

SCHEDULE OF EVENTS

FRIDAY, MAY 11: STEINMETZ SYMPOSIUM

9 A.M. – 5 P.M.

■ THE CHARLES PROTEUS STEINMETZ SYMPOSIUM

Presentations on student creative, scholarly and research achievement. Programs and information available in Schaffer Library, inside the north entrance to Karp Hall, inside the north entrance to Lippman Hall, inside the entrance to the Feigenbaum Center for Visual Arts, and inside the entrance to the Wold Center.

STUDENT PRESENTATION SESSIONS BEGIN AT 9 A.M.

5 – 6:30 P.M.

■ STEINMETZ SYMPOSIUM RECEPTION

Cash Bar and light refreshments.

For presenters, their parents, alumni, guests and faculty sponsors.

LALLY READING ROOM, SCHAFER LIBRARY

A selection of posters presented by student researchers at national professional society meetings during the 2017-2018 academic year will be posted outside of the Lally Reading Room.

8 P.M.

■ THE UNION COLLEGE CHOIR

■ THE UNION COLLEGE AND COMMUNITY ORCHESTRA

MEMORIAL CHAPEL

SATURDAY, MAY 12: PRIZE DAY

11 A.M. – NOON

■ PRESENTATION OF PRIZES AND RECOGNITION

MEMORIAL CHAPEL

IMMEDIATELY FOLLOWING

■ PRIZE DAY RECEPTION

REAMER CAMPUS CENTER PATIO

2 P.M.

■ UNION COLLEGE JAZZ ENSEMBLE

EMERSON AUDITORIUM, TAYLOR MUSIC CENTER

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SATURDAY, MAY 12:

UNION COLLEGE JAZZ ENSEMBLE SATURDAY AT 2 P.M.		31
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THE CONVENIENCE STORE WILL BE OPEN:

Friday, 8:45 a.m. – 11 p.m.
Saturday, 10:30 a.m. – 11 p.m.
Sunday, 11 a.m. – 11 p.m.

THE BOOKSTORE WILL BE OPEN:

Friday, 8:45 a.m. – 4:30 p.m.
Saturday, 10:30 a.m. – 3:30 p.m.
Sunday, closed

THE NOTT MEMORIAL WILL BE OPEN:

Friday, 10 a.m. – 6 p.m.
Saturday, 10 a.m. – 6 p.m.
Sunday, 10 a.m. – 6 p.m.

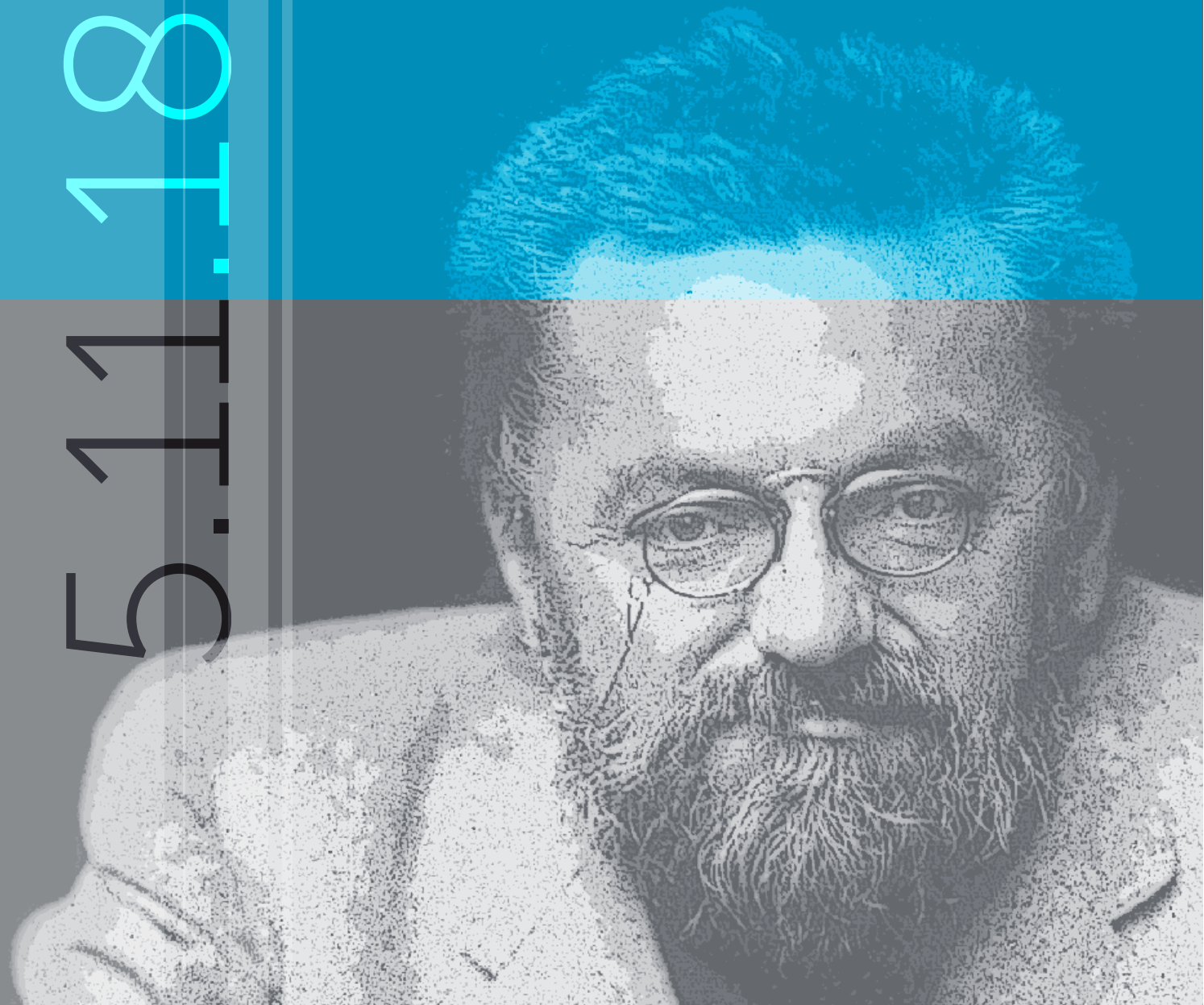
SCHAFFER LIBRARY WILL BE OPEN:

Friday, 8 a.m. – midnight
Saturday, 10 a.m. – midnight
Sunday, 10 a.m. – 2 p.m.

A HOSPITALITY STATION SERVING LIGHT SNACKS AND BEVERAGES IS AVAILABLE IN SCHAFFER LIBRARY.



5.11.18



THE CHARLES PROTEUS
STEINMETZ
SYMPOSIUM

THE 2018 ANNUAL STEINMETZ SYMPOSIUM STUDENT ART EXHIBITION

9 A.M. – 4:30 P.M. ■ CROWELL AND WEST GALLERIES IN THE FEIGENBAUM CENTER FOR VISUAL ARTS

The Visual Arts Department is delighted to present our 2018 Steinmetz Symposium exhibition, an annual highlight of select student work chosen by our studio faculty. The breadth and diversity of this exhibition showcases the range of courses students are taking, as well as their innovative efforts to push boundaries between different materials. This selection of work includes students in various class years, majors and minors in our program, as well as students taking visual arts courses as an elective. We are proud of our students' achievements, and hope that you will enjoy seeing all their hard work.

