (15 min.) | Old Main 132

As part of my sabbatical leave, I spent eight weeks immersed in the work of the monks of Wat Damnak's Life and Hope Association (LHA) in Siem Reap, Cambodia. LHA is an indigenous NGO serving the poorest members in their own communities. The purpose of my stay was to be able to engage in ongoing conversation with the monks of Wat Damnak about their work and in their work, so that I could learn enough about them to be able to design and develop an ethical service learning experience as part of my Cambodia Term course. In this presentation, I'll discuss the potential harm we can inflict under the guise of service and how I am trying to minimize that harm using the lessons I learned during my time abroad.

Presenter: Danna Jensen—Geography and Environmental Studies

An Analysis of the Correlations Between Freshwater Mussel Specie Richness and Land Use in McHenry County, Illinois

Project Advisor: Dr. Reuben Heine

2 p.m. (15 min.) | Hanson Hall of Science 327

Land use has negative and positive externalities on aquatic environments. This study examines the question if mussel specie richness is influenced by watershed land use and if there are any correlations between other mussel indices and land use. The mussel indices measured were Mussel Classification Index (MCI), specie average rank of importance and specie richness. Twenty-five surveys were conducted on streams in McHenry County, Ill., in both the Fox and Kishwaukee watersheds. To conduct statistical analysis, Geographical Information Systems (GIS) and SAS JMPIN were used to examine crop and developed land use along with the mussel data. The analyses imply that mussel richness, MCI and average rank of importance are better in watersheds with more agricultural land cover than in developed.

Presenter: Elizabeth Johnson—Anthropology

The Struggles and Victories of Life as a Refugee in America as Revealed through Burmese, Nepali and Sudanese Refugees

Project Advisor: Dr. Adam Kaul

11:30 a.m. (15 min.) | Olin Center 202

This presentation investigates the hardships that Burmese, Nepali and Sudanese refugees endured in their home countries as well as the emotions and issues they have since arriving in the United States. I conducted semi-structured one-hour interviews with male and female refugees where we discussed the reasons they left their home countries, their opinions on the trials refugees have in America and the areas in which they could use more help from the organization World Relief. I conclude that although they have a low economic standing in America, their lives have

improved, and despite the struggles, they are grateful for the aid that has been given. Language barriers, lack of employment and not understanding the medical system were the major complaints, revealing that they are mostly happy with the aid that World Relief has given them.

Presenter: John Joyce—Religion

What Might an Athlete Mean When He or She Gives Glory to God?

Project Advisor: Dr. Daniel Morris

12:35 p.m. (20 min.) | Old Main 117

Using Clifford Geertz's definition of ethnography and thick description from his work *The Interpretation of Cultures*, I was able to understand a few possibilities of what an athlete could mean when he or she gives glory to God after a contest. The few possibilities that my project investigates are: the Catholic view of human participation in grace, the Holy War Christian, the Libertines of Geneva, and the Classical Protestant. For each of these possibilities, I examine the way in which each participates in work, grace and faith, and how this participation ultimately shows how each possibility believes it has the way to salvation. For instance, the Catholic view of human participation in grace, work and faith have to be in conjunction while participating in grace for a Christian to have salvation. Another example is the Classical Protestants who believe that faith is at the center, while work is an extension of this faith. Therefore, it is ultimately the Classical Protestant's faith in grace that they receive salvation.

The implication of my research shows that there are many possible meanings to an athlete's statement of glory to God that may have a significant impact on their beliefs of salvation.

Presenter: Dr. Brian Katz—Mathematics

Understanding Student Inquiry

11:15 a.m. (15 min.) | Olin Center 307

Student inquiry has become an important topic on campus; we must prepare our students for Senior Inquiry, inquiry is often a high impact learning experience, and, more fundamentally, the goal of a liberal arts college is to teach students to ask and explore their own questions. This project is an attempt to understand how students inquire in a mathematics course. How do they use an understanding of questions asked in one content domain to inspire questions in a new domain? What kinds of exploration approaches do students use? How do students engage in peer-supported inquiry?

Presenter: Jordan Kirkbride—Art History

A Catalogue of the Furnishings of the Colonel Davenport Home

Project Advisor: Dr. Catherine Goebel

2:10 P.M. (20 min) | Olin Center 201

Located on the historic Rock Island Arsenal, the 1833 Colonel Davenport House currently is a museum dedicated to sharing the wealth of history that developed during the 19th century on the banks of the Mississippi River. The house is one of the oldest in Illinois, making it an important part of Midwestern history as well. Since the early 20th century, local volunteers and history enthusiasts have worked to restore the house to its former glory. Following two years of volunteer work with the special collections committee at the Colonel Davenport House, I have become well-versed in 19th-century American decorative arts. My work can help the Colonel Davenport House Foundation members sift through their current furnishings in order to understand what is historically appropriate for such a home and where changes might need to be made. The results of my research will ensure a more accurate historic preservation site, enabling

members of the community to discern a deeper understanding of an integral part of the community's history. My project also has resulted in the creation of an educational booklet which, in the near future, will be published and distributed at the home.

Presenter: Kelly Klees—French

Adaptations and Mirror Images: Jean Cocteau's "La Belle et la Bête"

Project Advisor: Dr. Sarah Skrainka.

3:15 pm. (15 min.) | Olin Center 209

The adaptation of a written story is a common practice and has become an especially prevalent technique in the film industry. One story that has been adapted countless times in both film and literature is the story of "Beauty and the Beast." The fairy tale was originally written in 1756 by Jeanne-Marie Leprince de Beaumont, and it has endured the test of time. The film adaptation of the story by Jean Cocteau is of particular interest because it adds a new visual element to the fairy tale. Though Cocteau alters the plot and characters established by Leprince de Beaumont, many elements to the story are unchanged. One element that is constant is the role of the magic mirror. In Cocteau's version of the story, the magic mirror represents a portal between what is real and what is fantasy. While characters may attempt to portray themselves as kind and beautiful, the mirror shows the reality of their facade. In Cocteau's film, the act of adaptation itself becomes metaphorical for the mirror. Imitating an already established story, Cocteau uses a visual medium to mirror the original version of "Beauty and the Beast." Mirrors reflect objects that exist outside of the representation that occurs in the glass; the picture in the glass is left to the interpretation of the view. In his version of "Beauty and the Beast," Cocteau applies the idea of an object's reality and its subjective mirror image to the real and fantastical worlds in the film.

Presenter: Kylie Koger—Classics

Delving Inside the Classical Female Body: A Study of Gynaecology within the Ancient Greco-Roman World

Project Advisor: Dr. Kirsten Day

1:45 p.m. (15 min.) | Olin Center 202

A woman's life is defined by blood and pain. Indeed, it is interesting to note that all of those things most associated with the masculine art of war—blood, pain and even death—are also closely associated with a female's initiation into womanhood. For women, however, this process is the result of a natural phenomenon having to do with the nature of the female body. In many ways, this can even be taken as a sort of betrayal against women by their very bodies. How, then, is this natural phenomenon to be understood? Early Greek gynaecological texts (dating back to the 5th and 4th centuries BCE) demonstrate how men sought to make sense of that which was so distinctly foreign to them—the female body—to both support and justify the mainstream-masculine views towards women at the time. And yet, by taking a closer look at these medical texts, a faint view of how women themselves once made sense of their own bodies begins to emerge, along with how they might have used this information to take a more active role in shaping their own lives.

Presenter: Dr. Jason Koontz—Biology

Why I Went to Southern California in the Summer, of all Times

11:45 a.m. (15 min.) | Hanson Hall of Science 305

I received funding from the Faculty Research Committee to spend one month in southern California during the summer of 2013 to continue my work on larkspurs from my 2012 sabbatical. I focused on higher elevation species and those that flower later in the growing season. I was able to add four species to my list of species to see.

Presenter: Christina Kunkel—Communication Studies

Game of Thrones: Are Women Simply Pawns?

Project Advisor: Dr. Wendy Hilton-Morrow

11 a.m. (15 min.) | Old Main 117

Throughout television history, women typically have been represented as beautiful, passive, submissive, dependent on others and defined in relation to father, son, boss or man. However, contemporary television shows feature increasingly independent and powerful women. Because television texts serve as legitimate influences in shaping social values and role expectations concerning gender, studying how texts depict women to viewers is important. The fantasy genre, which has gained popularity in media outlets this past decade, focuses on themes of grand struggle against supernatural or evil forces and is often set in an alternate world that resembles the extremely patriarchal society of Medieval Europe. Attracting an average audience of 13.6 million viewers per episode, almost half of which are female, *Game of Thrones* is a relevant and ideal text to see how women in this genre are being portrayed, particularly through several main plotlines revolving around female characters. This presentation will focus on the constructions of gender, femininity and power relations within the hegemonic context of *Game of Thrones* through feminist critique and media analysis. Major female characters in the show each experience striking moments of empowerment in their own individual ways, but ultimately they are treated as objects that are only valued for their ability to produce heirs and forge alliances through marriage. It is only through transformation and leaving behind one’s womanhood—through supernatural means or denying one’s sex—that a female character may escape oppressive subordination and gain true independence.

Presenter: Caitlin Lawler—English and Religion

Revelation and Religious Experience in the Writings of Flannery O’Connor

Project Advisor: Dr. Jason Peters

2:45 p.m. (20 min.) | Olin Center 201

My presentation examines Flannery O’Connor’s conception of religious experience and its place in her fiction. I use O’Connor’s essays, letters and stories to demonstrate the way she believed God reveals himself to human beings: through personal experience and through dogma. Although dogma can have negative connotations, being associated with an uncritical and stagnant faith as opposed to an experiential knowledge of God, I argue that, in O’Connor’s writings, both dogma and a personal encounter with God play a role in transformative religious experience. O’Connor’s committed belief in the God revealed in Catholic Scripture is at the heart of her understanding of religious experience. Although God is revealed in the stories and principles of the Church, this does not preclude the personal experience of God. Instead, in O’Connor’s stories it facilitates personal experience by presenting God as he really is. I focus on the short story “Revelation” to demonstrate this interrelation between Church doctrine and personal religious experience.

Presenters: Nicholas Levato—Philosophy

Forums of Experience

Project Advisor: Dr. David Hill

2 p.m. (30 min.) | Old Main Forum

It is commonly held that the mind is a subject of experience and often held that mind and brain are identical. Dr. David Hill argues against this, because I and my brain do not share the same properties, and so we cannot be numerically identical. Although

this conclusion is correct, it does not follow from his analysis. I have reworked the theory to account for experience by arguing that I am my mind, and my mind operates through forums available to it. The Forums of Experience had the capacity to expand and contract in experience, not limiting themselves to particular qualities and properties. Since the mind is not limited to particular qualities and properties, claims made about an individual based on properties of the brain are irrelevant. Thus, Dr. Hill’s conclusion can be better argued for on this basis.

Presenters: Mary Liles, Chase Matzinger, Samantha Swanborg and Patrick Ruddy—Secondary Education; Lauren Williamson and Lauranne Schonne—Communication Sciences and Disorders

Teaching at Schools for the Deaf and Blind; On our Experience at FSDB

Project Advisor: Dr. Deborah Bracke

12:30 p.m. (15 min.) | Old Main 132

The Florida School for the Deaf and Blind (FSDB) provides an impressive learning environment with free access to resources, specialists, health care and opportunities for qualifying students in Florida. The passionate community has much to offer each student beyond high quality academics; FSDB supports and delights in individuals’ strengths. Four Augustana secondary education majors and two communication sciences and disorders majors spent a week observing and getting involved in the FSDB community both academically and in extracurricular activities. Through working in preK-12 classrooms and interviewing a variety of specialists, teachers, administrators and other faculty, we learned approaches to teaching that are beneficial to all students, whether they are blind, deaf, both or neither. FSDB staff members were eager to advise, share resources and communicate their passions to us, but most of all we learned from the students themselves. Our experiences taught us what it means to be a part of the deaf or blind community, and we were able to experience the strengths, the achievements, the pride and the struggles. We were introduced to assistive technologies, differentiated instruction, and the variety of ways students can express their learning.

Presenter: Dr. Janis Lonergan—Business Administration

Teaching SAS to Undergraduates

11 a.m. (15 min.) | Olin Center 307

I revised the SAS Tutorial Manual for use by students during their first statistics class: BUSN211 Business Statistics I. The manual is designed so that students can learn the basics of programming in SAS by reading the manual and doing the examples provided. Little, if no, faculty instruction should be needed. SAS is the market leader in providing a new generation of business intelligence software and services that create true enterprise intelligence. SAS solutions are used at 40,000 sites, including 96 of the top 100 companies on the FORTUNE Global 500.

Presenter: Alicia Lumberry—Music

The Interdisciplinary Voice Teacher

Project Advisor: Dr. Michelle Crouch

3 p.m. (15 min.) | Olin Center 307

The voice is an instrument that resides in the body, which means that singers, like athletes, need to be trained to connect their minds to their instruments. Teaching them to do so is not an easy task. In the absence of more thorough music learning habits, many students resort to imitating other professional singers by listening to recordings. While this may yield quick and seemingly desirable results, singers taking this easy route have potentially robbed

themselves of a personalized process. Standard vocal pedagogy books such as *Basics of Vocal Pedagogy* by Clifton Ware and *The Structure of Singing* by Richard Miller approach education of the voice as predominantly scientific and mechanical. As valuable as these approaches can be, taken alone they fail to connect thinking about how to sing and actually expressing music with their bodies. This connection embodies the goal of holistic voice pedagogy. My research explores vocal teaching techniques that integrate physical, psychological and musical dimensions of singing using metaphorical tools and principles of kinesthetic awareness.

Presenter: Kelvin Mason—Art

Thought Experiment in Counterfeiting Yields New Printing Technique for Artists

3:15 p.m. (15 min.) | Olin Center 307

The printing processes involved in the production of the world's banknotes are closely guarded secrets. General knowledge of these processes could aid potential counterfeiters, so security is high at the handful of banknote printing companies not only to be sure the finished products of the industry are accounted for, but to ensure that the manufacturing of banknotes is impossible by unauthorized parties. The Pilchuck Glass School engages in very high quality printing for artists. Although they use glass printing plates instead of the steel plates used in the banknote printing industry, the general intaglio printing process is the same as traditional banknote printing. These similarities and the lack of access to information on actual banknote printing fostered a thought experiment that subsequently led to the discovery of a "roller wipe" technique to be used in the domain of fine art printing. Not for counterfeiting. Honest.

Presenter: Emily Matuseski—History

The Interstate Saga

Project Advisor: Dr. Brian Leech

2:15 p.m. (15 min.) | Old Main 117

I will be presenting on my Senior Inquiry. I researched the anti-freeway movements in Duluth, Minn., and Moline, Ill. I plan to give a brief overview of automobile and interstate history, followed by a narrative on Duluth and Moline's interstate stories. Then I will explain my analysis and significance section.

Presenters: Catherine McDermott and Elise McPherson—Interdisciplinary

"Something to Say": Incorporation of Chronic Illness into Adolescent Identity

Project Advisors: Dr. Jason Mahn and Dr. Bob Tallitsch

12:55 p.m. (20 min.) | Olin Center 201

This qualitative multiple methodology study utilized tenets from both narrative inquiry and grounded theory methodologies to examine the influencing factors of chronic illness on identity development in adolescents. Nine adolescents and young adults participated in semistructured, in-depth interviews centered on their experiences of living with chronic illness. We will present the results of our study, which provide insight into how the illness experiences of these adolescents were incorporated into their identities highlighting the (a) effects of illness, (b) rewards reaped from illness, (c) specific coping techniques utilized, and (d) importance of control over the content and structure of one's narrative.

Presenter: Abdul Rahman Merhi—Nuclear Physics

Segmented Target Design

Project Advisor: Dr. Nathan Frank

3:15 p.m. (15 min.) | Hanson Hall of Science 304

Experiments on atomic nuclei provide invaluable information about the structure of these systems. A radioactive beam of nuclei interacts with material producing very excited systems that result in charged particles and neutrons. This material is called a target that is currently made of beryllium, which cannot provide accurate information regarding the interaction point inside of the target. Therefore, the thickness of the target dominates the resolution of these measurements. However, a segmented target that is made of alternating layers of four detectors and three Be-targets solves this problem by allowing a better prediction for the interaction point. In this presentation, I will describe the segmented target design in detail, along with the improvement over the Be-target.

Presenter: Harrison Metcalf—Philosophy

The Inadequacy of Functionalism

Project Advisor: Dr. David Hill

2:45 p.m. (30 min.) | Old Main Forum

Philosopher John Searle's Chinese Room thought experiment is a widely discussed scenario within Artificial Intelligence circles. Its aim is to show how the functional processes of a computer may result in the appearance of intelligence, but fail to truly function as the mind of a human being does. This has sparked much debate as to whether understanding could be generated in a computational substrate. I argue that the resulting debate surrounding this topic is flawed as the focus is primarily upon the computing power of the computer. This focus ignores the primary essence of the mind, which has yet to be replicated in any other substrate aside from within organic beings such as ourselves.

Presenter: Kelsey Moon—Biology (Hematology/Oncology)

The Role of RECQL4 in Rothmund-Thomson Syndrome, Osteosarcoma, and Skeletal Development

Project Advisor: Rebecca Cook

3:15 p.m. (15 min.) | Hanson Hall of Science 327

My summer research focused on the role of RECQL4, a mutated gene in Rothmund-Thomson syndrome (RTS), in skeletal development. By researching this area, I was hoping to discover the possible causes of limb and skeletal abnormalities in the absence of RECQL4 that are seen in RTS patients. To do this, I planned to check the deletion efficiency of Recql4 Prx1-CKO mice in the forelimb using certain laboratory techniques, as well as examine the expression pattern changes in the known pathways which are critical for limb development. The discoveries I made over the summer have opened the door for further investigation into the mechanistic role of RECQL4 in skeletal development.

Presenter: Jorie Muraida—Religion

Designer Babies: An Ethical Dilemma

Project Advisor: Dr. Dan Lee

12:55 p.m. (20 min.) | Old Main 117

This project evaluates genetic engineering and the idea of "designer babies." Specifically, this project explores the ethical implications behind the subject in order to decide if genetic engineering on humans should be done and to what extent. In recent years, advances in reproductive technologies have flourished. Not only are parents able to eliminate undesirable traits, but selecting for desirable traits

are becoming a prevalent issue in genetic testing and engineering today. None of these issues, however, come without ethical implications. Is it ethical to perform genetic screening and tests? Once the tests are performed, what are the ethical next steps? Is it ethical to select positive traits of one's offspring and produce so-called "designer babies?" The list of questions and concerns go on and on. While there are always going to be many ethical issues with the genetic engineering of humans, genetic engineering can be a great benefit to humans when it is being used to benefit the direct health of the individual.