LORRAINE MORALES COX // ASSOCIATE PROFESSOR AND DEPARTMENT CHAIR

Featuring the best and most accomplished student works from the 2017-2018 academic year as selected by:

MARTIN BENJAMIN
PHOTOGRAPHY

CHRIS DUNCAN
SCULPTURE

LAINI NEMETT
PAINTING
& DRAWING

FERNANDO ORELLANA
DIGITAL ART

SANDY WIMER
PRINTMAKING & DRAWING

DIGITAL ART

PROF. FERNANDO ORELLANA

Daria Agadzhanova
Ari Bennett
Miles Bigelow
Kaitlynn Blow
Anne Bond
Baahh-Nazoshnii
Brown-Almaweri
Kajal Choudhari
Mitchell Clifford
Sydney DeCesare
Julia Delaney
Quinn Devlin
Abby Ellis
Abigail Golodik
Sonja Hansson
Gamze Inanc
Kevin Jordan
Ben Kopchains
Rachel McNeil
Samantha Miller
Matthew Minicucci
Lexi Morrison
Sahar Shakeel
Clara Shealy
Pranav Shrestha
Arielle Singer
XiaoZhi Yang

DRAWING

PROF. LAINI NEMETT

Marina Angelopolous
Yu Chang
Shannon Collins
Sata Daitke
Abby Golodik
A.J. Hubbard
Kirsten Kaptein
Pamela Rice
Josephine Sasso
Molly Weiner
Imogene Wells
Kristen Westerhoff
Yiran Zhang

DRAWING

PROF. SANDY WIMER

Steven Apolo
Jackie Burmester
Lauren Elder
Kirsty Kaptein
Matthew Minicucci
Jenny Mutch
Arjen Steegstra



THE 2018 ANNUAL STEINMETZ SYMPOSIUM STUDENT ART EXHIBITION

9 A.M. – 4:30 P.M. ■ CROWELL AND WEST GALLERIES IN THE FEIGENBAUM CENTER FOR VISUAL ARTS



PAINTING

PROF. LAINI NEMETT

Elizabeth Andonie
Carly Bayroff
Erin Besch
Natalya Brill
Megan Brown
Emily Fiore
Sophie Huther
Samantha Miller
Sophia Potter
Joshua Price
Clara Sheely

PHOTOGRAPHY

PROF. MARTIN BENJAMIN

Ava Berg
Olivia Britton
Lauren Capron
Molly Coleman
Zineb Hajjaj
Richard Ham
Haoyu Jiang
Isabel McCarthy
Jason Nelson
Kallan Piconi
Carlos Piedad
Pamela Rice
Clara Shealy
Hailey Sinon
Allison Supranowicz
Rebecca Taslitz
Eleanor Vaughn
Gangliang Zhao

PRINTMAKING

PROFS. SANDY WIMER AND SHERI LULLO

Hein Htet Aung
Annie Bond
Natalya Brill
Lilly Crissy
Yixuan Ma
Rachel Meyers
Wujin Shi
Johnny Willis
Bowei Xu
Yawen Yang

SCULPTURE

PROF. CHRIS DUNCAN

Anthony Amoroso
Sander Davis
Clifford Elike
Lilith Haig
Andrew Hamlijn
Kevin Jordan
Stephen Nadler
Sophia Potter
Pamela Rice
Elizabeth Soper
Bowei Xu
Niuniu Zhang
Yizhou Zhuang

PRINTMAKING

PROF. SANDY WIMER

Steven Apolo
Hein Htet Aung
Kate Blow
Mitchell Famulare
Abigail Golodik
Sonja Hansson
Melany Lucero March
Leah Miltenberg
Sophia Potter
Wujin Shi
Charapreet Singh

SESSION I

9 – 10:20 A.M. ■ CONCURRENT ORAL PRESENTATIONS

KARP 001

MEXICO/U.S. MINI-TERM I

MODERATOR: VICTORIA MARTINEZ

**9 A.M. // VANESSA RODRIGUEZ-JIMENEZ,
NANCY LOPEZ RAMIREZ**

Mexico/U.S. 1

**9:20 A.M. // MADELYN VANDORPE, MADELEINE HAMPARIAN,
GIOVANA COELHO**

Mexico/U.S. 1

**9:40 A.M. // EMILY SULLIVAN, ELLA TYLER,
MATTHEW BARRETT**

Mexico/U.S. 1: The Impact of Human Rights Groups on Immigrants

KARP 002

ANTHROPOLOGY I

MODERATOR: ARSALAN KHAN

9 A.M. // ANDREW LABROT

Fragmented Solidarity: Post-Fordist Labor and “The Political Revolution”

9:20 A.M. // ANDREA BECKER

Asian American Identity in the Pacific Northwest

9:40 A.M. // BRENDA LIN

Reentry Programs for the Formerly Incarcerated: the Performance of Transformation in Stigma Management

10 A.M. // MANUEL VENTURA

Dominicano De Aqui Y De Alla : Dominican from Here and There: A Conversation on Dominican Identity, Masculinity, Hair and Time in the Dominican Barbershop

KARP 004

FRENCH AND FRANCOPHONE STUDIES I

MODERATOR: CHARLES BATSON

9:20 A.M. // ELENA PETTIFORD

Local Particularities of Global French

9:40 A.M. // PAIGE GEIB

“Bonjour, hi”: The Influence and Threat of English for the French Language and Identity in Quebec

10 A.M. // WILLIAM GARNER

Education as Activism: Classroom Interventions by LGBT Organizations in Contemporary France

KARP 005

FINISHING WELL: END-OF-LIFE ISSUES

MODERATOR: CAY ANDERSON-HANLEY

9 A.M. // KATHLEEN MONAHAN

Nutrition and its Relation to Cognition: Examining the Relationship Between Proportional Macronutrient Consumption and Cognitive Functioning Among Older Adults

9:20 A.M. // CAITLYN TABOR

The “Give and Take” of Medical Morality

9:40 A.M. // KATHRYN WALL

Acute and Longitudinal Biomarker and Neuropsychological Change: A Three Month Pilot Study of the interactive Physical and Cognitive Exercise System (iPACESTM) for Older Adults on Insulin-like Growth Factor 1, Dehydroepiandrosterone and Cortisol

10 A.M. // SHANNON WEST

Advance Care Planning: Teaching Discussions about End-of-Life Care



SESSION I

9 – 10:20 A.M. ■■■ CONCURRENT ORAL PRESENTATIONS

KARP 008

CREATIVE WRITING

MODERATOR: JUDITH LEWIN

9 A.M. // ANGELICA RIVERA

WORD

9:20 A.M. // HOPE RELLY-COBB

Interwoven: A Historical Fiction

9:40 A.M. // JENNA SALISBURY

Jasmine Burning: Emulating the “King” of Horror

KARP 105

BIOLOGICAL NEUROSCIENCE

MODERATOR: ROBERT OLBERG

9 A.M. // BRIAN SHAW

Exploration of Neuronal Responses to Auditory Stimuli in Dragonflies

9:20 A.M. // CAROLINE ROBERTO

Identifying Backward-Looking Neurons in the Aeshnid Dragonfly

9:40 A.M. // WILLIAM BROWN

Neuromodulation of the Crayfish Third-Nerve by Focused Low-Frequency Pulsed Ultrasound Stimulation

LEARNING LAB

MATHEMATICS I

MODERATOR: BRENDA JOHNSON

9 A.M. // CASSANDRA CALL

Projective Planes and Groups

9:20 A.M. // YUNMENG LI

Math and Chemistry: Detecting Chirality of Molecules

9:40 A.M. // JASON TURNER

Persistent Homology of BuckyBall Configurations

10 A.M. // CASEY BRUCK

Applications of Covering Sets

LIPPMAN 012

KLEMM FELLOWS I

MODERATOR: MARK DALLAS

9 A.M. // ABIGAIL SALAMONE

Shaping Future Global Citizens: A Look Inside a Chinese International Kindergarten

9:20 A.M. // JACQUELINE SHARRY

Botswana: Conservation, Community, and Conflict

9:40 A.M. // OLIVIA BRITTON

The Price Tag of Suffering, The Exploited Lives of Refugees in Camini, Italy

10 A.M. // TSHERING LAMA SHERPA

Conservation in the Himalayas: A Look at the Interaction Between Conservation and Urbanisation in Ghandruk, Nepal

LIPPMAN 016

NEUROSCIENCE AND PSYCHOLOGY

MODERATOR: DANIEL BURNS

9 A.M. // GIOVANA COELHO

Working with Virtual Stoves and Lights: An Investigation of Memory Processing and Checking Behavior in Obsessive-Compulsive Disorder

9:20 A.M. // SAMUEL PODELL

Assessing the Survival Processing Memory Advantage in a More Ecologically Valid Environment

9:40 A.M. // DANIELLE MILLER

Cognitive and Emotional Correlates of Improved Gait Speed and Distance During the Course of Physical Therapy Treatment

10 A.M. // MOMNA ASLAM

Determining Binary Intentions Using A Steady State Visually Evoked Potential-Based BCI: A Comparison of Centered and Off-Centered Stimulus Presentation

SESSION I

9 – 10:20 A.M. ■ CONCURRENT ORAL PRESENTATIONS

LIPPMAN 017

MARKET ECONOMICS

MODERATOR: STEPHEN SCHMIDT

9 A.M. // GREGORY LANGNER

Momentum Strategies and Portfolio Construction in the U.S. Equity Markets

9:20 A.M. // MATTHEW LEWIS

Technological Efficiencies Behind Nonprofits

9:40 A.M. // KIMBERLY WELLINGTON

Agent-Based Modeling to Analyze the Effect of the 2009 Government Stimulus Package on the Labor Market

10 A.M. // ALEXANDER KOZIKOWSKI

The Application of a Leveraged Buyout: American Outdoor Brands Corporation

LIPPMAN 101

SOCIOLOGY I

MODERATOR: DEIDRE BUTLER

9 A.M. // EMILY KAUFMAN

An Examination of School Shootings and Mental Health: A Comparative Case Study

9:20 A.M. // LINDSAY HEMMINGER

Zero Tolerance Policy and School Policing: Implications of and Alternatives to Criminalizing Disciplinary Policies in Schools

9:40 A.M. // CLARA SHEALY

Animal Assisted Interactions for Youth and Adolescent Mental Health: Historic versus Contemporary Conceptions of the Human Animal Bond

10 A.M. // MALLORY KILEY

Dropout or Delinquent: An Ecological Analysis of High School Attrition Rates the Correlation to Criminal Behavior

OLIN 106

ROBOTS I

MODERATOR: JOHN RIEFFEL

9 A.M. // ELIZABETH RICCI

A Better Way to Construct Tensegrities: Planar Embeddings Inform Tensegrity Assembly

9:20 A.M. // JAMES BOGGS

Exploiting the Dynamics of Tensegrities Via Morphological Computation

9:40 A.M. // AKSHAY KASHYAP

Transfer Learning for Faster Tensegrity Robot Gait Optimization

10 A.M. // BIANCA MIELKE

Underwater Data Collector

OLIN 306

IGNEOUS AND METAMORPHIC PETROLOGY

MODERATOR: HOLLI FREY

9 A.M. // ABADIE LUDLAM

Decompression and Heating Induced Amphibole Breakdown on Dominica, Lesser Antilles

9:20 A.M. // SARAH HICKERNELL

Magmatic Enclaves and Magma Mixing in Morne Micotrin, Dominica

9:40 A.M. // ANDRES GALLEGO

Determining the P/T Path of Metamorphosed Phyllites using Chloritoid-phengite-chlorite and Other Blueschist Facies Assemblages

10 A.M. // MARIA VAN NOSTRAND

Petrology and Thermodynamic Modeling of Amphibolite Facies Rocks of the Blåhø, Nappe of the Middle Allochthon, Scandinavian Caledonides in Norway



SESSION I

9 – 10:20 A.M. ■■■ CONCURRENT ORAL PRESENTATIONS

SCHAFFER 204 (PHI BETA KAPPA ROOM)

RITUALS OF THE LIVING AND THE DEAD

MODERATOR: SHERI LULLO

9 A.M. // MEGAN HOLMES, THOMAS HARRISON

“The Footprint that Remains; An Analysis of the Implications and Externalities our Deaths Present Based on the Environmental and Ecological Backlash Linked to Traditional Aftercare Processes and the Theory of Cryonic Treatment”

9:20 A.M. // KATHARINE BEAL

Kolam and the Social Importance of Women’s Ephemeral Design in India

9:40 A.M. // SAHAR SHAKEEL

The Symbolic Imagery of the Islamic Prayer Rug

SCIENCE AND ENGINEERING N205

ENGINEERING MATERIALS

MODERATOR: ASHRAF GHALY

9 A.M. // ANOUK NOUET

Impact of Adding Waste Materials to Pervious Concrete Performance Under Freeze-thaw Conditions

9:20 A.M. // SEAN GLENNON

Design of a Load Frame for Nonlinear Viscoelastic Biological Materials

9:40 A.M. // ADAM ASHCROFT

Environmentally Friendly Hiking Boot Shanks

10 A.M. // RONALD TOCCI

Design, Theory and Construction of a Full-Scale Sustainable Composite Hockey Stick Shaft

WOLD 128

CHEMICAL BIOLOGY

MODERATOR: MARGOT PAULICK

9 A.M. // JOHN SHULER, NAR LIN

Isolation, Characterization, and Synthesis of Cuticular Hydrocarbon Natural Products from *Drosophila athabasca*, A Species of Evolutionary Interest

9:20 A.M. // GREGORY HAYNER

A Kinetic Study of Porcine Liver Esterase Hydrolysis of Cell-permeable Analogues of Trehalose

9:40 A.M. // RACHEL RILEY

Synthesis and Evaluation of Bu4Tre for the Protection of Mammalian Cells

10 A.M. // THOMAS WILLIAMSON

Synthesis and Evaluation of Bu6Tre, a Cell-permeable Trehalose Analogue, for the Protection of Mammalian Cells

WOLD 225

APPLICATIONS OF SILICA AEROGELS

MODERATOR: ANN ANDERSON

9 A.M. // KIAN COOK

Aerogel Windows as a Solution for Reduced Energy Consumption

9:20 A.M. // MATTHEW GIARRUSSO

High Performance Thermal Insulation: Silica Aerogels in Construction Technology

9:40 A.M. // PAIGE KOTOWITZ

Spectroscopic and Chemical Analysis of Ibuprofen-Doped Silica Aerogels as Drug Delivery Systems

10 A.M. // ELIZABETH DONLON

Optimization of Superhydrophobic Surface Production Using Ambient-Pressure Dried Silica-Based Aerogels

SESSION II

10:30 A.M. – 12:10 P.M. ■ CONCURRENT ORAL PRESENTATIONS

EMERSON AUDITORIUM

ARTS

MODERATOR: TIM OLSEN

10:30 A.M. // DANIELLE PINNEY

Storytelling in Music and the Redefinition of Singer-Songwriters in the Late 20th Century

10:50 A.M. // NICHOLAS LOCKWOOD

Dreamquesting: A Short Animated Film

11:10 A.M. // ARIELLE SINGER

Echoes: A Study in Projection Mapping

KARP 001

MEXICO/US MIN-TERM II

MODERATOR: VICTORIA MARTINEZ

10:30 A.M. // KEVIN JORDAN

The American-Mexican Border Mini Term: A Documentary

10:50 A.M. // MADELEINE HAMPARIAN

Mexico/U.S. 2: U.S. Immigration: Operation Streamline and the Private Prison and Detention System

11:10 A.M. // RILEY NICHOLS, SEAN GLENNON

Mexico/U.S. 2: The Wall and Alternative Methods of Immigration

KARP 002

ANTHROPOLOGY II

MODERATOR: JEFFREY WITSOE

10:30 A.M. // HANNAH RAYHILL

Religion and American Neoliberalism on a College Campus: Navigating the Grey Areas

10:50 A.M. // ABIGAIL SALAMONE

Bridging the Gap: Poverty, Education and After-School Programs in Hamilton Hill



SESSION II

10:30 A.M. – 12:10 P.M. ■■■ CONCURRENT ORAL PRESENTATIONS

11:10 A.M. // CAROLINE MCGUIRE

The Culture of the Use of Adderall at Union College

11:30 A.M. // MAXWELL SANDBERG

Free Speech and Political Correctness: Controversies Explored On College Campuses

KARP 004

FRENCH AND FRANCOPHONE STUDIES II

MODERATOR: CHARLES BATSON

10:30 A.M. // CASSANDRA CALL

Migrant Children of the Past and Present: Integrating in France as a Country of Asylum

10:50 A.M. // CATHARINE LEITER

The Dreyfus Affair: How did this Scandal Change France?