Presenter: Helen Myers—Anthropology

Religious Plurality in an Individualistic Society: Where Do We Go From Here?

Project Advisor: Dr. Adam Kaul

1 p.m. (15 min.) | Olin Center 202

The Interfaith Youth Corps (IFYC) is an organization motivated by the idea of promoting national interfaith understanding through training students to be leaders on their college campuses in an effort to create a network of young people initiating this movement across the United States. Through Renato Rosaldo's theory on positionality and Pierre Bourdieu's theory of habitus, I suggest that the complexity of social movements and the tension between the individual and society have facilitated limitations in the promotion of inter-religious pluralism on colleges within the United States. My research has led me to the question: How do we wrestle with juxtaposition IFYC creates by promoting a religiously and non-religiously plural community through actively enforcing individuality and individualistic ideals?

Presenter: Yasmine Nejdawi—Anthropology

The Sociocultural Experiences of Iraqi Refugees: U.S. Resettlement Post-9/11

Project Advisor: Dr. Adam Kaul

11:45 a.m. (15 min.) | Olin Center 202

The U.S. invasion of Iraq in 2003 and subsequent occupation generated a massive humanitarian crisis that has displaced more than 4 million people with numbers continuing to build. While the war with Iraq has formally been declared over and U.S. troops have since returned home, the country remains in a state of perpetual discord that actively threatens the lives of its citizens. Under the guise of democracy, the government in post-Saddam Iraq serves only to exacerbate the instability and violence that has forced millions to flee its borders. While the majority of refugees have been taken in by neighboring countries, the United States has done little to provide refuge for the displaced. This presentation seeks to shed light on the experience of Iraqi refugees who resettled in the United States and work through the paradox of making a home in the place arguably responsible for taking your own.

Presenters: Alison Nelson, Amy Maplethorpe, Breann Nelson, Kaitlynn Markowski, Jessica Bacon, Alicia Hughes, Brittany Burk, Leah Baumgart, Kerry Robbins—Psychology

The Effects of Culture on Childhood Development

Project Advisor: Dr. Jayne Rose

12:15 p.m. (45 min.) | Olin Center 209

As a result of the study abroad program examining the effect of culture on child development, 20 Augustana students alongside two Augustana professors traveled to Guatemala with the intention to observe and learn from those residing in the country. Prior to our departure, we examined Bronfenbrenner's Ecological systems

theory, in addition to other scholarly works. This theory details how an individual is inextricably linked to their microsystem, mesosystem, exosystem and macrosystem. It is important to note that everything in Bronfenbrenner's theory occurs within a context and that each occurrence can affect a system in a positive or negative manner. As students, we understood this theory and were able to discuss the possible implications with regards to childhood development. However, it was not until we visited the small community of Santa Catarina, Ixtahuacan, that we truly grasped the implications of poverty and violence on those in a developing country. While visiting the community, leaders of el Buen Sembrador (The Good Sower) presented on their association's efforts to provide for those in need. Dedicated to growing food for the 90 percent living in the area that are considered to be in poverty or extreme poverty and have been affected by several natural disasters, this community has demonstrated the importance of building relationships, maintaining relationships and intentionality. The purpose of this presentation is to explain how our experiences deepened our understanding of the scholarly material we read.

Presenter: Natalie Orsi—Biochemistry

Characterization of a Potential Malarial Drug Target Molecule

Project Advisor: Dr. Pamela Trotter

11:30 a.m. (15 min.) | Hanson Hall of Science 327

The Plasmodium parasite is responsible for more than 200 million cases of malaria worldwide, resulting in more than 600,000 deaths. Plasmodium's resistance to the most common treatments is great cause for concern and brings about the quest to develop new drugs to counteract the spread of malaria. Identifying the function of transporter proteins closely related to drug resistance and drug delivery within the parasite is the first step towards finding molecules that could potentially be targeted by future treatments. PKH_050710 is a predicted *P. knowlesi* homolog to a confirmed dicarboxylate/tricarboxylate carrier in *P. falciparum*. Characterization of PKH_050710 using yeast as a model organism involved the purification of yeast expression vectors, cloning of the gene of interest, and the ligation of the vectors and inserts. The growth of large amounts of the recombinant plasmid in *E. coli* and transformation of the recombinant vectors into multiple yeast strains was successful. The function of the gene remains unknown; growth experiments have been inconclusive.

Presenter: Mackenzie Ostermeier—Psychology

Volunteer Work and Intercultural Effectiveness

Project Advisor: Dr. Mark Salisbury

12:45 p.m. (15 min.) | Old Main 132

For my Senior Inquiry, I researched volunteer work and intercultural effectiveness.

Presenter: Richard Pipes Jr.—Classics

The Ancients' View of Race

Project Advisor: Dr. Emil Kramer

2 p.m. (15 min.) | Olin Center 202

What I am researching or looking for in my Senior Inquiry is how the Ancient Roman and Greeks perceived race. I am arguing that they made their guesses and assumptions not from a racial or ethnocentric view, but from an observed view. They would make their assumptions by going back into their own stories, or stories told to them by travelers, or by observation. They tried to explain and justify why the different cultures and races of their time were different. The Ancients perceived race differently than we did which is why I wanted

to research this topic. This area of Classics is not strongly taught and this sparked my interest in the subject. I hope that my findings will shed light on this area.

Presenter: Kimberly Proesel—Philosophy

Breaking Down the Chinese Room

Project Advisor: Dr. David Hill

3:15 p.m. (30 min.) | Old Main Forum

This presentation examines John Searle's Chinese Room argument through an analysis of its logical structure. I will present two interpretations of the argument, as well as the consequences of each. I will use their interpretations to highlight difficulties with Searle's argument, and develop a version of the Systems Response to Searle that further elaborates the underlying problems with Searle's overall perspective. Searle's original argument was intended to show that the so-called strong principle of Artificial Intelligence is false. This is to say that a machine which operates purely syntactically cannot possess understanding, no matter how well it can duplicate human behavior. The Chinese Room functions as an analogy to try to prove Searle's argument.

Presenter: Rachel Przybylek—Religion

The Roman Catholic Traditions of Sex and Marriage through the Eyes of a Cafeteria Catholic

Project Advisor: Dr. Dan Lee

1:30 P.M. (20 min.) | Old Main 117

The Roman Catholic Church, its dogmatic teachings and beliefs are taught worldwide and yet its followers' beliefs are ever changing. Sex and marriage within the Roman Catholic Church is both predictably familiar and frustratingly old. While the concepts of sex and marriage are seen physically evident in the Bible as well as presented during scripture and gospels during Mass, its parishioners are not always listening. Specifically, the Roman Catholic Church or "The Church" has noticed the recent decline in its parishioners' attention towards its teachings or rather selective deafness towards the teachings on marriage and sex. The individuals who are selectively going deaf are called "Cafeteria Catholics," individuals that in short, pick and choose what they want to follow in the Roman Catholic Religion. Discussed and presented will be a summary of the original teachings both past and present on controversial topics for the Roman Catholic Church, such as standards of marriage, cohabitation, artificial contraception, the use of artificial contraceptives in the 20th century and "The Church's" compared views to the traditional teachings, rules and regulations of sex in general as well as specific, and the differing views of the "Cafeteria Catholics." Finally, the impact of the future for marriage and sex for the Roman Catholic Church as well as its parishioners with the placement of a new pope with a more worldly view.

Presenter: Megan Quinn—Art

What I Brought Back From the Prado on My Sabbatical

3:30 p.m. (15 min.) | Olin Center 307

A look at the path of inspiration for new works in clay—starting with the painting of Hieronymus Bosch to the nature photography of Karl Blossfeldt to a new body of work in clay.

Presenter: Kenna Rago—Sociology

The Nature of Human Nature

Project Advisors: Dr. Dan Lee and Dr. Marsha Smith

2:45 p.m. (15 min.) | Hanson Hall of Science 305

This study examines the nature of human nature at Augustana College. I will present the results of a research study that examined the relationship between religiosity and morality that used survey research to obtain data.

Presenter: Katherine Rea—Classics

The Neglected Heavens: Gender and the Cults of Helios and Selene in Bronze Age and Historical Greece

Project Advisor: Dr. Mischa Hooker

2:15 p.m. (15 min.) | Olin Center 202

Why did the Greeks not consider Helios and Selene to be major deities, and why did the Greeks characterize the sun as male and the moon as female? Although the Greeks believed the sun and moon were divine, they also (somewhat disdainfully) associated their worship in a large-scale cultic setting with the barbarians. Despite this, it is from the Greeks that our own Western cultural pairings of sun/male, moon/female are descended. And yet, the Greeks stand out when compared with other Aegean and Near Eastern civilizations with whom the Greeks would have had contact during the Bronze Age before their historical pantheon had solidified, such as the Minoans, Hittites and Ugarit—cultures that not only paid more worship to the sun and moon but also characterized them as the opposite genders. The origins of Greek religion is difficult to trace; we know it is composed of elements from Indo-European culture and from other, non-Indo-European civilizations, but it is not always easy to distinguish which elements came from where. This paper attempts to fill this gap by comparing the cults and mythic roles of Helios and Selene to their counterparts in other Bronze Age civilizations, discussing why the Greeks assigned the genders that they did to the sun and moon, and what may have happened during the Dark Age to deemphasize their place in historical Greek religion.

Presenter: Dr. Michael Reisner—Environmental Studies

Defoliation Decreases Competitive Ability of Resident Plants, Alters the Outcome of Interactions, and Increases Invader Success

11 a.m. (15 min.) | Hanson Hall of Science 305

Biotic resistance induced by competition from resident plants is especially important in limiting the abundance of exotics invaders. Grazing may decrease such resistance by reducing the competitive abilities of resident plants and altering outcomes of interactions between natives and invaders, and thereby increasing invader success. We tested these predictions in Great Basin *Artemisia tridentata* ecosystems that are especially vulnerable to cheatgrass (*Bromus tectorum*) invasion. We conducted a factorial experiment to test interactions between treatments in small un-invaded patches within extensively invaded communities. Treatments included: (1) defoliation timing/frequency (control, spring, spring twice, spring/fall, fall), and (2) preference (native bunchgrasses, bunchgrasses and *B. tectorum*). Treatments involved clipping plants to a 5cm stubble height. Since competition is predominately belowground for water and nutrients, competitive abilities of two native bunchgrass species, *Achnatherum thurberianum* (Thurber's needlegrass) and *Elymus elymoides* (squirreltail), were assessed by measuring fine root biomass from root cores (0-15cm depth) at 5, 15, 30 and 45cm from bunchgrass bases and measuring fine root biomass growth in ingrowth cores and nitrate uptake rates. *B. tectorum* collected from the study site was planted in transects between bunchgrasses at 2cm increments. Established plants were harvested prior to seed maturity and weighed.

Results/Conclusions

All spring defoliations significantly reduced fine root biomass growth of both bunchgrass species ($P < .0001$). In the control, there

was a significant negative relationship between distance from the nearest bunchgrass and fine root biomass, and the model explained 66 percent and 57 percent of the variation in root biomass of *A. thurberianum* and *E. elymoides*, respectively. Except for the fall defoliation, defoliation treatments significantly reduced fine root biomass of both bunchgrass species at 5cm and 15cm and either significantly reduced the strength of (R²) or eliminated (non-significant) this negative relationship. The same defoliations also reduced nitrate uptake rates. All defoliation treatments significantly increased *B. tectorum* biomass (P<.0001) and the preference treatment was not significant (P=0.452). In the control, there was a significant positive relationship between distance from the nearest bunchgrass and *B. tectorum* biomass. All defoliation treatments either significantly reduced the strength of or eliminated this positive relationship. Overall, these results demonstrate that bunchgrass competition reduces *B. tectorum* biomass and likely slows its rise to dominance. Spring defoliations reduced the competitive ability of both bunchgrass species, increased the size of belowground gaps where resources are likely more available, and altered the outcome of interactions between bunchgrasses and *B. tectorum*. Ultimately, these defoliation-mediated changes increased *B. tectorum* biomass.

Presenter: Vanessa Reyes—Political Science and History

Educational Inequality and the Failed American Dream

Project Advisor: Dr. Christopher Whitt

3:05 p.m. (20 min.) | Olin Center 201

This presentation will be based on the findings and conclusions of the research I did for my Honors Capstone project, an examination of the history of the public education system, from kindergarten to high school, and its relation to the American Dream. The American Dream, an influential and foundational American ideology, promises that in America there are enough opportunities for all individuals to become successful, as long as they work hard. This promise has been intertwined with education. However, the education system has become an arena for social inequalities, especially along class and racial lines, to be created and reproduced. Because of this, the promise of the American Dream is undermined. By demonstrating how education and the American Dream are connected and how the two interact to exacerbate social inequalities, this research provides an oft-overlooked piece to the problem of inequality.

Presenter: Simone Roby—Women and Gender Studies

Sexual Assault Prevention: Beyond What Not to Do

Project Advisor: Dr. Jennifer Pople

11:15 a.m. (15 min) | Old Main 117

I would like to present information about sexual assault prevention, particularly on college campuses. Sexual and gendered violence continue to be some of the most frequently committed types of violence on college campuses, including Augustana. Although strong attempts have been made to reactively protect students from sexual assault and gendered violence, I would like to present about proactive methods of prevention. I would specifically like to present about the social psychology associated with the willingness to intervene, community-oriented aspects of prevention, and bystander intervention strategies. I would also like to talk about current sexual assault prevention programs and what makes them effective, as well as explore which program might be most effective for sexual assault prevention at Augustana. Lastly, I hope to engage listeners with a few interactive exercises, in which they practice community-building and apply prevention techniques to scenarios.

Presenter: Deanna Rowe—Computer Science, Business Administration and Mathematics

Big Data's Big Splash

Project Advisor: Dr. Tom Bengtson

3:30 p.m. (15 min.) | Hanson Hall of Science 304

In the last two years, 90 percent of the world's data was created; what are the impacts of this in our daily lives? How can this information be utilized to increase efficiencies in predictive analytics for companies? For example, IBM has created software to predict where and when crimes are likely to happen. This allows police to be in the right spot at the right time, decreasing the crime rate. However, what happens when this software places an officer at a crime scene before the criminal arrives. Does that mean the police officer should arrest the criminal even though they have yet to commit the crime? Big Data still cannot predict what a person will choose to do in the moment, so we must ask at what point do these predictions strip people of their free will? This presentation will touch on the implications of how we interact with the internet and our phones on a daily basis and briefly highlight how companies collect, store and manage the vast amount of data they are collecting. The goal is to inform the audience on data collection. It's possible future uses as correlations between behaviors are found and applied, and the ethical concern behind more efficient predictive algorithms.

Presenter: Amelia Ruzek—Interdisciplinary

Games, Learning, and This Thing Called Fun

Project Advisor: Kelvin Mason

3:25 p.m. (10 min.) | Olin Center 201

In recent years, educational mobile games have gained increasing popularity within the classroom. In this presentation, I will share the process of my own educational game's creation as well as my interpretation of any game's most important aspect—fun—and its contribution to learning. Join in my exploration through research, concept, design, graphics and coding. Learn how you too can start developing games today!

Presenter: Lea Schilke—Sociology and Psychology

Attitudes Towards Mental Illness

Project Advisor: Dr. Marsha Smith

2 p.m. (20 min.) | Old Main 117

Mental illness often is associated with negative stereotypes and stigmas. These views can be damaging to individuals living with mental health problems and can impact their self-esteem and desire to seek necessary psychiatric help. My research examined how Augustana students view mental illnesses as a whole and specific disorders independently. This study shed light on attitudes held towards mental illnesses while looking into possible influencing factors. The categories that were tested to determine connections with attitudes towards mental illness included previous exposure to and relationship with various disorders, comfort level, media consumption and college majors/minors. The commonality and abnormality of disorders also was considered when searching for factors that are related to attitudes towards mental illnesses. Results indicated that exposure to mental illness and social science studies yielded positive influence on attitudes and that more common disorders were viewed more positively. On the other hand, overall media exposure yielded negative attitudes and less common and more abnormal disorders were viewed more negatively. This research revealed interesting results regarding how Augustana students view mental illnesses and different aspects of mental health.

Presenter: Dr. Mike Schroeder—Education

Engaging Teaching Methodologies: Advice from the Frontiers of Cognitive Science

11:45 a.m. (15 min.) | Olin Center 307

During my fall 2012 sabbatical, I investigated some of the latest research regarding teaching methods and techniques which impact student learning. In essence, the research involved an extensive review of recent journal articles and books from fields associated with cognitive science. I undertook this effort with an eye towards completing the 2nd edition of my teaching methods book *Constructivist Methods for the Secondary Class: Engaged Minds*, which I co-wrote with Ina Gabler in 2003.

Presenter: Emily Seminary—Biochemistry

Activity of Plasmodium knowlesi glutamate dehydrogenase in Saccharomyces cerevisiae

Project Advisor: Dr. Pamela Trotter

3 p.m. (15 min.) | Hanson Hall of Science 327

One method of treating disease is targeting a specific enzyme involved in the invading organism's amino acid metabolism. In this pursuit, glutamate dehydrogenase (GDH) has been studied extensively in *Plasmodium falciparum*, a malarial parasite. However, due to the A+T content of *pfGDH*, the gene is not able to be introduced into other organisms very easily. This limits the extent to which inhibitors for this gene can be studied. Therefore, GDH in the other malarial parasites have become a focus. In this study, GDH2 from another malarial parasite, *P. knowlesi*, was introduced to *Saccharomyces cerevisiae* by inserting the gene sequence into two different plasmids. Once this was completed, the enzymatic activity was determined by performing GDH assays.

Presenter: Emily Seminary—French

Heredity and Eugenics: How Our Understanding of Heredity Led to the Eugenics Movement in France

Project Advisor: Dr. Sarah Skrainka

1 p.m. (15 min.) | Olin Center 209

The eugenics movement typically is considered today as the work of prejudiced people manipulating science in the name of social hygiene. According to this view, this manipulation ultimately led to a movement in many western countries that sterilized innocent victims who were declared too flawed to breed. While this statement certainly has some truth to it, it is neither an entirely correct nor a fair view of this portion of western history. When one analyzes it with a more neutral eye, one can see that while eugenics had many faults that, coupled with the social context, ultimately caused its demise in the mid-20th century, there are many attractive goals of social hygiene that made it difficult for many to oppose. Also, when one considers the comprehension of heredity at the time, it can be seen how many believed they had scientific evidence on their side. For this Senior Inquiry project, I analyzed how the understanding of heredity at the time, as well as the social context, logically lead to eugenics taking hold across the western world and how the movement in France differed from the more extreme practices in the United States and Great Britain.