11:10 A.M. // CLAUDE-LUVIER BONNET

Disparity and Its Implications on Health in France

11:30 A.M. // ELSA FAROOQ

Sexual Violence Against Muslim Women in France's Banlieues

KARP 005

POPULATION ECOLOGY IN THE ALBANY PINE BUSH PRESERVE

MODERATOR: JEFFREY CORBIN

10:30 A.M. // ABIGAIL-MARY LEHNER

Bee Communities in Native and Restored Pine Barrens Habitats in the Albany Pine Bush Preserve

10:50 A.M. // JACQUELINE SHARRY

Can an Invasive Species Burn Soil Carbon? Black Locust Invasion and Soil Carbon in the Albany Pine Bush

11:10 A.M. // SAMANTHA WILLIAMS

Evaluating Nitrogen Heterogeneity in the Albany Pine Bush

11:30 A.M. // ANNA BROWNE

Studying Mercury Bioaccumulation in Avian Species at the Albany Pine Bush Preserve

11:50 A.M. // JESSICA GILBERT

Biological Soil Crusts Inhibit Seedling Germination in an Inland Sand Plain

KARP 008

LITERARY STUDIES

MODERATOR: BERNHARD KUHN

10:30 A.M. // GIANLUCA AVANZATO

American Journeys: Quest, Displacement, Escape

10:50 A.M. // ETHAN WATSON

Desire in the Bildungsroman: Construction and Pursuit of an Ideal Self through the Ideal Other

11:10 A.M. // HALLIE STONE

Jane, Judith, and Gender Performance: A Butlerian Approach to Feminine Identity in Mansfield Park

11:30 A.M. // JILLIAN SLEZEK

The Eternal Rehearsal: Judith Butler's Gender Performativity in Wilkie Collins, Sarah Waters, and Tana French

11:50 A.M. // AENGUS MILLEN

Keeping the Military Men and the Terrorists in Check: The Socialist Alternative in the Irish Republican Army 1926-1969

KARP 105

FERTILITY AND CONTRACEPTION AT THE MOLECULAR LEVEL

MODERATOR: BRIAN COHEN

10:30 A.M. // ANGELINA STEWART

Modulation of Human Follicle Stimulating Hormone Receptor Action Using Small Molecules

SESSION II

10:30 A.M. – 12:10 P.M. ■■■ CONCURRENT ORAL PRESENTATIONS

10:50 A.M. // ANNIE LEAMON

FSH Dependant Activation of Proteins in Murine Osteoclast and Osteoclast Precursor Cells

11:10 A.M. // HANNAH MADDEN

Human Follicle Stimulating Hormone Receptor Lipid Raft Residency is Hormone and Caveolin Dependent

11:30 A.M. // MEGAN WELLS

Follicle Stimulating Hormone Receptor Signaling is Regulated by Lipid Raft Residency

LEARNING LAB

MATHEMATICS II

MODERATOR: PAUL FRIEDMAN

10:30 A.M. // YUNYE JIANG

Galois Theory and the Quintic Equation

10:50 A.M. // ZONGLIANG JI

Approximation of Continuous Functions by Neural Networks

11:10 A.M. // CRAIG SCHARF

The Math Behind Bracketology

11:30 A.M. // MATTHEW BARRETT

The Fibonacci Sequence, Linear Algebra, and the Metallic Means

11:50 A.M. // MEICHAH CHEN

Weak Orders and Utility Functions

LIPPMAN 012

KLEMM FELLOWS II

MODERATOR: MARK DALLAS

10:30 A.M. // ALEXANDRA MIGNUCCI

A Personal Exploration of the Health Care and Culture of Cordoba, Argentina

10:50 A.M. // ANKOOR TALWAR

Odo Ghana

11:10 A.M. // HANNAH CHRISTIAN

A Personal Account on Belizean Healthcare: An Emerging Sector in the Culture of Ambergris Caye

11:30 A.M. // SHARIFA SAHAI

Diving with Sharks: Fiji Marine Conservation Methods

11:50 A.M. // VIRALI SHAH

Battling Fiji's Heat with Positivity

LIPPMAN 014

LAW AND POLICY

MODERATOR: BRADLEY HAYS

10:30 A.M. // CHRISTOPHER YAO

Deference to Deference: Examining the Relationship Between the Courts and the Political Branches through Judicial Deference and the Chevron Doctrine

10:50 A.M. // WILLIAM MCCANN

The Fundamentals of Lobbying and its Application to New York State Government

11:10 A.M. // COLBY RICHARDSON

The New York City Watershed: Improving Relations Using Environmental Policy

11:30 A.M. // ALEC BEEN

Coal Mine Efficiency Using DEA and Geologic Data

11:50 A.M. // WILLIAM WYKOFF

Effect of Medical Marijuana Legislation on Smoking Behavior

LIPPMAN 016

(LOST) AND FOUND IN TRANSLATION

MODERATOR: MARITZA OSUNA

10:30 A.M. // DREW LENZ

Bigger is Not Always Better: The Process of Simplification in Translation



SESSION II

10:30 A.M. – 12:10 P.M. ■■■ CONCURRENT ORAL PRESENTATIONS

10:50 A.M. // SAMUEL FOGARTY

Cultural Boundaries between English and Spanish Translation

11:10 A.M. // LISA DEMORANVILLE

The Influence of Culture in the Art of Translation

11:30 A.M. // KATHERINE TIGHE

(Lost) and Found in Translation: An Examination of the Issues in Translation of YWCA Documents

11:50 A.M. // ALEXIS BERNSTEIN

(Lost) and Found in Translation: The Importance of Appropriate Translations of YWCA Documents

LIPPMAN 017

PEOPLE ON THE MOVE: CULTURE, CLIMATE, EXPLORATION, AND DESPERATION

MODERATOR: THERESE MCCARTY

10:30 A.M. // ETHAN STRAUSS

An Empirical Analysis of Climatic, Geographic, and Cultural Determinants of International Tourism

10:50 A.M. // EMMA PARECE

Cultural Tourism in East Africa: Assessing Impacts on the Maasai and Hadza Indigenous Groups

11:10 A.M. // ALYSSA LEAHY

An Analysis of Sanctuary City Characteristics and Their Role in the American Economy

11:30 A.M. // OLIVIA BRITTON

New Slaves: The Entrepreneurship of Refugee Lives

11:50 A.M. // OLIVIA CAMPOCHIARO

Denying Refuge, Creating an Industry: Migrant Smuggling and the Human Cost of the Turkey-European Union Asylum Framework

LIPPMAN 101

SOCIOLOGY OF HEALTH AND ILLNESS

MODERATOR: MELINDA GOLDNER

10:30 A.M. // MADELINE MARKS

Constructing Illness: The Effect of Society on Physical and Mental Illnesses

10:50 A.M. // TAYLOR ALLEN

Trauma, Stigma, and Reentry: the Gendered Health Experiences of Formerly Incarcerated Women

11:10 A.M. // DANIELLA BATARSEH

Sports Injury and Recovery Analyzed using Blum's Model of Health Determinants

11:30 A.M. // MARISA PETERS

The Misperception of Miscarriages and Its Sociological Impact on Grief

11:50 A.M. // DANIEL ROBENS

Smoking in the 21st Century: A Comparative Analysis Between the Tobacco and ENDS Industries

OLIN 106

COMPUTER SCIENCE

MODERATOR: CHRIS FERNANDES

10:30 A.M. // HEIN AUNG

Specializing Generative Adversarial Network to Render Terrain Textures

10:50 A.M. // AIDAN PIEPER

Heuristic Algorithms for Bike Route Generation

11:10 A.M. // RORY BENNETT

Different Modes of Semantic Representation in Image Retrieval

11:30 A.M. // YUAN GAO

Classifying Physiological States of Hair-Cap Moss Based on Digital Images

SESSION II

10:30 A.M. – 12:10 P.M. ■ CONCURRENT ORAL PRESENTATIONS

11:50 A.M. // ZHENGQI YANG

Breast Cancer Classification via Convolutional Neural Network

OLIN 306

PROXY RECORDS AND ENVIRONMENTAL CHANGE

MODERATOR: DAVID GILLIKIN

10:30 A.M. // TSHERING LAMA SHERPA

A 700,000-Year Record of Glacial Flour Flux in Lake Junin, Peru

10:50 A.M. // KATHERINE TREACY

High-Resolution Stable Oxygen Isotope Profiles of a Colophospermum mopane, from Northern Botswana

11:10 A.M. // HANNAH BARNES

An Isotopic Investigation of a Partially Recrystallized Aragonite Stalagmite from Central New York

11:30 A.M. // JOSEPH AMMIRATO

A Replication of Paleoclimate Reconstruction on Variability in the South American Summer Monsoon Over the Last 6 ka from Stable Isotope Analysis on a Speleothem from the Central Peruvian Andes

11:50 A.M. // AARON REIF

Varve Sequences at Glacial Lake Willow

SCHAFFER 204 (PHI BETA KAPPA ROOM)

WOMEN IN POLITICS AND MEDIA

MODERATOR: LORI MARSO

10:30 A.M. // PAIGE TEPKE

An Evaluation of Women in the 114th (2015-2016) Congress: Comparing the Differences Between Female Lawmakers Legislating for Women's Issues vs. Non-Women's Issues

10:50 A.M. // EMILY SULLIVAN

Nasty Women: Television Portrayals of Societal Anxieties toward Female Leadership



SESSION II

10:30 A.M. – 12:10 P.M. ■■■ CONCURRENT ORAL PRESENTATIONS

11:10 A.M. // GILLIAN SINGER

Ecofeminism and the Pink Industry

11:30 A.M. // EMILY FIORE

Combating the Male Gaze: Representations of Women in Art

11:50 A.M. // AARON GORDON

Women, Religion, and Happiness

SCIENCE AND ENGINEERING N205

GREEN ENERGY

MODERATOR: MICHAEL HAGERMAN

10:30 A.M. // JOHN JONKER

Ternary and Quaternary Hybrid Organic-Inorganic Films for High Performance Microsupercapacitors

10:50 A.M. // ANNA KLUG, EMILY JENNINGS

Harnessing Tidal Energy to Charge a Sailboats' Battery

11:10 A.M. // SAMANTHA ST MARIE

Solar Energy for the Soul: Solving America's Fuel Poverty Problem with Solar Panels for the Poor

11:30 A.M. // JACK SIMPSON

The Effect of State-Level Green Building Legislation on Electricity Consumption in the U.S.

11:50 P.M. // JULIA KIPP

An Economic Analysis of Leadership in Energy and Environmental Design (LEED) Certified Buildings and College Desirability

SCIENCE AND ENGINEERING N304

PHYSICS AND ASTRONOMY

MODERATOR: REBECCA KOOPMANN

10:30 A.M. // AIYANA POULIN

Star Formation in the NRGb027 and NRGb137 Groups of Galaxies

10:50 A.M. // TUAN PHAM

Inclusion of a Reggeon Exchange to Elastic Proton-Proton Scattering in Holographic Quantum Chromodynamics

11:10 A.M. // JASON TURNER

The Dynamics of Everyday Fluid Flows

11:30 A.M. // JACOB ZIPKIN

Improving Solar Cell Efficiency through the Application of Quantum Dots

11:50 A.M. // MARK MININBERG

The Fundamental Physics of MRI

WOLD 225

ENVIROMENTAL CHEMISTRY

MODERATOR: LAURA MACMANUS-SPENCER

10:30 A.M. // SARAH CONNOLLY

UAIR: An Investigation of Sources and Trends of Particulate Matter and its Effect on Air Quality at Union College

10:50 A.M. // KAYA COOLEY

Synthesis and Characterization of Organically Modified Montmorillonite for Sequestration of Perfluoroalkyl Acids in Contaminated Water

11:10 A.M. // ALEXANDRA PAGANO

Synthesis and Characterization of Organically Modified Hectorites for Sequestration of Perfluoroalkyl Acids from Drinking Water

11:30 A.M. // LAUREN O'CONNOR

Photolysis of Organic Ultraviolet Filter Chemicals

11:50 A.M. // JESSICA MAUNG

Photolysis and Cellular Toxicity of the Organic Ultraviolet Filter Chemical Octyldimethyl Para-aminobenzoic Acid and its Photoproducts

SESSION III

12:30 P.M. ■ POSTER SESSION I

WOLD CENTER ATRIUM

AYANAH DOWDYE, CLAUDE-LUVIER BONNET

Assessing Glucocorticoid Receptor Polymorphisms in Obese Populations

KAYLYN HUNG, AARON WU, RACHEL EISENBERG

Investigation of Glucocorticoid Polymorphisms Within a College Sample in Relation to Depression, Obesity, and the General Population

TRUC PHAM

Synthesis of Potential Small-Molecule Inhibitors for S.commune Metacaspase

KATHLEEN SWANSON

Effects of LaxPrep on Women's Lacrosse Players

JILLIAN YEAGER

Focused Ultrasound for Neuromodulation of Crayfish

RACHEL CLEMENT

Microtubule Stability: A Comparison Between ATP Depleted Cells and Taxol Treated Cells

KATHRYN WALL, SEAN RIGNEY

Beauveria bassiana Effects on Ixodes scapularis Mortality for Standardization of Entomopathogenic Fungus as Biopesticide

MEAGHAN BARROS

Changes in Isotopic Signature during the Aging Process of Black-legged Ticks

DAVID LOVE

Searching for the Operating Model of Sexual Selection in Drosophila athabasca

CHRISTINA DYKAS

Water Holding Capacity in Sphagnum: Micro CT Scanning Reveals Differences in Pore Structure

KAYENAT BISMILLAH

Design and Testing of 3D Printed Nanocomposite Matrix for Water Purification

NAR LIN, JOHN SHULER

Synthesis of Cuticular Hydrocarbon Signatures in D. athabasca

ANNA MAHONY

Development and Application of a Soil Extraction Method for Perfluoroalkyl Acids

ELIZABETH WHITNEY

Synthesis and Testing of Organically Modified Clay Materials for the Removal of Perfluoroalkyl Acids from Contaminated Water

KIMBERLY O'REILLY

Mammalian Cell Toxicity of the Photoproducts of Octyldimethyl Para-Aminobenzoic Acid

BROCK HARRIS

Semantic Grouping in Code Editing Environments

MALLORY CROAK

The Effects of STEM Education on Economic Growth

ELISABETH PALMIERI

International Environmental Policy Agreements and their Effect on Reduction of Greenhouse Gases

LAM NGO

Power Mobility for Young Disabled Children

KYLE STENGEL

Greenhouse Heating System

PRANAV SHRESTHA

Design of Low-Cost Phasor Measurement Unit for Local Power Grid Frequency Estimation