Presenter: Hope Shiel—Sociology

Beyond the Bubble: Analyzing Data from the Rock Island Community Survey

Project Advisor: Dr. Marsha Smith

3 p.m. (15 min.) | Hanson Hall of Science 305

Early this fall, the Rock Island City government conducted a survey of its residents to explore a number of issues that are important for future strategic planning. Using data gathered by the city, my research explores a series of questions concerning quality of life, safety and the effectiveness of local media in disseminating information about city events, services and other issues.

Presenter: Kyle Soyer—French

Defending a Culture, Departing Tradition: The Music of Zachary Richard and the French Language in North America

Project Advisor: Dr. Sarah Skrainka

1:45 p.m. (15 min.) | Olin Center 209

Since French-speaking settlers first arrived in Canada in the 17th century, the music they brought with them has developed several characteristics and styles. At the same time, it has remained in a constant state of evolution and flux due to interactions with other cultures and their music. This evolution has continued despite the hardships endured by French Canadians, including the forced expulsion of Acadians from New France in 1755 and, later, Louisiana's 1916 Compulsory Education Act prohibiting French in schools. Moreover, it is a testament to the change in cultural identity change caused by the 1755 expulsion that transformed a group of migrant Acadians to Louisiana's Cajuns.

Nowhere is this evolution more clear than in the songs of Cajun musician Zachary Richard, who uses his music to promote and defend the French language in North America. In this project, I analyze how Richard promotes Cajun, Creole and Acadian history and culture despite several marked departures from the very traditions he seeks to preserve. These departures include his heavy use of jazz, blues and country elements in his songs, and his atypical word choice. Traditionally, lyrics in Cajun and zydeco songs have been chosen for their sound and rhythm, rather than for meaning, coherency or story telling. However, although Richard has several songs with traditional melodic styles, his lyrics are often quite narrative, with a focus on Cajun and Acadian history or the environment.

Presenter: Sara Strever—Psychology

Psychosocial Functioning in Cancer Patients Prior to Facial Reconstruction

Project Advisor: Dr. Heidi Storl

11:15 a.m. (15 min.) | Hanson Hall of Science 102

Body image is a critical psychosocial issue for patients with facial cancers, as treatment can significantly affect physical appearance and functioning. However, there is limited research conducted in this area focusing specifically on patients undergoing reconstructive treatment. This study aims to evaluate body image perceptions, psychosocial functioning, and quality of life in patients about to undergo facial reconstruction. Ultimately, this information will be critical for identifying factors that place individuals at the highest risk for adverse psychosocial functioning during survivorship. Patients with facial cancers about to undergo reconstructive surgery completed a battery of self-report questionnaires (n=140). Our sample typically reported significantly better body image perceptions than available norms. Females reported significantly worse body

image perceptions than males on most measures. Adequate psychometric properties were demonstrated on a range of body image measures. Although our sample generally had better body image perceptions than available norms, some participants reported significant body image concerns. Our findings will be critical for serving as a baseline comparison for patients with facial cancer throughout the reconstructive process and developing targeted psychosocial intervention programs.

Presenter: Nicole Swanberg—Environmental Studies

Assessing Augustana Faculty, Student and Staff Awareness, Attitudes and Priorities of Campus Sustainability With Respect to Environmental Worldview

Project Advisor: Dr. Michael Reiser

2:15 p.m. (15 min.) | Hanson Hall of Science 327

To assess Augustana's campus sustainability priorities, behaviors and awareness for my environmental studies Senior Inquiry, I conducted a survey of Augustana students, faculty and staff using a variety of behavioral, New Ecological Paradigm, and knowledge-based questions. The results were analyzed using SPSS statistics software, and I found that priorities, behaviors and awareness differed among worldview groups. I hope that the findings will be implemented into Augustana's Sustainability Plan.

Presenter: Dr. Rosita Tendall—Music

Augustana Orff Chapter Inception and Continuing Music Education Community Collaboration

1 p.m. (15 min.) | Old Main 132

ESL elementary-age students who participated in singing and moving activities over a six-month period increased their English language skills faster than a control group of ESL students.

Presenter: Megan Vander Wall—Internship

Chaplaincy: Beyond the Misconceptions

Project Advisor: Dr. Heidi Storl

12:30 p.m. (15 min.) | Hanson Hall of Science 102

Chaplaincy is a profession that is widely misunderstood. Being a chaplain does not explicitly mean being religious; being a chaplain is about compassion, understanding, crisis intervention, counseling, spiritual care, etc. While participating in the Texas Medical Center Internship, I focused my energy on the misconceptions of chaplains, their work, and the training they undergo in preparation to become chaplains. The first misconception I focused on was the popular conclusion that everyone and anyone can be a chaplain in a tier 1 hospital with no prior education. While this is a common thought, being a chaplain in a tier one hospital is similar and perhaps even more rigorous than any other degree and certification process. Chaplains within the hospital setting also are subject to judgments about their religious intentions. It is commonly thought that chaplains are available only for those who are religious and are in the business of converting those who do not have a religious affiliation. Another common misconception of the chaplaincy profession is the thought that due to the decline in support for organized religion, chaplains are no longer necessary. These misconceptions help make up the negative connotation that surrounds the chaplaincy profession today. However, while working at the M.D. Anderson Cancer Center among skilled chaplains, whose words and actions proved these impressions to be false, it became clear that chaplaincy is a hidden gem among the helping professions, incorporating interfaith ministry, religious and secular perspectives, and a simple helping hand.

Presenter: Megan Vander Wall—Religion

Confidentiality and the Client-Counselor Relationship

Project Advisor: Dr. Dan Lee

1:45 p.m. (20 min.) | Old Main 117

Confidentiality is a principle that is important in many aspects of today's society. When one goes to the doctor, one assumes his or her record is sealed and the doctor has a legal obligation to keep the patient's medical condition and history private. Similarly, when a client speaks to a lawyer, their conversations are considered private and are protected. In the same way, counseling professionals such as licensed counselors, psychologists, chaplains, etc., are required to keep a high level of confidentiality contributing to a healthy counselor client relationship and allowing for a safe counseling environment. The goal of this project is not to downgrade the importance of confidentiality, but rather to reinforce its importance by engaging in the ambiguities that are evident in decisions regarding confidentiality. While confidentiality is important and should be highly respected, it is also just as important to be able to recognize when confidentiality needs to be breached. Some may argue that confidentiality should be absolute, in that a client's confidentiality should never be breached. However, in cases in which a third party or the client himself/herself is in imminent danger, absolute confidentiality does not work to protect all lives involved in a situation. There are certain situations in which breaching confidentiality is not only important, but necessary. It is the job of the counseling professional to be able to assess these types of situations and decide whether it is appropriate to either respect confidentiality or breach a client's confidence.

Presenter: Natalie Viscariello—Physics

Development of a High-Precision Brachytherapy System

Project Advisor: Dr. Heidi Storl

2:45 p.m. (15 min.) | Hanson Hall of Science 304

In radiation treatments, in vivo dose verification helps minimize damage to tissues surrounding the tumor. The goal of this project was to develop a precise positioning system in a phantom to measure dose from brachytherapy seeds using plastic scintillation detectors. This helps characterize the response of the detectors for their potential uses in vivo.

Presenter: Katie Vonderheide—Elementary Education

Making Lives Better For Children With Cancer

Project Advisor: Dr. Heidi Storl

11:30 a.m. (15 min) | Hanson Hall of Science 102

Children's Art Project (CAP) is a company created to implement art into a child's life while they are undergoing the hardships of cancer. Not only is art used to brighten the children's spirits, but this unique company helps in a various other ways. CAP creates products using these pieces of art made by the children, to then sell to the public. The money raised from these sales is then used to provide many opportunities for the children at the hospital, from summer camp to college scholarships.

Presenter: Jalayna Walton—English

Nikki Giovanni: Black Female Voices in Poetry of Witness

Project Advisor: Rebecca Wee

11:30 a.m. (15 min.) | Old Main 117

"Poetry of witness" is artistic expression with political implications. While the political implications may or may not be intentional, they are expressed in times of great need for such. While the poet writes,

creates and speaks out from a place of personal desire and need, his or her work often ends up speaking to the experiences of many and representing a collective. Nikki Giovanni has always had a massive following from the publication of her first book through the present day. Her voice poignantly speaks to the experiences of hundreds of black people in regards to black life and leadership. However, during her time of emergence she was rejected from the elite circle of poets. Here, I break down the reasons behind Giovanni's rightful place as an influential poet of witness during the Black Power Movement and the impacts she's made for black women in today's world in topics such as racism, sexism, feminism and the intersections of these topics.

Presenter: James Wiebler—Biology

Characterizing the Cold-Conditioning Response in a Vertebrate Ectotherm

Project Advisor: Dr. Tim Muir

11:45 a.m. (15 min.) | Hanson Hall of Science 327

In winter, ectothermic animals experience low body temperatures and must physiologically adapt to withstand the stresses of cold. Seasonal increases in cold hardiness have been well studied; however, a more rapid and supplementary increase in cold hardiness recently was reported in hatchling painted turtles (*Chrysemys picta*). This cold-conditioning response, induced by brief exposure to subzero temperature, increased cold hardiness and increased blood concentrations of glucose and lactate. To determine the thermal dynamics necessary to elicit this response, winter-acclimated turtles were chilled to modest subzero temperatures (-3.5, -7 or -10.5°C) gradually over five days or were repeatedly chilled to those temperatures in 24-hour cycles over five days. Turtles from both experiments were then cold-shocked to -12.7°C during the subsequent 48 hours to assess their cold hardiness. Turtles gradually chilled to -3.5 or -7°C and those repeatedly chilled to -3.5, -7 or -10.5°C had significantly higher survival after cold shock than did turtles from a control group. My results suggest that the cold-conditioning response can be elicited by a range of subzero temperatures and that naturalistic temperature fluctuation may further enhance cold hardiness. Generally, cold conditioning was accompanied by elevated glucose and lactate in the liver, blood and brain, suggesting the turtles mounted an adrenergic response and were subjected to moderate hypoxia, respectively. By correlating survival with cryoprotectant accumulation in cold-labile organs, I hope to shed light on potential protective mechanisms used by hatchling painted turtles and to further understand the underlying mechanisms of the cold-conditioning response.

Presenter: Kelsey Winter—Biology

A Clinical, Pathological and Immunohistochemical Analysis of Low, Intermediate and High Grade DCIS

Project Advisor: Rebecca Cook

11:45 a.m. (15 min.) | Hanson Hall of Science 102

The increasing use of mammography as a screening tool and recent advances in breast imaging techniques have resulted in *in situ* lesions, namely *ductal carcinoma in situ* (DCIS), to be diagnosed with increasing frequency. Traditionally the nuclear grade of the DCIS has been considered as one of the significant prognostic markers of clinical outcome; the higher the nuclear grade, the worse the clinical outcome, and increased risk of recurrence or progression to invasive carcinoma. In spite of the increasing diagnoses and clinical relevance, the criteria for nuclear grading of DCIS have been a matter of contention. Currently there are eight different schemes of classification of DCIS depending upon a combination of

factors. These criteria can be very subjective with moderate to low inter-observer reproducibility. Although the natural history of DCIS still remains an enigma, there is a consideration that half of the untreated DCIS will either recur or progress to invasive carcinoma. It is believed that many cases are being over-treated. Hence there is a need to understand the biology of the disease and seek clinical, histologic as well as molecular criteria for risk assessment of DCIS for appropriate treatment. Evaluation of the protein expression at subcellular levels in the different grades of DCIS will help us develop objective criteria to define the various grades of DCIS. Also it will facilitate the understanding of the biology of disease progression from low to high grade.

Presenter: Jennifer Wood—French

The Science of Teratology and the Advancement of Stem Cells

Project Advisor: Dr. Sarah Skrainka

3 p.m. (15 min.) | Olin Center 209

The science of teratology in the 19th century concerned itself with the study of monstrosities. The first big contribution to teratology was the work of Isidore Geoffroy Saint-Hilaire, *l'Histoire Générale et Particulière des Anomalies de l'Organisation chez l'Homme et les Animaux*, published in 1832. His classifications of monsters on scientific bases formed the foundation of the science of teratology, the artificial production of monstrosities in animal embryos. In this paper, I argue that there is a link between teratology (teratomas in particular) and stem cell research. In doing so, one can see that the most recent advances in stem cell research bring us back to the questions that shaped 19th-century investigations on the nature of monstrosities.

Presenters: Joseph Wood—Political Science

Examining Contextual Determinants: Extracting Lessons on Civil War from the Case of Lebanon

Project Advisor: Dr. Mariano Magalhães

3:45 p.m. (20 min.) | Olin Center 201

The purpose of this investigation is to analyze the various factors contributing to the outbreak of the Lebanese civil war. Occurring from 1975 to 1990 and involving more than a dozen conflicting factions, this prolonged rash of violence provides one of most bizarre and unfortunate examples of internal, violent conflict. The focus of this paper, however, lies neither with the events of the war itself nor the aftermath, but with the period leading up to the war, roughly from the end of World War I until the 1970s. This investigation will seek specifically to deepen the understanding of the causes of civil wars using the case of Lebanon, particularly those causes pertaining to ethnicity, identity and inequality. By doing so, I propose more nuanced representations of such causes in both theoretical and statistical models, making suggestions that could augment the way scholars analyze civil wars.

Presenter: Madison Wynes—History

A Five-Hundred-Year-Old Problem: Colonialism, Sexualization, and Violence Against Native American Women

Project Advisor: Dr. Jane Simonsen

11:45 a.m. (15 min.) | Old Main 117

My project consists of a study regarding the depictions of Native American women throughout history as a way to understand the ways in which domestic violence affects them today.

I will first examine early depictions of Native American women from travel narratives (notably those by John Smith and Hernan Cortes) dating back to the 16th and 17th centuries. These early narratives

depict Native American women as sexual and subjects of conquest by European men. I will then show how these characterizations have continued throughout history by examining several Western films from the mid-20th century. Generally speaking, Western films depict Native American women in essentially the same way as the early travel narratives. I will then show how those same themes are evident today, through popular films (namely “Pocahontas” and “The New World”). Finally, I will show how this linear view of Native American women as sexual objects has manifested itself as a key component of the group’s high rate of suffering from domestic violence, which is 2.5 times higher than any other group, according to the United States Department of Justice.

Presenter: Kristen Yerkes—Communication Sciences and Disorders

Speech Pathology and the Palliative Care Patient: True Vocal Fold Augmentation for Vocal Fold Paralysis

Project Advisor: Dr. Heidi Storl

12:45 p.m. (15 min.) | Hanson Hall of Science 102

Palliative care is the multidisciplinary system of delivering care to patients with life-threatening, terminal illnesses to prevent and relieve suffering of the patients and families. It is a holistic approach of treating the symptoms—physical, psychosocial, emotional, cultural and spiritual suffering—rather than the physical cause of disease (World Health Organization, 2002). The Speech-Language Pathologist (SLP) can be an integral member of the palliative care team to determine the best options for symptom management of a patient suffering from impairments in cognition, communication or swallowing. A common dysfunction treated by the SLP is true vocal fold paralysis (TVFP), which is characterized by immobility of one or both vocal folds. TVFP can jeopardize the integrity of laryngeal function, swallow function, and vocal function, and may require treatment to maintain quality of life and sustain the overall health of the patient. Vocal fold augmentation is a common treatment option for vocal fold paralysis. The two types of augmentation are injection laryngoplasty—a temporary injection into the affected vocal fold—and medialization thyroplasty, a permanent prosthesis placed in the vocal fold. Research shows that injection laryngoplasty can be advantageous in the palliative care setting, as it is a less invasive out-patient procedure, can be performed during the treatment schedule, and provides immediate results. A future academic plan at M.D. Anderson Cancer Center is a retrospective case study that will examine palliative care patients that receive injection laryngoplasty within 12 months of mortality to determine the post-treatment functional and laryngeal outcomes.

Presenter: Margaret Yuk—Biology

Late-radiation-associated dysphagia (late-RAD) with lower cranial neuropathies (LCNP) in long-term oropharyngeal cancer (OPC) survivors: Case reports

Project Advisor: Dr. Heidi Storl

1 p.m. (15 min.) | Hanson Hall of Science 102

LCNP are a rare complication of radiation, typically reported in nasopharyngeal cancer survivors. Limited data examine LCNP after treatment of OPC, particularly as they relate to late-RAD. Cases with late-RAD and LCNP in survivorship after OPC were examined longitudinally. Late-RAD was assessed per MBSImp, PAS, PSS-HN and MDADI; LCNP per clinical cranial nerve examination and laryngeal videostroboscopy. Two cases presenting with LCNP and late-RAD four and a half and 19 years after nonsurgical organ preservation were examined for six and four years, respectively. Distinct trajectories of late-RAD were seen in the setting of stable versus progressive LCNP. Phenotypes of dysphagia mirrored loss of specific cranial nerve functions, and standardized scores indicated profound impairment in both cases. Late-RAD with LCNP causes profound functional impairment and adversely affects quality of life. Radiation-associated LCNP can be a stable or progressive condition. Trajectories of late-RAD may coincide with loss of cranial nerve function.

RESEARCH POSTER PRESENTATIONS

Presenter: Nick Alonso-Emanuel—Psychology

Joke Cruelty and Appreciation in Regards to Empathy and Background Incongruity

Project Advisor: Dr. Daniel Corts

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #2

The purpose of this study was to investigate the roles of trait empathy and background incongruity in perceived joke appreciation and joke cruelty. The study suggests that those with high trait empathy will have a strong negative relationship. High background incongruity will also create a strong negative relationship between the two.

Presenter: Diana Boudreau—Paleontology

*Osteohistology of *Cryolophosaurus ellioti*: Tempo and Mode of Growth in a Large-bodied Polar Dinosaur*

Project Advisor: Dr. William Hammer

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #18

The Early Jurassic theropod, *Cryolophosaurus ellioti* (*Dinosauria: Theropoda*), was discovered in 1991 in the Hanson Formation of Antarctica. To date, it is the most complete dinosaur skeleton found in Antarctica. Here we describe bone microstructure in some axial and appendicular bones of *C. ellioti* and discuss histological variance at the individual level. Examination of histological slides under a light microscope with polarizing lens reveals mild to strong presence of lines of arrested growth (LAGs) in three to five elements, indicating slowing growth. The femur, fibula and radius show signs of moderate to severe remodeling, diminishing the number of annual markers, whereas axial elements preserve more of the growth record. The number of LAGs missing due to remodeling were estimated by fitting sigmoidal growth curves to LAG circumference in PAST[®]. Based on these results, the estimated age of the *C. ellioti* holotype is roughly 16 years old. Of those 16, 11-13 growth marks were directly observed in thin section while up to five were inferred missing by PAST[®] calculations. Patterns of diminishing growth match other skeletal indicators of subadult status (e.g., closed, but visible neurocentral sutures in the vertebrae), but contrast with rapid bone deposition observed in the femur. Prevalence of woven bone between widely spaced LAGs in the femur, indicating ongoing rapid growth, differs from the lamellar bone between narrowing LAGs found in the axial elements indicating slowing growth. Regardless of the variations, these observations add to the evidence that *C. ellioti* represents the largest known Early Jurassic theropod.