SIRUS NEGAHBAN

Design of a Power System's Dynamics Educational Module Using a Drum Kit

ETSEGENET AYELE

The Design and Evaluation of a Portable Solar Thermal Water Purification System



SESSION III

12:30 P.M. ■ POSTER SESSION I

WOLD CENTER ATRIUM

CLAIRE LOCKWOOD, KATHERINE TREACY

High-resolution Stable Oxygen Isotope Ratios of an African Mopane Tree

SARA COVELLI

Tiny House, Big Project: Bringing Sustainable Technology to Union's Campus

ALAINA CHORMAN, HEIDI O'HORA, HAYLEY BENNETT

Lateral Exchange of Mangrove Sediment Porewater Dissolved Inorganic Carbon to Coral Reef Ecosystems

QUINN RELIHAN

Water Quality Policies in New York and California

ABIGAIL SOROKA

Individuals' Perceptions of Large Numbers

JOANA SANTOS, RONALD TOCCI

Manufacturing of Curvilinear Shaped Aerogels

GREGORY KING

Measuring the Effects of the Magnus Force on Spherical Objects

SAMUEL HOYT

The Art of Diving: How Spargers Affect the Impact of a Diver as They Enter the Water

JOHN OZIRSKY

Optimizing a Connecting Rod through 3D Printing

JOSHUA PARK

Freezing Brain Tumors Noninvasively with Laser Cooling

DANIEL GIROUX

Solar Thermal Energy Storage: Applications of Latent Heat Storage Using Phase Change Materials

KEVIN POLLIO

Portable Solar Energy Power System for Natural Disaster Relief

VINCENT OLIVETO

Analysis of the Properties of Supercapacitors and Possible Applications for the Technology



SESSION III

12:30 P.M. ■■■ POSTER SESSION I
WOLD CENTER ATRIUM

ZAID AL-MOHRABI

Modification and Analysis of a Two-Axis Solar Tracking System

NATHAN SEARS

Designing and Manufacturing A Cross Country Ski with Sustainable Materials

JOSEPH CARUSO

Designing a Powered Wheelchair for Affordable Powered Mobility

MARK MARZOTTO

Design of a Robotic Cownose Ray

ZACK FISCHER

Design and Manufacture of a Mechanical Clock using Rapid Prototyping

JOCELYNE AKAMALIZA

Harnessing Body Energy with Triboelectric Nanogenerators.

KATHRYN WALL

Hippocampal Regional Volumes of Un-Medicated First Episode Psychosis Schizophrenic Patients

YIZHI LIN

Relationship Between Insula White Matter Alterations and Self-Reports Of Negative Childhood Experience

CASEY LEE

Development of an Optical Tweezers Apparatus

GENESIS GUERRA

Observing the Universe Through Radio

SAJJU CHALISE

Proton Induced X-Ray Emission (PIXE) Analysis to Measure Trace Metals in Soil Along the East River in Queens, New York

JACK EDSON

Phase Transitions of Benzene Confined in Nanoporous Silica

SKYE CONLAN

PIXE Analysis on Artificial Turf

IMOGENE WELLES

Characterization of Indigo and its color changes

PERIANNE SMITH

The Relationship Between Self-Reported Negative Childhood Experiences, Parental Bonding, and Fear of Pain

PAIGE OSBORN

The Relationship Between Body Image Concerns and 3D Shape Perception

12:30 P.M. ■■■ ENGINEERING TEAMS
WOLD CENTER ATRIUM

PYAE SONE AUNG, EDWARD GEBARA

Union College Robotics Crew Micromouse Demos

ANDREW ATTORRI, OWEN GAUTHIER, CHRISTOPHER MARINA

Union College Rocket Team

SAMUEL KUPIEC, RODERICK LANDRETH, AARON RAPAPORT

Design of a Micro-Class Plane for the SAE Aero West Competition

AIDAN MURPHY, NICHOLAS MURDOCK

The SAE Aero Competition: Advanced Team



SESSION III

12:30 P.M. ■ POSTER SESSION II
SCHAFER LIBRARY LALLY READING ROOM

IMOGENE WELLES

Red Lakes

MITCHELL FAMULARE, MICHELLE TREMBLAY

Lapis Lazuli

LILY DONG, THOMAS MELLO

Azurite

MALLORY EPSTEIN

Printing the Past: A Static Analysis of the Parthenon and Pantheon

CAITLIN WILLIAMS

The Pantheon Through Time

FRANCIS KAILEY

Spartan Money: Did it work?

JULIANNE FINLEY

An Examination of Trepanation in Classical Antiquity

ABIGAIL BAXTER

Livy's Women of Multiplicity: The Paradoxical Nature of Roman Morality in Ab Urbe Condita

ANASTACIA ANGELOPOULOS

Ovid's Metamorphoses and the Moral Reforms of Emperor Augustus

JEREMY JORDAN

Rome and the Emperor Augustus

KYLE KEANE

Economic Theory in the Ancient World

MICHAEL GRAY

Breaking Down the Factors of the Financial Crisis of 33 AD

ZAIYING LI

Quantitative Easing: U.S. and China Similarities, Differences, and Lessons Learned

NICOLE CHTCHEKINE

Co-working: The Global Movement

TAYLOR WESTERMANN

An Economic Analysis of the Determinants of Mental Health

ALEXANDRA CORSETTI

European Unemployment and the Great Recession

REID NICHOLS

Player Performance and NHL Salaries: Traditional Statistics Versus Advanced Statistics

HOPE NOONAN-STONER

Co-opting the Air Waves: The Effect of Radio and Television on Irish Feminism

MORGAN PETERS

Forgotten Women: The Involuntary Sterilization of American Indian Women During the 20th Century

DOMINIQUE TOSCANO

Treatment of the Mentally Ill at Letchworth Village, an Abandoned Asylum in Rockland County, N.Y.

MEGAN STEVENS

Women's Role in Old Norse Society as Viewed through Literature

RACHEL CLAREY

Writing Center Programming for First-Year International Students

MARIA LOVETERE

A Cycle of Terrorism: Palestinian and Israeli Children

EMMA PARECE

Africa Yoga Project Internship: A Grant for Resources

RACHAEL ROSE PARISI

Patient Satisfaction with Home Based Palliative Care: A Mixed Methods Analysis

SESSION III

12:30 P.M. ■ POSTER SESSION II
SCHAFFER LIBRARY LALLY READING ROOM

MORGAN PETERS

A Family Affair: The Fate of Julius and Ethel Rosenberg During the Second Red Scare in Cold War America

NATALYA BRILL

Baba Yaga and Domesticity: Gender and Identity in Russian Folktales and Literature

DARCY BOWMAN

The Sociology of Bullying: Prevention and Intervention using a Three Themed Model

HANNAH ELLEN

Criminalizing The Fertile Female Body: An Analysis of the Current U.S. Opioid Crisis

MITCHELL CLIFFORD

Film Animatronics: The Creation of the Skeksis Puppet

12:30 P.M. ■ MINERVA FELLOWS
SCHAFFER LIBRARY LALLY READING ROOM

MASON KING

Environmental Foundation of India, India

NAINA THOTA

Gram Vikas / Dharma Endeavors, India

BRIANNA GODLEWSKI

Witkoppen, South Africa

GILLIAN HENRY

Batik Boutique, Malaysia

DANIEL TOMPKINS, SYDNEY SPETT

The Global Child, Cambodia

VITO JOSEPH CAPUANO, JUSTIN SALM

Engeye, Uganda



SESSION IV

2 – 3:20 P.M. ■■■ CONCURRENT ORAL PRESENTATIONS

KARP 001

ASIA: POLITICS AND INVESTMENT

MODERATOR: LEWIS DAVIS

2 P.M. // ANDREA BECKER

Government and Press Freedom in Japan and Singapore

2:20 P.M. // IAN KOON

How Does Chinese Investment Abroad Affect Export Performance in Recipient Countries?

2:40 P.M. // CHRISTOPHER MCGRATH

Chinese Import Competition, Technological Change, and Mortality Rates in US Commuting Zones

KARP 002

ANTHROPOLOGY III

MODERATOR: MICHELLE OSBORN

2 P.M. // MIK MAYA SKEELE

Shifting Identities Among Nepali Youth

2:20 P.M. // MEREDITH WESTOVER

Two Unions: Exploring Experiences of Students of Color at a Predominantly White Institution

2:40 P.M. // PAIGE GEIB

Life-Changing: Parenting Heroin Addicts and the Role of Parental Peer-Support Groups

KARP 004

TERROR, OPPRESSION, AND WAR

MODERATOR: CIGDEM CIDAM

2 P.M. // HELENA ROLAND

Terrorism in Charlottesville: The News Media's Coverage of Acts of Terrorism and its Impact on Public Opinion

2:20 P.M. // CATHARINE LEITER

Homegrown Terrorism in France

2:40 P.M. // MADELYN VANDORPE

The Development of Memory through Film in the Southern Cone

3 P.M. // JAMES BOGGS

Comparing Analytic Models of Arms Races

KARP 005

DEVELOPMENTAL BIOLOGY

MODERATOR: NICOLE THEODOSIOU

2 P.M. // EMMANUELA OPPONG

Structural Analysis of the Formation of the Spiral Valve Intestine of a Cartilaginous Fish

2:20 P.M. // JACOB ALEXANDER

Gene Patterning in the Little Skate L. Erinacea Digestive Tract

2:40 P.M. // ALYSSA KLEIN

Smooth Muscle Differentiation and Cell Proliferation Patterns in the Developing Spiral Intestine of Leucoraja Erinacea

3 P.M. // LIANNA GANGI

Time-Lapse Imaging of Embryonic Chick Development: Insights into Cardiac Morphogenesis and Body Flexure Formation

KARP 105

BIOLOGY: GENES AND PROTEINS

MODERATOR: J. STEPHEN HORTON

2 P.M. // LAKHENA LEANG

Protein Characterization and Mutant Studies of ScMC1-5^lpro

2:20 P.M. // LINDSAY TOMCZAK

Light-Induced Expression of a Blue Coral Protein in an Industrial Fungus

SESSION IV

2 – 3:20 P.M. ■ CONCURRENT ORAL PRESENTATIONS

2:40 P.M. // CLAUDE-LUVIER BONNET

The Genetic Underpinnings of Glucocorticoid Receptor Polymorphisms in Obese Populations

3 P.M. // CLAIRE KELLY

Impact of Single Nucleotide Polymorphisms on HPA Axis Functionality in Depression

LIPPMAN 012

HEALTH CARE IN THE UNITED STATES

MODERATOR: YOUNGHWAN SONG

2 P.M. // WILLIAM CHRISTOPHER

The Effect of the Affordable Care Act Medicaid Expansion on the Labor Force

2:20 P.M. // ANKOOR TALWAR

How Do Variations in Health Literacy Affect Preventive Care Usage in the United States?

2:40 P.M. // HAILEY PERRY

Determining the Effects of Hospital Consolidation: An Examination of the Impact of Hospital M&A on Financial and Quality Metrics

3 P.M. // ANDREW LIDDLE

An Analysis of the Relationship Between the United States Government and the Pharmaceutical Industry: The Effect of Government on the cost of Prescription Drug Prices

LIPPMAN 016

MENTAL HEALTH, LABELS, AND STIGMA

MODERATORS: JEREMY VANDEROVER, DAVE HAYES

2 P.M. // CAROLYN DOTY

The Significance of a Label from the Perspective of Individuals on the Autism Spectrum

2:20 P.M. // ERIC LOVETT

Establishing a Spectrum: Childhood Neglect and Its Association with Varying Neuroanatomy Volume in Healthy Patients

2:40 P.M. // HEATHER WRIGHT

How Stigma Affects Seeking Psychological Help

3 P.M. // KATHERINE TIGHE

Mental Disorders as Brain Disorders: The Impact on Stigma of an Educational Intervention about Neuroscience Behind Mental Illness

LIPPMAN 017

INTERNATIONAL ECONOMICS

MODERATOR: SUTHATHIP YAISAWARNG

2 P.M. // TAINA ORELLANA

Do Language Structures Influence Foreign Direct Investment Behavior Across Countries?

2:20 P.M. // SAM BEBOUT

A Data Envelopment Analysis of Country Efficiency

2:40 P.M. // KAJAL CHOUDHARI

The Effectiveness of U.S. Private Aid

3 P.M. // BERYL ISIJI

Is Microfinance the Best Tool for Empowerment? Analysis of Efficiency of Developing Economies' Microfinance Institutions in Empowering Women using Data Envelopment Analysis Meta Frontier Technology

LIPPMAN 101

SOCIOLOGY II

MODERATOR: ILENE KAPLAN

2 P.M. // DEIBEL BENNETT

An Analysis and Breakdown of Brazilian Slavery and Racial Democracy



SESSION IV

2 – 3:20 P.M. ■ CONCURRENT ORAL PRESENTATIONS

2:20 P.M. // IRLANDO GONCALVES

Cape Verdean Response to Social Construction:
An Exploratory Study of Resilience and Strength
Throughout Centuries

2:40 P.M. // ALISSA VITIELLO

The Perception of Gourmet: Food and Class in
Contemporary American Society

3 P.M. // ELYSE CLARK

Secular Sells: How Secular Lifestyle Affects Religiosity

OLIN 106

ROBOTS II

MODERATOR: WILLIAM KEAT

2 P.M. // SHARIFA SAHAI

Grasshopper Inspired Locomotion in Tensegrity Robots

2:20 P.M. // MITCHELL CLIFFORD

Designing a Wireless, Modular Strut for Vibrationally
Controlled Tensegrity Robot

2:40 P.M. // KENTARO BARHYDT

Determining Correlation Between Resonance and
Locomotion in Vibrating Tensegrity Robots

OLIN 306

POLLUTION IN WATERSHEDS

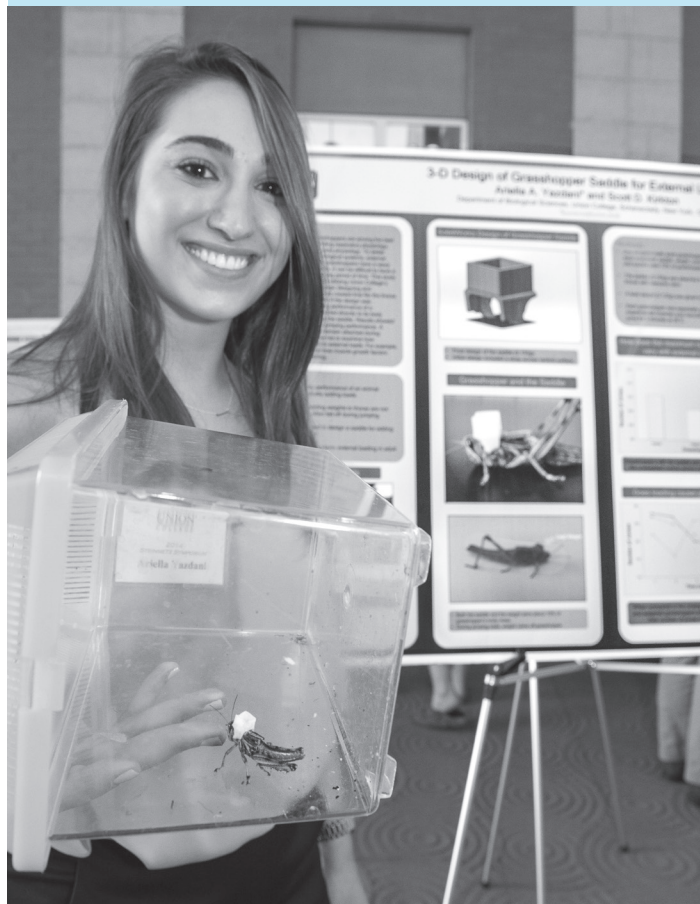
MODERATOR: DONALD ROBBELL

2 P.M. // JORDAN HERBERT

Investigating the Causes of Organic and Inorganic Pollution
in High Andean Lakes (Junín region, Peru) through
Nitrogen Isotope and Metals Analysis of Sediment Cores