Presenter: Josh Brown—Biology and Religion

Genetic Piety

Project Advisor: Dr. Sean Georgi

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #19

Our inquiry was formed during the discussion of a study involving a serotonin transporter promoter (5-HTTLPR) polymorphism, which has been associated with spiritual acceptance. In the examined study (Nilsson et al. 2007), volunteering 16 to 19-year-old secondary school students in Sweden were investigated for the presence of the 5-HTTLPR gene, which contains an individual-dependent short and/or long allele variation. The shorter allele is correlated with less serotonin re-uptake activity, while the longer allele contrasts. To determine whether genotype had an effect on spirituality, the students in this study were administered Cloninger's TCI, an inventory used for investigation of temperament and character

traits. Their results showed a significant effect of genotype on spirituality only in males, with those having the long allele showing lower spirituality.

In order to corroborate their findings, volunteering 18 to 21-year-old undergraduate students at Augustana were genotyped using buccal swab and polymerase chain reaction (PCR) techniques. To assess levels of spirituality, we administered the TG-323 Spiritual Attitude Inventory from the U.S. Army. This poster will present the results of our study.

Presenters: Annette Bugno, Jennifer Vanderpool, Timothy Michaels—Biology

*An investigation of one-component regulators in *Myxococcus xanthus**

Project Advisor: Dr. Kimberly Murphy

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #20

Myxococcus xanthus is a Gram-negative bacterium commonly found in soil that uses adventurous and social motility systems for gliding motility. When *M. xanthus* cells are unable to find sufficient nutrients, a complex developmental program is initiated that allows large groups of cells to begin building fruiting bodies. The multicellular behavior of development is an intensely studied area in *M. xanthus* biology. However, the role of one-component regulators in development has not been investigated. Therefore, the genes corresponding to one-component regulators within the *M. xanthus* genome were disrupted. Resulting mutants were assayed for motility and fruiting body development. Among the mutants tested, a small number showed defects in motility or fruiting body development.

Presenter: Jordan Carey—Geology

Effects of Basin Subsidence on Experimental Delta Sedimentation Patterns and Surface Morphology

Project Advisors: Chris Paola, Dr. Jeffrey Strasser

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #35

Tectonic subsidence has been recognized as an important factor affecting surficial patterns of delta morphology. However, the link between subsidence and its manifestation in surface morphology is still unclear. Fluvial systems actively undergoing subsidence have an uncanny ability to fill in the newly created space. The rate at which sediment is deposited is adjusted to the rate of subsidence, on average. Here we present an analysis of two experiments conducted using the Experimental EarthScape (XES) basin. The XES basin allows for the study of sedimentological and geomorphological characteristics under controlled conditions of sediment/water supply, base level, and subsidence rate and geometry. We observed transitional flow deposits (fan structures), channel mobility and depositional bar formation in response to two varying types of subsidence; XES-02 experienced passive margin style subsidence, while XES-10 underwent foreland style subsidence, both of which had temporally constant subsidence. We found that depositional bars and transitional flow deposits on the surface of the deltas gave us conflicting results with our hypothesis. However, an analysis of channel mobility seemed to account for the inverse correlation, with subsidence, in depositional bars and transitional flow deposits. We conclude that depositional features at the surface account for less of the net deposition than previously thought, while the large portion of deposition occurs in the areas where the channel is highly mobile. We show that, experimentally, varying types of subsidence geometries express themselves differently at the surface, and an understanding of surface process can provide insight to subsidence geometry.

Presenters: Stuart Casarotto, Peter Draznik, Mark Hoffmann—Physics, Mathematics and Computer Science

Real Time Visualization of Music Using Arduino

Project Advisor: Dr. Tom Bengtson

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #11

We will present our Arduino powered music visualizer. Over a two-year process, we engineered a way to visualize music in real time by means of signal processing techniques and a custom built LED matrix. Our presentation will focus on the process we took to reach our final product. We will also demonstrate the product and allow anyone to test his or her own music and see it visualized in real time. Additionally, we will be willing to talk in detail about any portion of the development process or final product. This project was completed under the direction of Dr. Bengtson and the Beling Scholarship Program.

Presenters: Hailee De Wild, Abigail Jones—Biology

A Comparative Analysis of Groundwater, Surface Water and Surface Water with Rainwater Runoff

Project Advisor: Dr. Kevin Geedey

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #43

The study consisted of a comparative analysis of groundwater, surface water, and surface water containing a runoff event in four streams located in Rock Island and Moline. When comparing the three types of water, phosphorus, ammonia and nitrates were the nutrients that were looked at. Other parameters analysed were the pH, dissolved oxygen percent, salinity, total dissolved solids and conductivity. These parameters were used to hypothesize as to whether any pollution in the streams was coming from the ground or the surface environment.

Presenters: Stephen Dempsey, Hunter Winstead—Chemistry

Synthesis of Novel TLR-7 Agonists

Project Advisor: Dr. José Boquín

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #31

We were tasked with synthesizing novel chemical compounds that are biologically active on toll-like receptor 7. These compounds could hopefully be used in the treatment of many diseases. Our presentation will detail this synthesis, as well as some future goals for the project.

Presenter: Erin Doty—Psychology

Time Restraints on Perceptions of Fit in the Résumé Process

Project Advisor: Dr. Daniel Cortis

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #4

Résumés can be considered one of the most important tools used during the initial stages of the hiring process for an available job. Hiring managers use résumés to make quick judgments about a candidate and his/her fit with the job, organization, and others persons in the work environment. These judgments are called perceptions of fit (PoF). The average time a hiring manager spends looking at a résumé is about 45 seconds (Arnulf, et al., 2010). This may not be enough time to make careful decisions about hiring a candidate; however, thin-slice research shows that quick reviews may be beneficial in focusing on what is most important for the job (Ambady, 2010). This study was conducted to see how time pressure and workload affect hiring decisions when looking through résumés. The following hypothesis was examined: With more time

and less résumés, one will pay more attention to person-person (P-P) perception of fit, gaining more knowledge of the candidate as a whole. As time pressure and workload increase, one will pay more attention to work experience and person-job (P-J) fit. Bivariate correlations and a 2x3 mixed analysis of variance were conducted. Results showed significant correlations between person-job fit, person-organization fit and hiring recommendations, but no significant results for person-person fit. Also, participants in the heavy workload condition felt a greater sense of pressure under the time limit. Part of the hypothesis was supported. Even though the other correlations trended in the right direction, there were no significant differences.

Presenter: Joshua Eisenberg—Biology

Characterization of Transcription Factors Expressed During Chicken Retinal Development

Project Advisor: Dr. Sean Georgi

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #21

The retina is a light-sensitive layer of tissue that lines the inner surface of the eye. During the development of the retina, a group of multipotent progenitor cells give rise to seven different cell types. The aim of this study is to provide a preliminary characterization of the expression of the transcription factors NFIL3 and NCOA3 through the course of retinal development; two transcription factors that are known to be influenced by the addition of microRNA (Georgi and Reh 2010). Through the use of polymerase chain reaction (PCR), I was able to examine the expression levels of the two genes throughout development, and hypothesize the role in which NFIL3 and NCOA3 play in the differentiation of the retinal cells.

Presenter: Carlisle Evans Peck—Environmental Studies

“Over the River and Through the Woods”: An Analysis of Understory and Canopy Plant Diversity in Urban Riparian Forests

Project Advisor: Dr. Michael Reisner

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #45

As population growth explodes and urban areas expand, studying the ecology of urban areas has become increasingly important. Urban development can have disastrous effects on biodiversity, but urban landscapes also hold the potential to harbor and support valuable biodiversity. I studied the understory herbaceous plant and overstory tree canopy diversity of eight forested ravines in the small cities of Rock Island and Moline, Illinois, surrounded by a range of urban development intensity. Herbaceous understory communities were found to be dominated by early successional and invasive species. The quality and diversity of the herbaceous communities were negatively associated with increasing intensity of urbanization. Overall, the ravines are of moderate to minimal biodiversity significance. Given that urbanization was found to have a significant negative effect on native biodiversity, I suggest that the ravines and the surrounding neighborhoods be properly managed in order to improve the ecological and social well being of the Quad-Cities area. This includes removal of impervious surfaces, use of native species landscaping, and social awareness of the value of local forests.

Presenter: Dr. S. Fenwick—Psychology

Active and Collaborative Approaches in Core Classes

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #5

Statistics and Research Methods form the foundation of our developmental approach to the psychology curriculum. Student interest in these classes tends to be low as the topics are not inherently interesting. To engage students and improve motivation in these crucial areas, we have redesigned our classes to include

short- and long-term group projects while reducing lecture time. Activities incorporate self-explanation, distributed and interleaved practice, and collaboration. The goal is to ensure a uniform level of prior knowledge as students enter lab courses. Specific assignments are presented and evaluated.

Presenters: Marcela Fitzpatrick, Melissa Gunlogson, Devon Pace, Cammie Ruhl—Neuroscience

Effects of Religiosity and an Implicit Religious Prime on Behavioral and Physiological Responses to Moral Dilemmas

Project Advisor: Dr. Ian Harrington

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #9

Normative ethics offers two broad approaches to moral reasoning. The deontological approach is rule-based (e.g., “thou shalt not kill”), whereas the consequentialist approach involves assessing the likely outcomes of the options. In utilitarianism, for example, moral decisions are motivated by efforts to bring the greatest good to the greatest number of people. Moral dilemmas are known to differ in their ability to elicit emotional responses (Greene et al., 2001), and these responses are thought to influence moral reasoning (Damasio, 1996). Studies also have demonstrated that implicit religious primes can increase pro-social behavior (e.g., Shariff & Norenzayan, 2007). The goal of the present study was to determine whether an implicit religious prime would promote a more deontological approach to moral reasoning. We recorded behavioral responses, reaction times, and skin conductance responses (a proxy measure of sympathetic nervous system arousal) while participants responded to a number of moral and non-moral scenarios (Koenigs et al., 2007). For the first five minutes of the experiment, participants were asked to sort plastic beads by color under the pretense that it would allow them to “relax” before testing. Half of the participants sorted simple shapes (control), while the other half sorted crucifixes (religious prime). Participants also answered questions about their level of religiosity. We hypothesized that the religious prime would promote deontological reasoning and reduce emotional responsiveness. We also expected that the more religious participants would be less likely to endorse utilitarian decisions and faster to render their decisions overall. Data analyses are ongoing.

Presenter: Melissa Granados—Psychology

Mental Health Assessment: Evaluation Bias with Deaf Individuals

Project Advisor: Dr. Daniel Corts

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #10

Mental health evaluation in populations of deaf individuals has been lagging behind hearing populations for some time. Research shows that deaf patients leave their health-care providers without being asked about depressive symptoms, despite the paralleled symptoms expressed by hearing individuals. The purpose of this study was to examine whether attribution of depression favored hearing individuals in comparison to deaf individuals. Sixty-three participants aged 18 to 22 from a small liberal arts college were used in this study. An online survey was used to collect data and the data was analyzed using SPSS statistics software with a 2x2 analysis of variance. The results showed an insignificant interaction between judgment of symptoms and deafness. Despite a null hypothesis, further research on this issue is necessary in the future for treatment of mental health disorders in deaf individuals.

Presenter: Amy Hicks—Biology

What Affects Participation in Cancer Screenings

Project Advisor: Dr. Dara Wegman-Geedey

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #22

As a dual-degree B.A./B.S.N. student at Augustana College and Trinity College of Nursing and Health Sciences (TCN&HS), I completed a clinic-based Senior Inquiry project. During the summer between junior and senior year at Augustana, students in the B.A./B.S.N. program take the first course on basic nursing concepts, and then complete clinical hours at the hospital. In addition to the clinical experience provided through that course, I shadowed two professionals for a total of 60 hours—Mary Jo Bloominger, P.A., who works at a family practice clinic, and Carolene Robinson, R.N., who coordinates care for patients affected by breast cancer. As the prevalence of cancer has proven to be constant despite the advances of technology and research in today’s world, I became interested in what healthcare providers are doing at the forefront of the battle against cancer by examining means of prevention. In order to do this I created a survey to be distributed to members of the Quad-Cities community, as well as the Augustana College community, which questioned them about their experiences with cancer screenings. With Carolene Robinson, R.N., and Mary Jo Bloominger, P.A., I gained insight specifically in breast and cervical cancers, and the means of participation in the screens done for each.

Presenter: Brittany Hite—Sociology

Technology Etiquette and Social Interactions

Project Advisor: Dr. Paul Croll

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #14

Technology is everywhere. The increase, in recent years, of people owning personal devices also has led to the increased use of technology in situations where it hadn’t been used before. For example, technology is increasingly being used in classes, the workplace and social settings. The current young adult generation is at the age where they would have grown up as these technological advances were becoming the norm and were starting to be implemented in places such as schools and social settings. Therefore, they would have started to develop a different technological etiquette than generations before them had in place.

My research focuses on the technology etiquette of current 18 to 22-year-olds. I want to find out what they believe is acceptable in public situations in regards to technology. My research tries to narrow down what this age group is willing to engage in while in a public setting and what they think is appropriate for others to engage in while in a public setting.

I also will look at the effect this change in technology etiquette has on social interactions, and how this increased ownership and use of technology affects the individual and society. There are some possibilities of trends that may come up due to the increased presence of technology in people’s lives. Sociologists have theorized about numerous potential suppositions, but now that we are more in the possible testing time frame, I will try to study some of them.

Presenters: Keegan Horack, William Thompson—Biology

Decomposition of Aquatic and Terrestrial Invasive Species

Project Advisor: Dr. Kevin Geede

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #34

A problem facing ecosystems today is the migration and habitation of invasive species of plants. The DATIS Project (Decomposition of Aquatic and Terrestrial Invasive Species) was developed to broaden our understanding of how decomposition rates of native plant species are affected by invasive species. The DATIS Project aims to identify the threshold of invasive species abundance necessary to affect ecosystem processes. The invasive species chosen to study was the Tree of Heaven or *Ailanthus altissima* Swingle. It comes from central China and has inhabited 30 states in the United States. The threat that Tree of Heaven poses is that it can rapidly overtake sites, replacing native plants. Being a prolific seeder and fast grower, it forms dense thickets blocking sunlight from reaching the plants under its cover. It also produces chemicals that harm other plant species' ability to establish themselves in an area. The damaging affects of Tree of Heaven make it a good candidate to study in hopes that a solution will be found to control future invasions. The native species studied alongside Tree of Heaven was the Smooth Sumac or *Rhus glabra*. It is abundant in the United States and is extremely durable. Its ability to withstand competition and thrive in neglected sites makes Smooth Sumac a good species to study. We looked at how decomposition rates are affected when amounts of invasive species decomposing alongside native species are varied in order to determine the degree of invasive abundance necessary to affect the decomposition rates of native species.

Presenter: Abigail Jones—Environmental Studies

An Analysis of Groundwater Surface Water and Surface Water Containing A Runoff Event

Project Advisor: Dr. Michael Reisner

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #44

The research consisted of looking at groundwater surface water and surface water containing a runoff event. The aspects looked at in these three areas are phosphorus, ammonia, nitrate, dissolved oxygen, total dissolved solids (TDS) and salinity levels. The samples were taken from four different streams in Rock Island and Moline. The different water types are compared within a stream and across streams to determine whether there are any trends.

Presenters: Carrie Keahl, Matthew Shipon—Aquatic Biology

Population and Diversity of Phytoplankton

Project Advisor: Dr. Kevin Geede

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #23

The Augustana Slough is a great on-campus resource that allowed us to develop a research project from our previous knowledge in the aquatic biology Senior Inquiry. Although we are able to see that this slough is home to many organisms such as frogs, turtles and fish, we were more interested in looking at the microscopic organisms. We chose phytoplankton to research because we knew there are hundreds of species in the world and we were interested to see what the most popular species in our slough were. We developed this project to determine if there were any differences in phytoplankton abundance and species between the two distinct ends of the slough, the area near the main fountain, and the area near President Bahls' house.

Presenter: Lauren Kirik—Geology

Characterizing Hydrothermal Fluids of Post-Variscan Ore Deposits of the Abandoned Domus Nieddas Mine, Sardinia, Italy

Project Advisor: Dr. Michael Wolf

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #36

The geological evolution of Sardinia is characterized by numerous magmatic and hydrothermal mineralizing events, ranging in age from the sedimentation of the Cambrian Middle carbonate platform to Miocene Alpidic tectonic and magmatic activity. Earlier studies have pinpointed the types of ore bodies hosted and phases of fluid flow within the Lower Cambrian platform carbonates. However, few studies have focused on the mechanisms of hydrothermal fluid flow and possible sources of metallic cations in SW Sardinia; two types occur: Pre-Variscan and Post-Variscan ore deposits, with the former deformed with their host rocks by Variscan compressive tectonics, and the latter cutting into Variscan deformed lithotypes (Boni et al., 1996). Post-Variscan deposits can be further characterized into (a) skarn deposits, (b) high-to-low temperature veins, and (c) low-temperature paleokarst "Ricchi Argento" deposits (Boni, Muchez & Schnieder, 2002). Three hydrothermal fluid systems were derived using Pb, Sr and S isotopes. In this study, samples from the Domus Nieddas mine were collected from the main ore vein and surrounding host rock in a gradational sequence to best represent the interactions between the platform carbonates and mineralizing fluids. Analytical methods such as XRF major and trace elements analysis and SEM analysis are utilized to determine evidence of mineralogical alterations of surrounding host rock that offers insight into ore precipitating hydrothermal fluids and attempts to characterize what systems of fluids are throughout the area.

Presenter: Brian Konecke—Experimental Petrology

Solubility and Stability of Beryllium-silicates in Haplogranitic Melts

Project Advisor: Dr. Michael Wolf

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #17

Despite its low crustal abundance of ~2.8 ppm, beryllium is a major structural component for more than 90 minerals. In this study, an experimental petrological approach was employed to determine the solubility of beryl and stability within haplogranitic melts. Beryl saturation was evaluated using seven haplogranite compositions with varying concentrations of SiO₂ (64-74%), F (0.02-2.57%), and ASI (0.84-1.25) (ASI= Al/(Na+K)). The haplogranites of varying compositions were mixed with 10 wt.% beryl and 10 wt.% H₂O, then run at 900-950°C and 200 MPa (H₂O) in a cold-seal apparatus. The average calculated BeO content of the haplogranite + beryl powder from 10 runs was ~1.3 wt. %. The glass products were analyzed using EMP and BSE imaging in order to delineate phase stabilities of bertrandite and beryl within the system. Bertrandite is the only stable Be-bearing mineral in six runs; no mineral phases are present in three runs. The crystallization of bertrandite and absence of beryl may be explained by either: 1) bertrandite is the only stable phase following the breakdown of beryl, or 2) relic beryl hydrated to bertrandite at relatively low temperatures (<300°C). Bertrandite commonly replaces beryl, with a sheet silicate taking up the aluminum, which correlates to an overall increase of Al₂O₃ (wt. %) and decrease of SiO₂ (wt. %) within five of the six bertrandite-bearing glass products. Although bertrandite has surpassed beryl as the most important domestic source of beryllium, the beryl + bertrandite stability relations within the BeO-Al₂O₃-SiO₂-H₂O (BASH) system is not well understood.

Presenter: Katie Kornaus—Humanities

Commonly Experienced, Individually Endured: Finding Productive Components Within the Challenges of Culture Shock

Project Advisor: Dr. David Crowe

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #3

Culture shock, like “culture” itself, is an ambiguous term that is difficult to define, as it can comprise all sorts of different effects on different people, as well as varying levels of severity, symptoms and time-spans. Experts have attempted to define the term, to offer modes of preparation for culture shock, and to draw conclusions about this phenomenon, although relatively few empirical studies have been done on the subject. Also, as all different sorts of people go abroad for all sorts of different motives and lengths of time, it is evidently extremely difficult to be able to draw any generalized conclusion on culture shock, especially since people also may have different personalities, expectations of their host culture, levels of preparation, and sources of support.

This project aims to come to terms with experts’ debates and definitions of culture shock, and its causes and effects. It also analyzes previous research on the subject, including my own study on Augustana students’ attitudes towards culture shock. Finally, I arrive at conclusions about how culture shock can positively challenge study-abroad students to productively cultivate newfound cultural consciousness and intellectual perception.

Presenter: DJ Lawlor—Biology

The Characterization of Elk4 and Jazf1 during Chicken Retinal Development

Project Advisor: Dr. Sean Georgi

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #25

During the development of the retina, progenitor cells are seen to proliferate and differentiate into seven distinct cell types in a certain order. The goal of this research was to investigate the genetics involved in the ability for the formation of these cell types. Based on previous research (Georgi and Reh, 2010), Dicer, an enzyme responsible for the production of microRNAs, was knocked out and lead to altered expressions of transcription factors, leaving the retina in an immature state. Here, two transcription factors, Elk4 and Jazf1, were selected and studied due to their raised expression when Dicer was knocked out in mice (La Torre et al., 2013). Using chicken retinas, PCR and sequencing of the DNA allow for the identification of the levels of expression and specific variant types present at different stages of development. The characterization of these genes can help understand how this individual cell types are signaled to differentiate.

Presenter: Jessica Leifheit—Aquatic Biology

Submerged Macrophytes as a Water Quality Indicator of the Mississippi River

Project Advisor: Dr. Kevin Geede

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #24

Submerged aquatic macrophytes are crucial to aquatic ecosystems as a source of food and oxygen, as well as the role they serve in nutrient cycles. From this, they are used as a biological indicator of water quality. In the Mississippi River, submerged aquatic macrophytes thrive upstream of Pool 16 but are uncommon downstream. Two submerged macrophytes, *Ceratophyllum demersum* and *Elodea canadensis*, were placed in tanks with water from different river sources (pools 14, 15 and 16). Standard measurements of water quality, shoot length and biomass were measured as indicators for

stress along with the herbicide, atrazine. Despite clear differences in water quality among treatments, there was no significant difference in plant growth. However, the non-significant results indicated that the plant species responded differently to the pool environments.

Presenter: Cesar Lira—Geology

Phosphorus Levels in a Gravel-Hill Prairie are Remnants of Fertilizer Runoff from Condominiums Uphill

Project Advisor: Dr. Jeffrey Strasser

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #37

Tallgrass prairies have been reintroduced to some urban areas of the Midwest, partially in an effort to capture runoff and pollution. This project tests the effects of an urban prairie in northern Illinois by analyzing shallow soil samples. The Harlem Hills Prairie in Winnebago County, Illinois, is a 53-acre gravel-hill prairie surrounded by residential and light commercial neighborhoods. The study area lies down-gradient of residential condominiums, and it is assumed that nutrients and pavement runoff are washed into this system from several directions. Five 6-8 inch cores were taken from the prairie along a 159 m transect, decreasing in elevation from 257 m to 247 m.

Soil pH varied from 6.4-7.4. Potassium concentrations peaked at 176 ppm, about 66.5 m down-gradient from the turf lawns, with an average value on the study area of 122.4 ppm. Phosphorus levels peaked at 17 ppm, about 104.2 m down-gradient from the turf lawns, with an average value of 5.4 ppm. Nitrogen tests are forthcoming. Preliminary results suggest a slug of nutrients between 66.5 and 104.2 m from the prairie boundary. This slug may have been transported by surface runoff and subsequent infiltration. The fact that the most down-gradient samples have lower nutrients reflects eventual capture of the nutrients by the prairie system. Complicating factors, including variable near-surface hydrogeological and microbial properties of the soils and variable vegetation, require further study.

Presenter: Alexis McAdams—Geology

Exploring the Relationship Between Megathrust Earthquakes and Intraplate Stress Fields in Japanese Subduction Zones

Project Advisor: Dr. Michael Wolf

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #42

The principal forces acting on subducting plates are slab-pull and bending/unbending, which generate the stress field and earthquakes within the plate. The focal mechanisms of intraplate earthquakes reveal the orientation of the stress field within the slab. Astiz et al. (1988) and Lay et al. (1989) observed differences in the focal mechanisms of intermediate-depth earthquakes before and after large underthrusting events. Before megathrust events, intermediate-depth earthquakes tended to be tensional. In contrast, immediately after megathrust earthquakes, intermediate-depth events tended to have compressional mechanisms and/or to occur at a decreased rate. This change in seismic behavior following a megathrust event may reflect a transient change in stress orientation within the subducting plate. We revisit this observation with expanded datasets and new methods to calculate the orientation of the stress field. Following previous research on the Nazca slab subducting under South America, we apply the same methods to the Japan Trench subduction system. We utilize focal mechanism data from the global Centroid Moment Tensor project and the Full Range Seismograph Network of Japan of $M_w \geq 4.7$ and $M_w \geq 3.5$ respectively. Using these records, we invert the focal mechanisms to calculate the stress field in each cell. We damp stress variations between adjacent cells to minimize the complexity of the model and only keep changes required by the data (Hardebeck

and Michael, 2006). Comparison of the calculated stress orientations and relative magnitudes of the stress axes provide clues to the nature of the interaction between intraslab stresses and megathrust earthquakes.

Presenter: Darrick McCarthy—Geology

Geochemical Analyses of the Clay/Silt Sediment of a Small Stream System That Has Been Subject to Overflow From a Sewage Treatment Plant

Project Advisor: Dr. Michael Wolf

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #38

In Paddock Lake, Wis., the local water treatment facility dispatches its overflow into a small stream that then drains into a State-protected swamp. This stream flows for approximately one mile through six residential properties. The water is a result of exceeding the capacity of the facility, mainly due to large rain events and spring thaw, and may be inadequately treated or not treated at all. This poses the problem that the overflow has potential to contain heavy metals, including: antimony (firearm refuse, batteries, ceramics), arsenic (treated wood), barium (paint pigment), bismuth (paint, makeup), cadmium (brazing, soldering, electroplated parts), lead (old toys, paint), mercury (thermometers, medicines), nickel (cigarettes, diesel, food waste), tin (rubber), and others. The sources for these heavy metals can be found in the surrounding area, within the stream, and in water runoff that the treatment plant may be discharging. The sources also may not come from the plant itself, but from the residents that live along the stream. Evidence of dumping, garbage disposal and personal drain tiles are found draining into this stream. The threat of bodily waste, fecal matter, and other household wastes may also be prevalent and pose a health issue.

Presenter: Dr. Kimberly Murphy—Biology

Genetic Analysis of American Toad Dispersal in Restored Wetlands of Winnebago County, Iowa

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #26

Nearly all wetlands have been destroyed in Northern Iowa, and restoration of these wetlands is vital to amphibian populations. Between 2000 and 2009, clusters of wetlands were restored in Winnebago County, Iowa. We are studying how toads and frogs are dispersing across agricultural landscapes to the restored wetlands. This helps gauge the effectiveness of the wetland restorations. Information collected in our study can be applied to rare species of concern and help land managers design future wetland restorations.

Presenter: Mariana Noga—Theatre Arts

Modernizing Theatre: “The Marriage of Figaro”

Project Advisor: Adam Parboosingh

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #1

As a scenic artist, I researched painting techniques and staging conventions from 18th-century France. I then combined them with my modern painting techniques and knowledge to the painting of the Augustana theatre department’s fall play, “The Marriage of Figaro” by Beaumarchais. Working hand-in-hand with the designer, who designed a set that was similar to the staging from the era, we tried to recreate the experience that audience members would have had seeing the play in the 18th century. We used a series of backdrops to create the forced perspective view that was popularized after the Renaissance.

Presenter: Matt Osman—Geology

Manual and Acoustic Constraints on Ebullitive Methane Fluxes from Warming Subarctic Lakes

Project Advisor: Dr. Michael Wolf

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #39

Systematic difficulties in capturing the large spatial and temporal variability of ebullition (bubbling) has promoted a broad range of uncertainty in our understanding of the role of lakes as key emitters of atmospheric methane (CH₄). With the projected warming and ongoing thawing of high-latitude frozen peatlands abundant in small lakes and ponds, there is an increasing need for methods that provide high-temporal resolution delineating precisely when and under what circumstances ebullitive fluxes occur. Employing the well-established Minnaert resonance formula as a reliable proxy for bubble volume, we designed a system of passive acoustic hydrophone sensors calibrated to continuously record ebullition from lakes at 160 kbits/sec. We present here the results of three summer field seasons (2011-2013) of acoustic and manual bubble flux measurements from three subarctic lakes situated in discontinuous permafrost regions of northern Sweden. Results show trends similar to prior lake measurements in the subarctic. We found wide variation in CH₄ concentrations, spanning between 0.10 to 95.16%. Fluxes ranged from 0-279.72 mg CH₄ m⁻² d⁻¹ and averaged 10.95 mg CH₄ m⁻² d⁻¹ (n = 482) over the three-year period. High-resolution time series analysis of our measurements are compared alongside standard meteorological parameters such as atmospheric pressure, temperature, rainfall and wind speed/disturbance to infer dominant external forcings and thresholds on ebullition.

Presenter: Chris Petlicki—Physics

Optical Autocorrelator

Project Advisor: Dr. James Van Howe

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #16

Ultrafast lasers are important for applications such as information processing, environmental sensing, biomedical imaging, surgery, spectroscopy, threat detection and micromachining. In our ultrafast optics lab at Augustana, we build lasers that produce bursts of light that have durations of hundreds of femtoseconds or 1/0.000000000001 seconds. That amount of time is more than 1,000 times faster than the separation of 4 G data. Because this is too fast to be measured with even the best state-of-the-art electronics, we use the laser light itself to make the measurement of the light burst (pulse) duration using second-order optical autocorrelation. This work describes the autocorrelator I built in order to measure the ultrashort pulses from a fiber laser in our lab. Autocorrelation traces show pulses of 700 fs.

Presenters: Leesa Potthoff, Jessica Bacon, Jacqueline Kreiner—Elementary Education

Kindergarten Number Sense Project

Project Advisors: Dr. Mike Egan, Dr. Randy Hengst

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #6

The Number Sense Project stems from Augustana’s partnership with Longfellow Elementary School in Rock Island. Each year, Augustana elementary education students collaborate with Longfellow’s kindergarten teachers and classes, as well as the Augustana education faculty, to conduct an active research project. The goals of this project are to provide kindergarten students with differentiated small group instruction and to enhance the Augustana teacher candidates’ understanding of developing number sense in kindergarteners. Throughout the duration of the Number

Sense Project, the Augustana teaching candidates have developed research questions on the topics of “adding on” and the best form of assessment for kindergarteners, which have been explored through their work with the Longfellow students. Pictures, videos, anecdotes and other findings are presented to give a peek into what goes on in a kindergarten math class.

Presenters: Mason Robertson and John Bialek—Aquatic Biology

Alkalinity and Dissolved Oxygen Relationships in Upper Mississippi Studies Center Watersheds

Project Advisor: Dr. Kevin Geedeey

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #27

Significant increased river alkalinization has been observed in the eastern United States. Our main project goals were to (1) establish a relationship between alkalinity, pH and oxygen levels at local watershed sites, (2) compare them to eastern U.S. alkalinity trends, and (3) contribute to the Upper Mississippi Studies Center’s data on local watershed alkalinity in the Quad Cities and Moline area to help better sustain urban watersheds. Sustained low pH adversely affects aquatic organisms’ behavior, growth and reproduction. Our experimental research goal was to find a relationship between alkalinity and biochemical oxygen demand of the watershed sites.

We found that local watershed alkalinity tended to decrease as pH increased, but headwater, ravine and confluence sites within watersheds had relatively stable alkalinities. Local watersheds thus did not follow the same trend seen in the eastern United States. We also found that alkalinity decreased as the concentration of dissolved oxygen decreased. Increased rates of river alkalinization in the eastern U.S. were found to be primarily caused by carbonate lithology, acid deposition and topography. We found similar patterns in local watersheds, with alkalinity being correlated with an increase in impervious surfaces, likely due to excess carbonate runoff from these materials. The biochemical oxygen demand was found to increase as the percent of impervious surfaces increased, possibly due to increased nutrient runoff into watersheds associated with greater amounts of impervious surfaces. Headwater sites had the highest biochemical oxygen demand, and this unexpected trend requires further investigation to determine possible causes.

Presenter: Christina Scribano—Biology

The Relationship Between Environment Manipulation and Breast Cancer Cell Adhesion and Metastasis

Project Advisor: Dr. Scott Gehler

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #28

Tumor cell motility, or metastasis, is the cause of most cancer deaths. During metastasis, cells gain the ability to migrate and invade surrounding tissues. Cell adhesion, or the binding of a cell to its micro-environment, is a contributing factor to the metastatic ability of cancer cells, making it a relevant research topic. Collagen is a prominent molecule in the micro-environment of breast cancer cells to which the cells can attach. The collagen concentration found within the breast tissue of individuals with breast cancer can greatly impact the development and progression of the disease. We demonstrate that cellular adhesion is reduced at low collagen concentrations when compared to higher collagen concentrations. Moreover, we have shown that an intermediate collagen concentration promotes maximal cell migration, whereas low and high collagen concentrations result in reduced migration. A similar pattern was also observed upon examination of the cell spreading of breast cancer cells on varying concentrations of collagen. We then introduced nerve growth factor (NGF), a signaling molecule produced by malignant

(but not normal) breast epithelial cells and a known enhancer of breast cancer cell metastasis. Preliminary data was obtained on the effects of this molecule on breast cancer cell behaviors in environments of differing collagen concentrations. Understanding the interactions of these molecules in vitro will lead to a better understanding of the complex breast cancer cell mechanisms in vivo.

Presenter: Andy Shearouse—Computer Science, Communication Studies and User Interface Design

Developing a Streamlined Responsive Web Design Framework

Project Advisor: Doug Tschopp

9:30-10:45 a.m. | Center for Student Life– Gävle Room, poster #12

In this project, I conducted research into Internet usage trends and demographics, particularly in regards to the devices that are being used to view websites. Additional research was conducted to gather more information about best practices for developing mobile-friendly websites. The findings from this research were used to demonstrate that “responsive web design” poses a better solution to the complex problem of web traffic coming from many different device types. The project culminated in the development of a new, streamlined, responsive web-design framework.

Presenter: Michelle Skowron—Psychology

A Cognitive Behavioral Approach To Treating Alcoholism With Co-Occurring Conditions

Project Advisor: Dr. Samuel Moreno

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #7

My research question is “From a cognitive behavioral approach, what is its effectiveness in treating alcoholism with co-occurring conditions?” For my method, I gathered 20 hours of observations in a local substance abuse facility. Rock Island’s Trinity Health Medical Center has a wing dedicated to substance abuse patients. That wing is known as Riverside, and substance abuse programs take place Monday through Thursday for three hours a day. It is not a closed program, which means that new admitted patients can join at any time. It is a 12-week program that stresses zero tolerance for alcohol and other substances that were abused. My presentation is about the effectiveness of Cognitive Behavioral Therapy in alcoholic patients with co-occurring conditions.

Presenter: Michael Spehlmann—Geology

Per Plant Lead Uptake in Lemna minor (Duckweed)

Project Advisor: Dr. Michael Wolf

9:30-10:45 a.m. | Center for Student Life– Gävle Room, poster #41

This study seeks to further examine the heavy metal bioremediation potential of a species of duckweed, *Lemna minor*. Previous research suggests that various species of aquatic plants including duckweed can accumulate heavy metals. However, these studies often examined the remediation potential at near neutral pH. In order to better understand the potential of duckweed species to be an effective bioremediation of heavy metals, it is necessary to test it in aqueous solutions of different levels of acidity. Pondered water contaminated by heavy metals often is highly acidic. Therefore, this study quantifies the amount of lead that *Lemna minor* is capable of uptaking in solutions of different acidities between pH of 5 and 8. *Lemna minor* cannot survive at pH levels outside this range. Initial tests have shown that *Lemna minor*, like other species of duckweed, can uptake lead from contaminated water. However, in order to understand the remediation potential of this species it is necessary to determine how acidity outside of its ideal, neutral condition affects the uptake of lead.

Presenter: Sam Stewart—Neuroscience

Dose-Dependent Effects of SDPN Administration on Anxiety in Mice

Project Advisor: Dr. Ian Harrington

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #13

Activation of estrogen receptor beta (ER β) is commonly associated with diminished anxiety. As such, understanding the effects of this receptor may help further our understanding of anxiety and comorbid conditions, such as depression. R-diarylpropionitrile (SDPN) is a potent ER β agonist. In this experiment, I observed the dose-dependent effects of SDPN administration on anxiety in mice via measuring their behavior using an elevated plus-maze test, as well as their plasma levels of corticosterone, a hormone that is associated with stress in mice. These mice were administered with differing doses (either 0.5, 1.0, 2.0 or 5.0 mg/kg) of SDPN over the course of a week. On the second-to-last day, the mice were placed in an elevated plus-maze, and their behavioral levels of anxiety were measured. On the last day, the mice were restrained for 30 minutes, then allowed to recover for 30 minutes, after which they were anesthetized and had 1 ml of blood extracted via cardiac puncture. The plasma was then sent for radioimmunoassay in order to measure corticosterone levels. While neither behavioral measures nor corticosterone measurement returned any significant results, presumably due to the age of the mice, a general linear trend was observed, suggesting that future studies may return significant data.

Presenters: Kelsey Stockert and Mallory McLain—Biology

Structure of the Forest at Collinson Ecological Preserve based on EREN Permanent Plots

Project Advisor: Dr. Bohdan Dziadyk

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #29

Collinson Ecological Preserve is a 37ha field station owned by Augustana College in Rock Island, Illinois. The preserve is a second growth, upland forest located on well-drained, rolling topography. In 2012, we established two permanent (20x20m) study plots as prescribed by the Ecological Research as Education Network (EREN). Tree density of the forest was 925 tree/ha. The average dominance of the most important species, Slippery Elm (*Ulmus rubra*), was 0.82m²/ha for the two years (2012 and 2014) on the west plot. On the east plot, Red Oak (*Quercus rubra*) was the most important species based on average dominance (5.1m²/ha). The structure of the forest at Collinson Preserve is comparable to the upland forests found throughout the region.

Presenter: Steven Ray Trent—Geology

Hydrothermal Alteration of the Butler Hill Granite, St. Francois Mountains, Southeastern Missouri

Project Advisor: Dr. Michael Wolf

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #40

The St. Francois Mountains in southeastern Missouri reveal a roughly 900 km² 1.5 Ga igneous complex that shows signs of post-emplacement alteration. This study focuses on a hydrothermal event affecting the Butler Hill granite near Fredericktown, Missouri, manifested by green boulder fragments within the largely red granite quarry. Although our sample boulder was not in place when taken, we know its approximate original location relative to a quarried-out hydrothermal vein, based on information from the quarry geologist. Our sample was divided into six lateral zones by visual inspection, each showing different stages of mineralization. Zone 1, the least altered, shows slightly altered feldspar and plagioclase, biotite/chlorite and quartz. Zone 2 shows progressive alteration of feldspar and plagioclase, typically unaltered microcline,

and quartz. Zone 3 has substantially altered plagioclase, slightly altered microcline, biotite in solution pathways, and epidote in place of chlorite. Zone 4 shows pervasive alteration throughout, large quartz crystals, and epidote in interstitial areas. Zone 5 has smaller subhedral quartz crystals, plagioclase appears broken up, and epidote/opaque minerals are located in alteration routes. Zone 6 shows disseminated alteration throughout, excluding small anhedral quartz and (~3-4mm) vugs of calcite. The sample shows opaque minerals disappearing as the zones grade from slightly to significantly altered. X-ray fluorescence spectrometry (XRF) data shows trending oxide patterns from Zone 1 to Zone 6 indicative of hydrothermal alteration. Continued petrographic and SEM analyses will give further insight into the composition and source of the hydrothermal fluids that affected the original granite composition.

Presenter: Krista Watson—Exercise Science

Fatigue Deleteriously Alters Muscle Activation Patterns during Landing and Cutting Tasks

Project Advisor: Dr. Bob Tallitsch

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #15

Fatigue may lead to improper landing neuromechanics, contributing to non-contact knee injury. Research has investigated effects of fatigue on landing kinematics and kinetics, but few studies have investigated effects on muscle activation. PURPOSE: Study the effects of fatigue on muscle activation during landing and cutting tasks. METHODS: 12 active college students (five female, seven male) performed three tasks: maximal vertical jump (VJ), single-leg landings (SL), and side-cuts (SC). Five trials of each were collected before (PRE) and after (POST) a four-minute fatigue circuit: forward sprints, backward sprints, side-step/vertical jumps (12.5m distance). SL and SC tasks included jumping forward onto the force plate, landing one legged and stabilizing or cutting laterally (45°). EMG electrodes were attached to thigh muscles (i.e., rectus femoris [RF], vastus medialis [VM], vastus lateralis [VL], medial hamstrings [MH], lateral hamstrings LH]). EMG data was rectified, band-pass filtered, smoothed, and normalized to maximal voluntary contraction obtained from manual muscle testing. Peak landing phase EMG averages were calculated for each muscle and task. PRE and POST averages were compared with t-tests ($\hat{\mu} \pm 0.05$). RESULTS: VJ height decreased after exercise (6/12 subjects significant). With fatigue, muscle activations (%MVC) were greater for the VL and RF during SL. Also, trending towards lower muscle activation was the VL and RF during SC after fatigue. CONCLUSION: With fatigue, landing and cutting tasks were completed with greater RF and VL activation. Since greater VL activation is associated with greater knee valgus angles the observed changes in muscle activation may have deleterious effects on injury risk.

Presenter: Grant Wick—Geology

A Forensic Geoscience Approach of Comparing Evidence and Field Samples in Connection with a 23-Year-Old Missing Persons/Murder Cold Case

Project Advisor: Dr. Michael Wolf

9:30-10:45 a.m. | Center for Student Life–Gävle Room, poster #33

When crimes are committed outside, soil and sediment evidence may be very useful in connecting criminals and objects to the crime scene. This investigation attempts to quantify soil samples taken in connection with an October, 1990, missing persons/murder case and match them to local surrounding areas based on soil characteristics. Two evidence soil samples were collected from behind the victim's car wheel wells and hitch, a day after he was reported missing. Nine samples recently were collected from two sites of police

interest: six from a highland wooded area and three from a lowland floodplain. All soil samples were analyzed by multiple techniques for bulk mineralogy and grain size analysis. After optical study using a 3-90x magnifying microscope, sample splits were wet-sieved at 4 phi to separate the clay/silt fraction. Bulk mineralogy of the clay/silt fraction was determined through X-ray Diffraction (XRD) spectroscopy to compare to known glacial periods in the area and geologic history. Major, minor and trace element constituents of the clay/silt fraction were measured through X-ray Fluorescence (XRF) spectroscopy of both fused disk and pressed powder preparations. Organic matter embedded in the evidence mud also is being studied to help narrow down possible sites. The methods in this study will be used to assist police in their investigation by determining which (if any) of the field locations has more soil characteristic similarities to the evidence samples taken from the victim's vehicle. Potential matches will be searched using cadaver dogs.

Presenters: Trace Wingo, Justin Davidson and Sean Walker—Biology

Structure of the Forest at Beling Ecological Preserve Using EREN Permanent Plot Protocol

Project Advisor: Dr. Bohdan Dziadyk

9:30-10:45 a.m. | Center for Student Life-Gävle Room, poster #30

The Beling Ecological Preserve is a 40ha field station owned by Augustana College, located in Rock Island County, Ill. The preserve is located on a second growth lowland forest on level, seasonally saturated wetland soils. In 2012, we established two permanent (20X20m) study plots as prescribed by the Ecological Research as Education Network (EREN). The North Plot tree density of the forest was 575t/ha in 2012 and 2014. The South Plot tree density of the forest was 450t/ha in 2012 and 325t/ha in 2014. The dominance species is Silver Maple (*Acer saccharinum*). The average dominance in the North Plot is 2.36m² and in the South Plot is 4.25m². The changing dynamic of density and dominance is due to the harsh conditions of the environment.

Presenter: Jennifer Wood—Biochemistry

Expansion and Characterization of Autologous Natural Killer Cells from Patients with Lymphoma

Project Advisor: Dr. Heidi Storl

9:30-10:45 a.m. | Center for Student Life-Gävle Room, poster #32

Human natural killer (NK) cells are a subset of peripheral blood lymphocytes that have therapeutic potential for a wide variety of cancers. However, NK cells in patients undergoing cancer treatment are significantly reduced in number in vivo and have impaired cytotoxic abilities. To determine if NK cell numbers and cytotoxicity from patients with lymphoma could be restored, NK cells from 4 patients with lymphoma were expanded ex vivo using a 21-day expansion method. After expansion, cytotoxic function was assessed against autologous lymphoma cell lines compared to that of expanded NK cells from 3 healthy donors using an antibody dependent cell-mediated cytotoxicity (ADCC) assay. Phenotyping on day 21 indicated NK cell proliferation. The ADCC assay revealed that the cytotoxicity decreased as the effector: target cell ratio decreased and increased with the addition of the antibody Rituximab, but this increase gave under 30% cell lysis for all patient NK cells. These findings suggest that further research needs to be conducted to determine why allogeneic NK cells are more effective against autologous tumor cell lines than autologous NK cells.

SENIOR ART SHOW

Presenter: Grace Bunderson—Art

All These Little Things

Project Advisor: Peter Xiao

10:30 a.m.–noon (10 min.) | Augustana Teaching Museum of Art

Each chair represents a different person. The size of the chair reflects the amount of influence a person makes on your life, and each small dot on the chair is an individual moment you share with them. Each one on its own is small and can be picked out individually, but if you take a step back, you see them all come together to weave this story, with all its twists and turns. And when they're all together, you have a full of memories and places to reflect on them. A quiet place just for you to "sit" and think about that person. What I've been trying to show throughout this whole experience is that the little things in life add up, and make an experience yours and yours alone. Others may join you on your adventure, just like a different person sitting in the chair you were just in, but they all bring something different with them that can change things. They can have sharp keys in their pocket, which will tear and drag at the surface, or they can curl up and stay for hours working on a project and keep the chair warm. It's all about the little things.

Presenter: Adrielle Canda—Art

Change Is a Clock of Inevitability

Project Advisor: Peter Xiao

10:30 a.m.–noon (10 min.) | Augustana Teaching Museum of Art

As humans, as persons, we never stop growing and learning. After graduating high school and entering my college years, I wanted to begin some journey. It was not until I submitted a paper for a first-year class that made me realize where to start. The paper I wrote was about self-actions, and Professor Ann Boaden commented at the end of the paper something about fighting the dragons within ourselves. Thus began a pilgrimage, a pilgrimage I know will not end even when I graduate.

In this journey so far, I realized that, as humans, we seem to be in this never-ending circle. What we believe is actually not real, and once we become comfortable in a set of beliefs, something shakes us out of that comfort into either a new set of or an extension of our beliefs. We are always growing, always changing, because everything around us is changing. We go through seasons of emotions and growth: happiness, full, dull, degrading, cold, bare, growth, promise. Because everything is constantly changing, it never becomes clear what it is we are going through, until we are at the next stage, next season.

Nature is constant, revolving, changing—just like humans. These pieces, as a whole, are a reflection of myself. I hope that I have generalized it enough so everyone could relate to it in some way or another.

Presenter: Monica Hill—Art

Family Ties

Project Advisor: Peter Xiao

10:30 a.m.–noon (10 min.) | Augustana Teaching Museum of Art

Throughout the past four years at Augustana, I have found myself interested in art. As a first-year student I took a class on fibers, learned loom weaving and used a handheld loom to weave different types of fiber pieces such as Kente cloth (a technique where individually woven strips are sewn together to make one piece, usually worn as clothing in Western African cultures). I've looked

at the work of many artists, but just couldn't grasp inspiration from them. In western African art, there aren't any known artists of tapestry or Kente cloths. My coursework in African art, African art history, and fibers allowed me to be inspired by West African art and moved me to work with fibers for this Senior Exhibition. My dad was the biggest influence and inspiration for this installation. The idea of bow ties came from my dad's tie hanger in his . I was intrigued with the different colors and chaos. His ties made me want to create something the opposite of chaos and confusion, and create something tailored and structured with sharp lines. While using fibers, I wanted to create cohesive pieces, all incorporating the motif of bow ties, using different weaving techniques such as loom weaving and rug making. To go along with my Kente cloth made in Junior Inquiry, I used only red, white and black in these pieces, because I adore how simple black and white are against one another, and the red pops it all off and give the pieces a hint of color and boldness. Also, I use these colors because of their meaning in West African cultures. I learned in my African art class that white symbolizes purification; red, sacrificial rites and the struggle; and black, spiritual energy and maturity. These meanings are symbolic of my life experiences, growing up young and pure, the struggles my family and I faced throughout my years, and the spiritual energy that helped me deal with those struggles in a positive way.

Presenter: Lindsay Hohertz—Art

Farm Town Living

Project Advisor: Peter Xiao

10:30 a.m.–noon (10 min.) | Augustana Teaching Museum of Art

I am hoping that through my collection of works, I can remind people to appreciate what they have, and to appreciate the way of life on a family farm. Since my concentration is fibers, I interpret farm scenes in an abstract way. The abstract qualities also are represented in my glass-blowing pieces. For example, the movement of the smooth glass represents the husk of the corn perfectly. The textures I pinch into the glass suggest the movement of the kernels of corn.

Like Augustana College Professor Rowen Schusheim-Anderson, I am interested in the beauty of nature, and interpreting it through layers of color. My batiks have layers as well, with the wax and the various colors making the batik. There also is the fabric over the top to create a frame, and then the pieces are quilted together.

In addition to the batik quilts and the glass-blowing sculptures, I also am incorporating linoleum print making in my show. The prints are scenes of buildings one would find in a small farm town, such as a church and a school. This is where education and a sense of community are established, so, it is important to incorporate them into my theme. I also have images of scenes that are typical in the farming community, such as a combine harvesting. To make these prints more lively and better incorporated within my overall aesthetic appeal, I add sections of color to the background, which gives a quilt effect.

Presenter: Rajinder Kaur—Art

A Sensory Trip to India

Project Advisor: Peter Xiao

10:30 a.m.–noon (10 min.) | Augustana Teaching Museum of Art

The focus of my senior art portfolio is the culture of India. I want to capture the culture I was born in and make it available for others. By evoking all of your senses, this installation will help visitors to transport themselves to the land that I was born in, perhaps even something close to the house I was raised in. The work I am presenting is not made to copy what is found in India; instead it is a combination of my own interpretation of multiple influences, woven

together to evoke things that can still be found in India today. I lived in India for 10 years and then my family came to the States, and I have been here since then. During my 12 years in the U. S., I have been exposed to many cultures from around the world. As part of my artistic development during my time at Augustana, I have learned to think about some old things in new ways. This has led me to create some traditional art forms using new media and new methods without completely changing the tradition that comes with the art form.

Presenter: Christopher Andrew Madison—Graphic Design

The Alternative Route

Project Advisor: Kelvin Mason

10:30 a.m.–noon (10 min.) | Augustana Teaching Museum of Art

These photographs open doors, altering reality and allowing an audience to question their own thoughts and perceptions. The simplicity of the backgrounds allow the viewer to believe the falsifications are truth. I am trying to constrict my photography, allowing the mirror to display an open space making it seem as if the mirror is not there. This sequence demonstrates there is always another way out, even though it may not be visible—that there is a way of escaping a problem, no matter how deep you're in. Next time you feel trapped, look at a wall, acknowledge the details, and find a way out.

Presenter: Samantha Paddock—Graphic Design

The Modern Landscape: What Have We Given?

Project Advisor: Peter Xiao

10:30 a.m.–noon (10 min.) | Augustana Teaching Museum of Art

Moved by the modernist writers of the early 20th century, specifically William Faulkner and T.S. Eliot, my art responds to their innate sense of the human need for art, language and beauty in a desolate post-industrial world. My deep appreciation for the modernist aesthetic and all beauty (even beauty derived from the most grotesque places) has led me here. I chose to make my statement by combining the traditional medium that I love, photography, with my love for literature, in the form of a printed publication. I hope my photographs can provide a narrative for the cleansing power of nature, as well as generate critical conversation about what type of landscape we are choosing to create for ourselves. In short, I ask, what have we given?

Presenter: Liv Reinacher—Art

Moments

Project Advisor: Peter Xiao

10:30 a.m.–noon (10 min.) | Augustana Teaching Museum of Art

One of the most difficult things for me as an artist is knowing when to stop working on a painting. When I first started this project I had this overwhelming need to make life-like representations of things that surrounded me, and as I was working I got really frustrated because there always seemed to be something missing. Why paint a painting of something that I could just take a photograph of? I realized that the beauty of paint is that it isn't restricted by real life. Painting is a process where each brushstroke is a form of expression. So I stopped overworking and started embracing each mark my brush made.

I chose to paint people because I love capturing human moments. Moments are made up of so much more than one simple image; they are complex arrangements of layers. For this project I let these moments find me instead of trying to force them onto the canvas. I painted layer upon layer until I could see the beginning of something

that seemed worth capturing. I pulled these figures out of random acts of color and shaped them until they made sense to me. More than being visual depictions of real life, they are memories of emotions and feelings that I tried to portray through shape and color. My hope was it to create paintings that wouldn't tell the viewer what to think but that would remind viewers of things that have happened in their own lives.

Presenter: Amelia Ruzek—Art

Paper Improvisations on Architecture

Project Advisor: Peter Xiao

10:30 a.m.–noon (10 min.) | Augustana Teaching Museum of Art

The Paper Improvisations on Architecture Series is made up of mixed-media sketches and 400 physical sculptures that reflect an abstract expressionist aesthetic representing the unseen world of dynamic sculpture around us, within daily life. My work is influenced by deconstructivist architecture, art and design, particularly that resembling a science-fiction structure—notice the juxtaposition of a peaceful smooth form with sharp, conflicting planes and edges. Some might be tempted to think, “Anyone can fold paper randomly. Anyone can draw a few pen lines.” This is true, but I am of the philosophy that anything is art if it's thought of as such. I didn't approach this project seeking to prove my paper-folding skills. There are amazing origami artists, but I am simply folding to make the neglected known and to make the ordinary beautiful. My work is essentially a call to understand the physical world itself as art from the simplest shape to the most complex combination. The canvas pieces shown here today are loosely based on sketches of a paper sculpture rotating as it spins on the line in a breeze. Dimension is truly a wonder to contemplate. I hope you'll join me in its celebration! I would ask that, while viewing my work, you contemplate the following questions: What geometrical forms are found in everyday life and in nature? What shapes can be seen in the negative space between the forms on the canvas and between the sculptures? How much art and beauty is neglected by our busy lives?

Presenter: Sara Sievert—Graphic Design

True Love

Project Advisor: Peter Xiao

10:30 a.m.–noon (10 min.) | Augustana Teaching Museum of Art

When I was a small child and couldn't fall asleep, my parents told me to tell myself a story. One July night this past summer, I couldn't fall asleep and I did exactly what my parents had told me to do when I was younger. I told myself a story. However, this story was different than any of my previous stories. This time my story had no live people and no actual speaking but was instead a very visual affair. These changes I believe to be influenced by my enjoyment of Pixar Shorts. These video productions are about inanimate objects falling in love or people falling in love with the help of inanimate objects. That fateful July night I created a fun, dynamic storyline that turned into my own unique short. The characters in my story have ups and downs on their journey to love and finally being together. The rise and fall of the plot line is similar to that seen in Pixar Shorts such as “The Blue Umbrella” by Sashchka Unsled and “Paperman” by John Kahrs. In “The Blue Umbrella,” a red umbrella and a blue umbrella are given faces and fall in love through a series of comic encounters. By looking into the making of “The Blue Umbrella” via the internet I was able to learn a lot about the process Pixar goes through in the making of one of their shorts. Then I was able to apply certain steps and thought processes to the making of my own short, such as how to go about designing simple yet expressive cartoon faces. “Paperman” is similar to “Blue Umbrella” except with two people.

My short blends the two ideas—the characters are inanimate objects yet they are shaped like people. Instead of a fluid animation I have created an animation similar to a stop-motion piece to emphasize that overall I want it to be a funny and enjoyable experience. My goal was to create a work that brings entertainment to people in a manner similar to that of Pixar Shorts, but do it in my own style.

Presenter: Samantha Stanton—Art

Skyborne Concepts

Project Advisor: Peter Xiao

10:30 a.m.–noon (10 min.) | Augustana Teaching Museum of Art

I'll come right out in saying I love dinosaurs. They have always been a part of who I am—I literally cannot remember a time when these amazing prehistoric creatures haven't been part of my psyche. They're the reason I originally was majoring in geology, so that one day I could find them myself, have a career doing that. Reading about them, I learned how animals worked, how ecosystems worked, how evolution worked; eventually I learned how science itself works and is done. But I wasn't just concerned with the science of all this. I loved drawing it too, and was always striving to incorporate what I learned into my art. People will tell you that art and science are opposites, that they have little in common and don't work well together, but I believe this is blatant falsehood. There are few scientific concepts that can't be represented with a diagram or illustration of some sort, and museums rely almost completely on visual representations of scientific phenomena to educate the public, who otherwise may not have the vocabulary to read and understand these things. After all, a picture says a thousand words. For almost as long as I've been drawing dinosaurs, I've been drawing dragons, and inventing fantasy worlds for them to live in. Now one may wonder what fantasy has to do with dinosaurs, or indeed any influences from anything real, but believe it or not but fantasy relies on logic quite a bit. We want these mythological creatures and figures to feel real, like they really could exist somewhere, and for that a storyteller needs a halfway-decent understanding of how the world works. Even allowing for magic in my worlds, I have always approached them like they could be a real place, and would function much like our own world does for the most part. This is where my background in science has come in handy. My knowledge of anatomy in particular helps me build believable fantasy creatures, from dragons to aliens and everything in between, and it's one of my favorite things to do. Books have always been a way to bring fantastic worlds and their creatures to life, and more recently movies, but another great storytelling medium has arisen: the video game. Though often dismissed, the highest-quality games easily rival today's blockbusters in terms of story and characters, but allow a level of interaction no film can achieve for longer than an audience could bear to sit through. Wholly imagined lands and societies can be explored in a way no other medium offers, so it should be immediately apparent why I'm drawn to them. Being involved in making them would be a dream job, but I'm rather new to the whole process. Even though I always liked watching my brother play when we were younger, it took playing some truly great games for myself in the last couple years to realize this was something I'd like to get into, and only just started really learning about all that goes into the construction of a game. This is the focus of my show: the exploration of how a fantasy world and its story can be brought to life, made real in a way, through the use of technology, cleverly applied science, and good old-fashioned imagination.

Presenter: Erin Williams—Graphic Design

Elder Futhark Rune Cards

Project Advisor: Peter Xiao

10:30 a.m.–noon (10 min.) | Augustana Teaching Museum of Art

“I know that I hung on a windy tree nine long nights, wounded with a spear, dedicated to Odin, myself to myself, on that tree of which no man knows from where its roots run. No bread did they give me, nor drink from a horn, downwards I peered; I took up the runes, screaming I took them, then I fell back from there.” –Havamal 138.

Everyone wants to see their future. Everyone wants to understand the forces at play in their own lives. Some seek these answers through meditation, and others through prayer, but myself and many others in the Asatru community look for these answers through runic divination, using the Elder Futhark runes. These runes date back to the 2nd century, and through study of surviving literature many Norse scholars have deduced meanings and symbolism for each of these runes. Generally painted onto stone or wood discs, they can be hard to memorize. I found myself wanting to create a visual learning tool for the Asatru and Norse Pagan community to help them in their own study and to provide a new medium for using the runes. Learning and mastering these symbols is a process which takes many, many years, and I want to help people who are just starting to get their bearings in the Norse world. I have always loved paper as a medium, from origami to scherenschnitte to bookbinding, paper has always been a constant in my supply box. As I’ve gotten older and progressed as an artist and designer I have fallen in love with the bold and graphic look of paper sculpture. Artists like Brittney Lee and Carlos Meira have shaped how I think about paper. Through this series, I wanted to break out of stereotypical Viking imagery and show the beauty of Norse religion in a more modern light loaded with different inks, pigments, and shimmers. Through these works I hope to inspire others in their study of the Norse runes, as well as bring deeper meaning to my own personal study. I hope to gain a better understanding of the questions I am exploring both in terms of my religious beliefs and in discovering my design style.

FACULTY PUBLICATIONS

Calendar Year 2013 (Updated 4/28/14)

- Banks, Jacob.** *The Information Age* for large wind ensemble. World premiere by the United States Marine Band, March 17, 2013. Faculty Recital at Augustana College, April 6, 2013. Performance by the Augustana Symphonic Band, November 2, 2013.
- Banks, Jacob.** Teaching Innovation. Music 116. Experimentation with in-class workshop of works by beginning composers. Lively, fast-paced sessions encouraging student composers to see themselves as part of an artistic community.
- Bluemle, Stefanie; Horowitz, Sarah; Rogal, Margaret.** "Epiphany in the Stacks: Library Research and the First-Year Experience." Presented at the Conference for Promoting Undergraduate Research at Liberal Arts Colleges, Rock Island, IL, April 6, 2013.
- Bluemle, Stefanie; Makula, Amanda; Rogal, Margaret.** "Learning by Doing: Performance Assessment of Information Literacy across the First-Year Curriculum." *College & Undergraduate Libraries*. Volume 20. Issue 3-4. 2013. Print. Selected as a 2013 Top Twenty article by the Library Instruction Round Table (LIRT) of the American Library Association.
- Bluemle, Stefanie; Makula, Amanda; Rogal, Margaret.** "The Joy of (Performance) Assessment." Presented at the Association of College and Research Libraries, Indianapolis, IN, April 11, 2013. This was a poster presentation.
- Bluemle, Stefanie; Makula, Amanda; Rogal, Margaret.** "Concept/Context: Information Literacy and Assessment in the First Year." Presented at the Annual Conference on the First-Year Experience, Orlando, FL, February 25, 2013. This was a poster presentation.
- Boaden, Ann.** "Netting Stories: the Weave of Hospitality." *The Lutheran Journal*. Volume 82. Pages 6- 13. Summer, 2013. Print.
- Boaden, Ann.** "Dramatic monologue: Netta Bartholomew Anderson." Tea party to mark the restoration of the Anderson home by the Rock Island Preservation Society, Moline, IL, January 15, 2013.
- Boaden, Ann.** Performance. Chorus of Fair Young Maidens. "Pirates of Penzance." Gilbert and Sullivan. Opera@Augustana. May, 2013.
- Bracke, Deborah.** "A New Way to Assess Student Learning." *Teaching Professor*. Volume 27. Number 2. February, 2013.
- Bracke, Deborah.** "Teacher Candidates' Perceptions of Including Students with Disabilities; An Immersion Experience." National Council for Exceptional Children's Conference, San Antonio, Texas, 2013.
- Burnham, Jennifer L.** "A Man and His Mounds: Contributions of Donald L. Johnson to the field of mima mound studies." Presented to the Geological Society of America, Denver, CO, October 27-29, 2013.
- Burnham, Jennifer L.** and Ronald Sletten. "Active layer warming and deepening at Thule, Greenland during past decade: a comparison of a polar desert and a polar semi-desert site." Presented to the American Geophysical Union, San Francisco, CA, December 2013.
- Burnham, Jennifer L.** and Doug Causey. "Effects of Rapid Environmental Change (2010-2012) on Greenland High Arctic Coastal Marine Communities." Presented to the American Geophysical Union, San Francisco, CA, December, 2013.
- Calder, Lendol.** "The Oldest Alternative Profession: What Doctoral Programs Can Do To Improve History Teaching." Presented with Robert Townsend, Richard Bond, Ann Fabian and Linda Salvucci at the American Historical Association Conference, New Orleans, LA, January 4, 2013.
- Calder, Lendol** with Ann Fabian and Richard Bond. "Preparing Future Teachers: What Graduate Programs Can Do." Presented for the panel Teaching: The Oldest Alternative Profession, American Historical Association, New Orleans, LA, January 6, 2013.
- Chambers-Samadi, Chadia.** "Romancero pour les gens de la frontiere: Jacques Stephen Alexis et Cuba." Presented at Haiti in a Globalized Frame Panel, Tallahassee, FL, February, 2013.
- Crimmins, Jonathan.** "Mediation, Medium, and the Two Vectors of the Gothic in Mary Shelley's *Frankenstein*." *Studies in Romanticism*. Volume 52. Issue 4. Pages 561-583. 2013. Print.
- Crimmins, Jonathan.** "Where Did History Go? What New Historicism Can Learn from Hegel Sense-Certainty." Presented at the North American Society for the Study of Romanticism, Boston, MA, August 8-11, 2013.
- Croll, Paul.** "Explanations for racial disadvantage and racial advantage: beliefs about both sides of inequality in America." *Ethnic and Racial Studies*. Volume 36. No. 1. 2013. Pages 47-74. Print.
- Croll, Paul.** "Getting students to say what they are not supposed to say: The challenges and opportunities in teaching about race in a college classroom." Presented at the 2013 Annual Meeting of the Midwest Sociological Society, Chicago, Illinois, March 28, 2013.
- Daniels, Kelly.** *Cloudbreak, California: a memoir*. Boulder, CO. Owl Canyon Press. 2013. Trade Paperback. Print.
- Day, Kirsten.** "The Economics of Gender: Sex as Capital in Rome Season 2." Presented at the Film & History Conference, Madison WI, November, 2013.
- Day, Kirsten.** "Print the Legend: Classical Connections in John Ford's *The Man Who Shot Liberty Valance*." Presented at the Southwest Texas Popular/American Culture Association Annual Conference, Albuquerque, NM, February 2013.
- Day, Kirsten.** "Print the Legend: Epic Meets Western in John Ford's *The Man Who Shot Liberty Valance*." Presented at the Classical Association of the Middle West and South, Iowa City IA, February, 2013.
- Day, Kirsten.** "Representing Olympias: The Politics of Gender in Cinematic Treatments of Alexander the Great." *Ancient Greek Women in Film*. Edited by Konstantinos P. Nikoloutsos. Oxford, England. Oxford University Press. Pages 279-304. 2013. Print.
- Day, Kirsten.** "Soul Fuck: Possession of the Female Body in Antiquity and in Cinema." *Screening Love and Sex in the Ancient World*. New York. Palgrave Macmillan. Pages 85-98. 2013. Print.
- Day, Kirsten.** Area Chair of the "Classical Representations in Popular Culture" panels. Chair of the "Mythic Heroes Reimagined" panel. Representative of a small liberal arts college in a Professional Development panel entitled "Professional Development 1: How to Succeed In and Outside of Academe: The Professorial Academic Job Search." Southwest Texas Popular/American Culture Association annual conference. Albuquerque, NM. February, 2013.
- Delaney, John** with Martin Coe. «Trabeck Prepares for IFRS: An IFRS Case Study.» *Journal of Accounting Education*. Volume 31. Issue 1. Pages 355-381. 2013. Print.

- Domski, Greg** with Matthew E. Humphries, Wiktoria H. Pecak, Sallie A. Hohenboken, Samuel A. Alvarado, Dale C. Swenson. "Ruthenium(II) supported by phosphine-functionalized N-heterocyclic carbene ligands as catalysts for the transfer hydrogenation of ketones." *Inorganic Chemistry Communications*. Pages 138-143. 2013. Print.
- Domski, Greg** with Matthew Humphries. "Ruthenium(II) complexes supported by phosphine-functionalized N-heterocyclic carbene ligands: Effect of orthometalation on catalytic transfer hydrogenation activity." Presented at the National Meeting of the American Chemical Society, Indianapolis, IN, September 9, 2013.
- Ellis, David.** "Splendid Neutrality: Explaining Prussia's Stance in the Crimean War." Presented at the Consortium on the Revolutionary Era, Ft. Worth, TX, Feb. 22, 2013.
- Ellis, David.** "The Other 48ers: Redefining Freedom in the Wake of the 1848 Revolution." Presented at The Legacy of 1848: Transplanted Ideas and Values in America Past and Present Conference at Wartburg College, Waverly, IA, October 21, 2013.
- Ellis, David.** "Two Souls in One Conservative Breast: The Internecine Struggle Between the *Wochenblatt* and *Kreuzzeitung* Factions." Presented at the German Studies Association Panel, Denver, CO, October, 2013.
- Frank, Nathan** with Z. Kohley, G. Christian, T. Baumann, P.A. DeYoung, J.E. Finck, M. Jones, J.K. Smith, J. Snyder, A. Spyrou, and M. Thoennessen. "Exploiting neutron-rich radioactive ion beams to constrain the symmetry energy." *Physical Review C*. Volume 88. Page 041601. 2013. Print.
- Frank, Nathan** with Z. Kohley, E. Lunderberg, P.A. DeYoung, A. Volya, T. Baumann, D. Bazin, G. Christian, N.L. Cooper, A. Gade, C. Hall, J. Hinnefeld, B. Luther, S. Mosby, W.A. Peters, J.K. Smith, J. Snyder, A. Spyrou, and M. Thoennessen. "First observation of ¹³Li ground state." *Physical Review C*. Volume 87. Page 011304. 2013. Print.
- Frank, Nathan** with Z. Kohley, T. Baumann, D. Bazin, G. Christian, P.A. DeYoung, J.E. Finck, M. Jones, E. Lunderberg, B. Luther, S. Mosby, T. Nagi, J.K. Smith, J. Snyder, A. Spyrou, and M. Thoennessen. "Study of Two-Neutron Radioactivity in the Decay of ²⁶O." *Physical Review Letters*. Volume 110. Page 152501. 2013. Print.
- Frank, Nathan.** "Simulation of a Novel Active Target for Neutron-Unbound State Measurements." Presented at the American Physical Society Division of Nuclear Physics Meeting, Newport News, VA, October 24, 2013.
- Gehler, Scott** with Suzanne M. Ponik, Kristin M. Riching, and Patricia J. Keely. "Bi-directional signaling: Extracellular Matrix and Integrin Regulation of Breast Tumor Progression." *Critical Reviews in Eukaryotic Gene Expression*. Volume 23. Issue 2. Pages 139-157. 2013. Print.
- Hagar, Stephan B.** with Hager, B. J. Cosentino, et al. "Window area and development drive spatial variation in bird-window collisions in an urban landscape." *PLoS ONE*. Volume 8. Issue 1. Pages 1-10. 2013. Print.
- Harrington, Ian A.** "Can you change a student's mind in a course about the brain? Belief change following an introductory course in biological psychology." *Journal of Undergraduate Neuroscience Education*. Volume 12. Issue 1. Pages A23-A33. 2013. Print.
- Hartman, Laura M.** "Consumption, Ethics, and the Environment: A Lutheran Perspective." *Journal of Lutheran Ethics*. Chicago, IL. Evangelical Lutheran Church in America. March, 2013. Online.
- Hartman, Laura M.** "Seeking Food Justice." *Interpretation: a Journal of Bible and Theology*. Volume 67. Issue 4. Pages 396-409. 2013. Print.
- Hartman, Laura M.** Book Reviews *Blessed Are the Consumers: Climate Change and the Practice of Restraint* and *Resisting Structural Evil: Love as Ecological-Economic Vocation*. *Journal of Lutheran Ethics*. November, 2013. Online.
- Hilton-Morrow, Wendy** with Kathleen Battles and Joy Hayes. "War of the Worlds to Social Media." *New York, NY. Peter Lang*. 2013. Print.
- Huntsha, Lisa.** Competitive scholarship awarded. Museum Computer Network annual conference. Montreal, Canada. November 20-23, 2013.
- Hurty, Jon.** Augustana Choir Concert. Illinois Music Education Conference. Peoria, IL. January 24, 2013.
- Jakielski, Kathy J.** with G. Raca, B.S. Baas, S. Kirmani, J.J. Laffin, C.A. Jackson, E.A. Strand, E. A., and L.D. Shriberg. "Childhood Apraxia of Speech (CAS) in two patients with 16p11.2 microdeletion syndrome." *European Journal of Human Genetics*. Volume 21. Pages 455-459. 2013. Print.
- Jakielski, Kathy J.** with K. Hennessy & K. Hennessy. "Foreward." *Anything but silent: Our family's journey through childhood apraxia of speech*. Tarentum, PA. Word Association Publishers. 2013. Print.
- Jakielski, Kathy** with E.A. Worthey, G. Raca, J.J. Laffin, B.M. Wilk, J.M. Harris, J. M., D.P. Dimmock, E.A. Strand, and L.D. Shriberg. "Whole exome sequencing supports genetic heterogeneity in Childhood Apraxia of Speech." *Journal of Neurodevelopmental Disorders*. Volume 5. Page 29. Print. Online.
- Jakielski, Kathy J.** with R.McCauley and E.A. Strand. "Current trends in CAS from the 'street.'" Presented at the 2013 Childhood Apraxia of Speech Research Symposium, Atlanta, GA, February, 2013.
- Jakielski, Kathy J.** with C.J. Gildersleeve-Neumann, and C. Meyer. "Preparing SLPs to appropriately serve bilingual and culturally diverse clients: Education abroad experiences in Ecuador and Cambodia." Presented at the Annual Meeting of the Council of Academic Programs in Communication Sciences and Disorders, Scottsdale, AZ, April, 2013.
- Jakielski, Kathy J.** with S. Gretz, and N. Tarshish. "Questions and answers: Tweens and teens with a history of CAS." Presented at the National Conference on Childhood Apraxia of Speech, Denver, CO, July, 2013.
- Jakielski, Kathy J.** "[Keynote address] State of the art in childhood apraxia of speech research." Presented at the National Conference on Childhood Apraxia of Speech, Denver, CO, July 2013.
- Jakielski, Kathy J.** and Kathy Hennessy. "Teaching children how to talk back: Creative and fun language-advancing activities." Presented at the National Conference on Childhood Apraxia of Speech, Denver, CO, July 2013.
- Katz, Brian** and Michael Starbird. *Distilling Ideas: An Introduction to Mathematical Thinking*. Washington, DC. Mathematical Association of America. 2013. Print.
- Katz, Brian.** "A Bridge between IBL and Student Inquiry." Presented at MathFest, Hartford, CT, March 8, 2013.
- Katz, Brian.** "Levels of Learning Identified in an Inquiry-Based Math Course." Presented at the International Institute for SoTL Scholars and Mentors, Los Angeles, CA, May 31, 2013.

- Katz, Brian.** "Teaching Mathematical Maturity through IBL Axiomatic Geometry." Presented at The 16th Annual Legacy of RL Moore Conference, Austin, TX, June 14, 2013.
- Katz, Brian** with Brant Carlson and Mark Mahoney. "Wikis and Flipped Classrooms to Promote Collaborative Student Writing and In-Class Engagement." Presented at the Preparing Future Faculty Conference, Chicago, IL, June 12, 2013.
- Kivisto, Peter** and Osten Wahlbeck. *Debating Multiculturalism in the Nordic Welfare States.* Houndmills, Basingstoke, Hampshire. Palgrave MacMillan. 2013. Print.
- Kivisto, Peter** and Vanja La Vecchia-Mikkola. "Immigrant Ambivalence toward the Homeland: The Case of Iraqis in Helsinki and Rome." *Journal of Immigrant and Refugee Studies.* Volume 11. Issue 1. Pages 1-19. 2013. Print.
- Kivisto, Peter.** "[Mis]Reading Muslims and Multiculturalism." *Social Inclusion.* Volume 1. Issue 2. Pages 126-135. 2013. Print.
- Kivisto, Peter.** "Historians and Sociologists Debate Transnationalism." *The Oxford Handbook of Immigration and Ethnicity.* Edited by Ronald Bayor. New York, NY. Oxford University Press. Pages 281-299. 2013. Print.
- Klein, Stephen.** "O'Reilly's War on the 'War on Christmas: Diatribe, Culture War, and Conservative Ideology." *Venomous Speech: Problems With American Political Discourse on the Right and Left.* ABC-CLIO/Praeger. April 30, 2013.
- Lee, Daniel E.** "Christianity and Violence: Coming to Grips with the Bloody Threads in the Garment." *Journal of Lutheran Ethics.* Volume XIII. Issue 7. November 2013. Online.
- Mahn, Jason A.** "Reforming Formation: The Practices of Protestantism in a Secular Age." *Currents in Theology and Mission.* Volume 40. Issue 5. Pages 305-318. 2013. Print.
- Note: **Nathan Montover**, who also teaches in the Augustana Religion Department, was the guest editor for this volume.
- Mason, Kelvin.** "Moon 1." Displayed in the Staff Exhibition at the Pilchuck Gallery, Pilchuck Glass School, Stanwood, WA. May, 2013.
- Mason, Kelvin.** "Moon 2." Displayed in the Staff Invitational at the Pilchuck Gallery, Pilchuck Glass School, Stanwood, WA. June, 2013.
- Mason, Kelvin.** "Moon 3." Displayed in the Biennale at the Pilchuck Glass School, Stanwood, WA. July, 2013.
- Mason, Kelvin.** "Sea Monkey." Displayed in *SeaPunk* at the Pilchuck Glass School, Stanwood, WA. July, 2013.
- Mason, Kelvin.** "Moon 4." Displayed in the Adler Displays at the River Center, Davenport, IA. September-December, 2013.
- Mayer, Thomas F.** *The Roman Inquisition: A Papal Bureaucracy and Its Laws in the Age of Galileo.* By Thomas F. Mayer. Philadelphia, Pennsylvania ; University of Pennsylvania Press. 2013. Print.
- Morris, Daniel A.** "Improvisation as Democratic Virtue: A Deweyan Possibility for African American Religion and Ethics." *Soundings: An Interdisciplinary Journal.* Volume 96. Issue 4. Pages 355-381. Print.
- Morris, Daniel A.** "Unnoticed Consensus: Dewey, Niebuhr, and the Politics of Sovereignty." *The Journal of Religion.* Volume 9. Issue 3. Pages 319-340. 2013. Print.
- Morris, Daniel A.** "Positive Law and Familial Reconciliation: A Reflection on Same-Sex Marriage Policy." Presented at the American Academy of Religion, Baltimore, Maryland, November 25, 2013.
- Morris, Daniel A.** "The Pull of Love: Mutual Love as Democratic Virtue in Niebuhr's Political Theology." Presented to the Society of Christian Ethics, Chicago, Illinois, January 5, 2013.
- Morse, Margaret.** "From Chiesa to Casa and Back: The Merging of Public and Private in Domestic Devotional Art." *Reflections on Renaissance Venice: A Celebration of Patricia Fortini Brown.* Edited by Blake De Maria and Mary Frank. Milan. Five Continents. Pages 143-54. 2013. Print.
- Morse, Margaret.** "The Venetian portego: Family Piety and Public Prestige." *The Early Modern Domestic Interior, 1400-1700.* Edited by Erin Campbell, Stephanie Miller, and Elizabeth Carroll Consavari. Aldershot. Ashgate. Pages 89-106. 2013. Print.
- Mortenson, Chris.** "Photography by Chris Mortenson." Exhibited at the Janalyn Hanson White Gallery, Mount Mercy University, Cedar Rapids, IA. October 14- November 8, 2013.
- Muir, Tim** with **Jimmy Wiebler ('14)** and **Manisha Kumar ('13).** "Characterizing the cold-conditioning response in a vertebrate ectotherm." Presented at the International Symposium on Environmental Physiology of Ectotherms and Plants, London, Ontario, 2013.
- Rose, Katrina** with Alyson Dodi Meiselman. "Employment of Trans-Individuals: A Perspective With a Long View." *Maryland Bar Journal.* Volume 46. Issue 5. Pages 12-19. 2013. Print.
- Salgado, Nirmala.** *Buddhist Nuns and Gendered Practice: In Search of the Female Renunciant.* New York, NY. Oxford University Press. 2013. Print.
- Schroeder, Jared.** "Critical Thinking During a Time of Critical Change in Media Industries: Examining Media Students' Perception and Appreciation of Higher-level Learning Outcomes." *Southwestern Mass Communication Journal.* Volume 28. Issue 2. 2013. Online.
- Schroeder, Jared.** "Media Fragmentation." *The Encyclopedia of Public Relations.* Edited by Robert L. Heath. Thousand Oaks, CA. Sage. Pages 552-553. 2013. Print.
- Schultz, Jessica** with Elizabeth Altmaier, Saba Ali, and Benjamin Tallman. "A study of posttraumatic spiritual transformation and forgiveness among victims of significant interpersonal offenses." *Mental Health, Religion, and Culture.* In Press. 2013.
- Schussheim-Anderson, Rowen.** Solo exhibition. Manierre Dawson Gallery. West Shore Community College, Ludington, Michigan. 2013.
- Strunk, Christopher.** "Circulating practices: Migration and translocal development in Washington D.C. and Cochabamba, Bolivia." *Sustainability.* Volume 5. Issue 10. Pages 4106-4123. 2013. Print.
- Strunk, Christopher** and Helga Leitner. "Resisting federal-local immigration partnerships: Redefining Secure Communities and public safety." *Territory, Politics, Governance.* Volume 1. Issue 1. Pages 62-85. 2013. Print.
- Strunk, Christopher** with Leonardo de la Torre Ávila. "Living, not [just] leaving: Bolivian migrant survival strategies and adaptations in the United States and Spain." Presented at the Latin American Studies Association International Congress, Washington, D.C., June 1, 2013.

- Tawiah-Boateng, John.** "Chinua Achebe: Africa's Missing Nobel Laureate." Presented at the African Literature Association's annual conference, Charleston, March 21, 2013.
- Xaio, Peter.** Paintings and mixed media work displays about his experiences during Mao's Cultural Revolution. Quad City Airport Art Gallery. September and October, 2013.
- Zargar, Cyrus.** "The Poetics of Shuhud: Ibn al-Arabi's 'Intuitive, Enamored Heart' and the Composition of Erotic Poetry." *The Journal of the Muhyiddin Ibn Arabi Society*. Volume 54. Issue 2. Pages 13-36. 2013. Print.
- Zargar, Cyrus.** "Revealing Revisions: Fayd al-Kashani's Four Versions of al-Kalimat al-Maknuna." *Iranian Studies*. Volume 47. Issue 2. Pages 1-22. 2013. Print.
- Zargar, Cyrus.** "The Ten Principles: Theoretical Implications of Volitional Death in Najm al-Din Kubra's al-Usul al-Ashara (A Study and Translation)." *The Muslim World*. Volume 103. Issue 1. Pages 1-24. 2013. Print.
- Zemek, Michael.** "Jenny Lind Vocal Ensemble in Concert." Presented at the Illinois Music Education Conference. Peoria, IL, January, 2013.
- Zemek, Michael.** "Teaching the Choir to Sing ." *Podium*. American Choral Directors Association. Winter 2012-13. Volume 39. Issue 2. Pages 5-6. 2013. Print.
- Zemek, Michael.** "Jenny Lind Vocal Ensemble in Concert - Unison Winners for Children's Choir." Presented at the Illinois American Choral Directors Association ReTreat 2013, Normal, IL, June 26, 2013.

STUDENT HONORS AND AWARDS

(FIRST-YEARS, SOPHOMORES, JUNIORS)

ACCOUNTING

Deere and Company Scholarship

Tressa Czysz

McGladrey Scholarship

Benjamin Fornek

Arthur Andersen Scholarship

Laura Behnke

Cody Burgdorff

Patrick Devine

Greg Larson

Ha Pham

S. James Galley Scholarship

Michael Baugh

Andrew Beveroth

Jessica Campbell

Siming Chen

Quinn Foley

Benjamin Fornek

Justin Fox

Jeremy Gottardo

James Hays

Andrea Hult

Danielius Jurgutis

Katherine Karstens

Sarah Kerres

Kody Kiefer

Nathan Kyes

Greg Larson

Michael McAleer

Danilo Panici

Jared Puls

Shelby Reese

Jordan Richardson

Ashim Shrestha

Madeline Voss

Seth Whan

Katherine Ziegler

Augustana Accounting Association Scholarship

Nathan Kyes

KPMG Peat Marwick Scholarship

Danilo Panici

ASIAN LANGUAGES

Outstanding Academic Achievement Award in Asian Languages

Mylaun Griffith

Adam Populorum

BIOLOGY

Anderson Swedo Science Education Endowed Scholarship

Alexa Gutasukas

Jeffrey Meeker

BUSINESS ADMINISTRATION

Harold E. and Louise Lage Swanson Scholarship

Siming Cheng

Jamie Christian

Tressa Czysz

Benjamin Fornek

Justin Fox

Megan Funke

Jamie Hochmuth

Andrea Hult

Kody Kiefer

Samuel Mago

Ha Pham

Jacob Puls

Andrew Shearouse

Kylie Siebert

Ryan Silvola

Jacob Soukup

Mikaela Steinberg

Katherine Ziegler

Thomas C. Montgomery Memorial Scholarship

Patrick Devine

Katherine Karstens

Kimberly Khuen

Allison Kotleba

Nathan Kyes

Danilo Panici

Anthony TouVelle

Madeline Voss

CHEMISTRY

American Chemical Society Analytical Chemistry Award

Rong Zheng

Albert L. Eliason Chemistry Endowed Scholarship

Tyler Rolfe

CLASSICS

Eta Sigma Phi Honorees National Classics Honor Society

Rachel Akmakjian

Daniel Kochanski

Christopher Saladin

Shelby Stuparits

COMMUNICATION STUDIES

Scott Alden Johnson Memorial Endowed Scholarship

Kimberly Khuen

Chad Meyer Endowed Scholarship

Amber Dalgaard

Lambda Pi Eta Speech Honor Society

Allison Hupfer

Hadley Karrick

Kimberly Khuen

Stephanie Loconsole

Kerry Robbins

Sara Ruthberg

Leah Stortz

Natalie Tomerlin

Valerie Van Roeyen

Alicia Win

Karly Zucker

MULTIMEDIA JOURNALISM AND MASS COMMUNICATION

Illinois College Press Association Awards

Megan Boedecker

Shylee Garrett

Angelica Lindqvist

Ian Magnuson

Linnea Ritchie

ECONOMICS

Bruce R. Milligan Endowed Scholarship

Cody Burgdorff
Vincent Giglierano
Alexander Odenkirk
Ha Pham
Joseph Wood

Thomas C. Montgomery Memorial Scholarship

Hunter Hill
Edgar Leon
Samuel Mago
Kristin Molloy
Long Nguyen
Jonathan Pape
Matthew Stevens

GEOLOGY

Joseph M. Hoare Endowed Scholarship in Geology

Joey Romero

GERMAN AND SCANDINAVIAN STUDIES

Delta Phi Alpha, the German Honorary Society

Bethany Hayenga

MATHEMATICS AND COMPUTER SCIENCE

Pi Mu Epsilon, National Honorary Mathematics Society

Kimberly Grimmer
Benjamin Knapper
Jessica Launius
Alex Odenkirk
Rebecca Post
Grace Vente
David Voland

MUSIC

Presser Scholar

Scott Reynolds

Ruth D. Hagelin Scholarship

Elizabeth Lundine

Louise Nathanson Applied Lesson Award

Lorraine Stamberger
Madeline Ruzek
Whitney Sampleton
Patrick Yasutake
Rebecca Strandberg

SOCIOLOGY, ANTHROPOLOGY AND SOCIAL WELFARE

Mike Kirn Book Award

Madison Neece

THEATRE ARTS

Judith Katz Memorial Theatre Scholarship Award

Mariel Rogozinski

FREISTAT STUDENT LANGUAGE AWARD

Danica Gray
Meghan Grahs
Emily Haskins
Bethany Hayenga
Alexandra Nusz
Bonnie Thornton

FREISTAT CENTER SPECIAL AWARD IN INTERNATIONAL PEACE STUDIES

Joseph Wood

Freistat Center Student-Faculty Fellows On-Site Undergraduate Research

Rukmini Girish (faculty mentor,
Taddy Kalas)
Mamady Soumah (faculty mentor,
Taddy Kalas)

HONORS CAPSTONE PROJECTS

Christine Harb

Self-Identity and Self-Esteem of Palestinian Youth in Go Palestine Camp

Supervising professors: Dr. Brian Katz,
Dr. Jessica Schultz and Dr. S. Fenwick

Joseph Wood

Examining Contextual Determinants: Extracting Lessons on Civil War from the Case of Lebanon

Supervising professor:
Dr. Mariano Magalhães

OMICRON DELTA KAPPA

Juniors

Natali Bode
Stephanie Burbidge
Brittany Burk
Katherine Douglas
Emily Haskins
Mary Kiolbasa
Samantha McGreer
Madison Neece
Ha Pham
Sylvia Ramirez-Bertolasi
Kerry Robbins
Cody Schmitt
Ingrid Schneider
Lauranne Schone
Anthony TouVelle
Alexandria Wade

CLASS HONORS (4.0 GPA)

Juniors

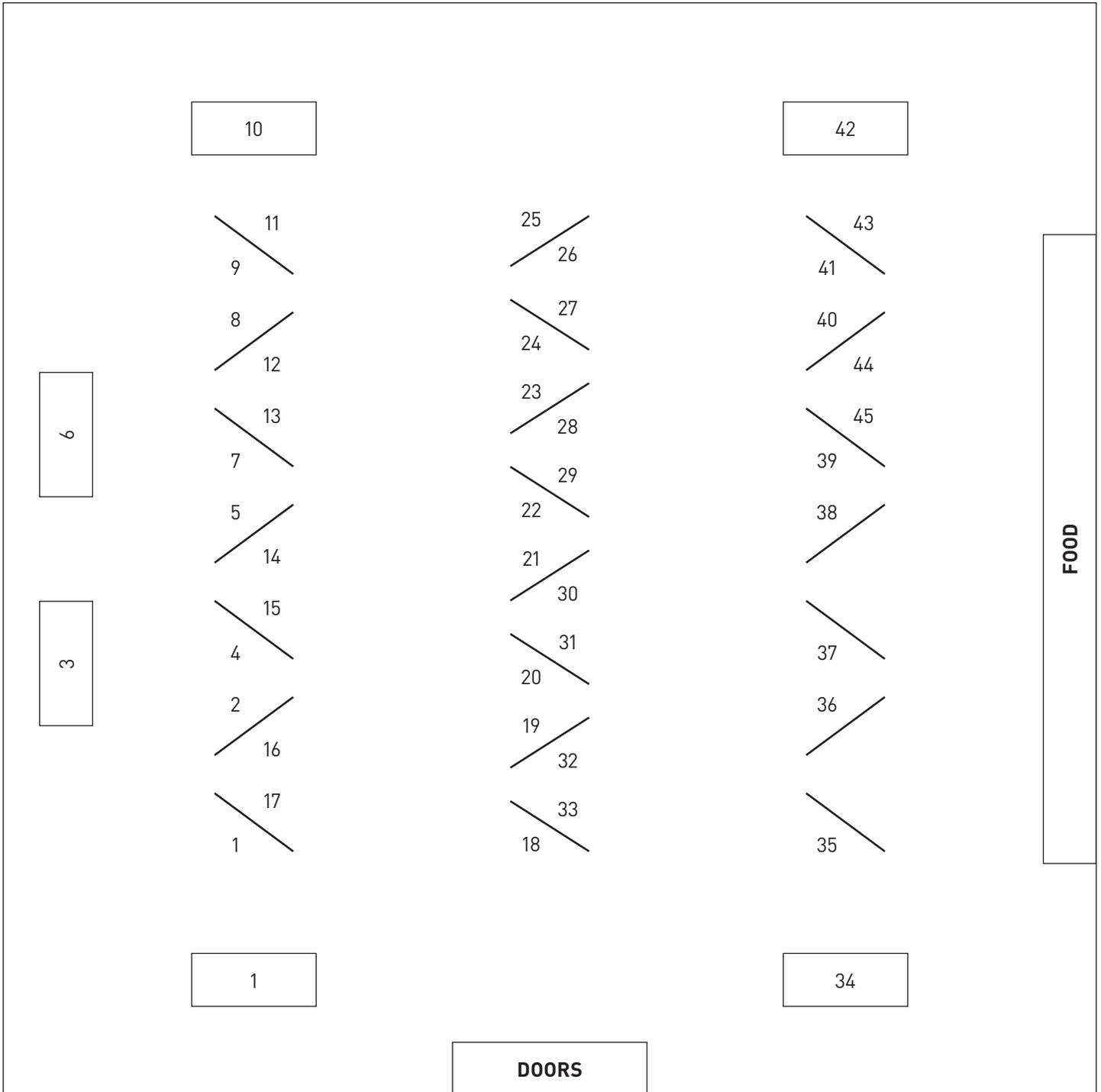
Kyle Christensen
Meagan Murphy
Sophia Ries

Sophomores

Joseph Carroll
Jordan Gibb
Hannah Lohmeier
Anne Mitchell
Sergio Tekeli

RESEARCH POSTER PRESENTATION LAYOUT

Center for Student Life, Gävle Room, 4th floor



Augustana College