2:20 P.M. // JOSHUA DUNN

The Biogeochemistry of Steinmetz Lake



SESSION IV

2 – 3:20 P.M. ■ CONCURRENT ORAL PRESENTATIONS

2:40 P.M. // CALEB REYNOLDS

Characterizing Redox Processes of Arsenic-Affected Aquifers in South and Southeast Asia

3:00 P.M. // THOMAS COWARD

Patterns of Soil Arsenic in the Conterminous United States

SCHAFFER 204 (PHI BETA KAPPA ROOM)

BODY IMAGE

MODERATOR: CATHERINE WALKER

2 P.M. // ALEXANDRA MORGAN

Facebook and Us

2:20 P.M. // MEAGAN RUSSELL

The Effect of Fitspiration and Thinspiration Images on Body Image

2:40 P.M. // MEGHANA DAMARAJU

A Meta-Analysis: The Neuroanatomical Association between Body Perception and Postpartum Depression in Women with Low Self-Esteem

3 P.M. // MADISON SHEA

College Women: Exploring Body Image Issues from the 20th Century to the 21st Century

SCIENCE AND ENGINEERING N205

MECHANICAL ENGINEERING

MODERATOR: JEREMY VANDEROVER

2 P.M. // JOHN CARR

Liebau Pumping: A PIV Study of a Valveless Pumping Model for Embryonic Hearts

2:20 P.M. // JENNIFER FROMM

Multicomponent Working Fluids in Organic Rankine Cycle Evaporators

2:40 P.M. // CAMERON PETERSON

Redesign and Manufacture of a Liquid-Gas Rocket Engine

3 P.M. // ZACHARY SAYAH

Design for Manufacturing of Streamlined Bed Cap

WOLD 225

CHEMISTRY

MODERATOR: JAMES ADRIAN

2 P.M. // SAMANTHA GAVIN

Synthesis and Characterization of Isotopically Labelled Asymmetric Co(III) and Zn(II) Metal Complexes: Through Metal Carbon Spin-Spin Coupling

2:20 P.M. // ANGUS MCREYNOLDS

Exploration and Characterization of Various Ligands Used to Functionalize CdSe Nanoparticles for Use in Solar Nanocomposites

2:40 P.M. // WESLEY BRIGHT

An Investigation of the Synthesis and Binding of Mechanically Bound Cucurbit[n]uril Host-Guest Complexes

3 P.M. // ANTONIO CAMPEDELLI

Microwave Enhanced Ullman Ether Synthesis



SESSION V

3:30 – 5:10 P.M. ■■■ CONCURRENT ORAL PRESENTATIONS

KARP 004

PERSPECTIVES ON HISTORY

MODERATOR: // HANS-FRIEDRICH MUELLER

3:30 P.M. // SAMANTHA COLLINS

The Healing Spaces of Asclepius' Sanctuary at Epidaurus

3:50 P.M. // EMILEE BUYTKINS

I, Claudius and the Historical Accuracy of Its Characters

4:10 P.M. // THOMAS SHIELDS

The Rhode Island Slave Trade and the Brown Brothers

4:30 P.M. // ANDREW CASSARINO

"Botany Bay": The State of Society at Union College during the Early Nineteenth Century

4:50 P.M. // ANDREW FORTE

A New Look at Reliabilism

KARP 005

BIOLOGY: ORGANISMS

MODERATOR: KATHLEEN LOGIUDICE

3:30 P.M. // KIPRIAN GERNAT

Using Stable Isotope Analysis to Identify Tick Hosts

3:50 P.M. // SOPHIE VALLAS

The Influence of Stimulus and Environmental Conditions on Visual Displays of the Lizard *Anolis sagrei*

4:10 P.M. // VALERIE KESSLER

Goldfish in the Study of Color Vision and Perception of Color in Nature

LIPPMAN 012

GLOBAL HEALTH

MODERATOR: MEHMET SENER

3:30 P.M. // ALYSSA TREBINO

Prescription Drug Costs in the United States and Abroad

3:50 P.M. // BRADLEY BROWNE

Effects of Industry Specific Patent Protection on Global Pharmaceutical Exports

4:10 P.M. // MATTHEW GRACER

Climate Change: The Global Impact of Rising Temperatures on Mortality Rates

4:30 P.M. // JOHN SHULER

HPV Vaccination Policy: A Case Study of the Virginia School Mandate

LIPPMAN 014

HOUSING POLICY AND MARKETS

MODERATOR: J. DOUGLASS KLEIN

3:30 P.M. // JASMINE NAKKAB

An Economic Analysis of Transportation Investment and the Role Proximity has on Property Value in San Diego, Calif.

3:50 P.M. // HARRISON GLATT

Does an Increase in Risk Impact Value? How Natural Disasters Impact Housing Markets

4:10 P.M. // AN NGUYEN

Housing Price Prediction

4:30 P.M. // SARA COVELLI

The Tiny House Movement: Addressing the Feasibility of Development and Proliferation in the United States

SESSION V

3:30 – 5:10 P.M. ■ CONCURRENT ORAL PRESENTATIONS

LIPPMAN 016

RELATIONSHIPS

MODERATOR: LINDA STANHOPE

3:30 P.M. // TIFFANY GEORGE

Attachment Anxiety, Relationship Satisfaction, Fear of Change, and Commitment in Romantic Relationships

3:50 P.M. // RACHEL MCNEIL

Expectations in Film Relationships: The Suffocation Model in Film

4:10 P.M. // MELANIE GRAGG

Children's Judgments of Others Across Time: The Role of Attractiveness and Gender

LIPPMAN 017

ECONOMICS

MODERATOR: TOMAS DVORAK

3:30 P.M. // DEVIN COFFEY

Banking Efficiency within the World's Largest Banks: Application of Data Envelopment Analysis to the Global Financial Crisis

3:50 P.M. // CONNOR LIGHT

Optimizing Union College's Admissions Recruitment Using High School Visits

4:10 P.M. // IAN VOGT

Does Player Performance Outside of Major League Baseball Translate to the MLB?

4:30 P.M. // ANTHONY DESANTIS

An Economic Analysis Of The Rise In Franchise Values In The Four Major North American Sports Leagues From 2008-2016

OLIN 106

ELECTRICAL AND COMPUTER ENGINEERING

MODERATOR: JAMES HEDRICK

3:30 P.M. // JOHNNY VILLATORO-ARRIAGA, QUINTIN LENOCI

Circuit Breaker Failure Analysis

3:50 P.M. // JACOB WINK

Sending a Secret Message Using Chaos

4:10 P.M. // CAITLIN MCMAHON

Dissolved Gas Analysis for Transformers

4:30 P.M. // MICHAEL GEIGER

IEEE Signal Processing Cup: Camera Model Identification Challenge

SCHAFFER 204 (PHI BETA KAPPA ROOM)

POLITICS AND PARTISANSHIP

MODERATOR: ZOE OXLEY

3:30 P.M. // MEGHAN BENTLEY

The Federal Art Project: Government Subsidized Expression or Propaganda?

3:50 P.M. // JULIANNE LOREE

What Makes a Congressional District Competitive and Does it Matter?

4:10 P.M. // MICHAEL STALTERI

Schoolchildren in the Age of Trump

4:30 P.M. // OWEN REDA

Party Polarization and Presidential Approval: It's Time to Take a Closer Look

4:50 P.M. // SAYYIDA HASAN

Discussing Topics with Others: The Brain Mechanisms Behind Political Discord



SESSION V

3:30 – 5:10 P.M. ■ CONCURRENT ORAL PRESENTATIONS

WOLD 225

AEROGELS FOR AUTOMOTIVE APPLICATIONS

MODERATOR: BRADFORD BRUNO

3:30 P.M. // XIAO PENG LI

Investigation of Ceria-Containing Aerogels for Catalytic Converter Applications

3:50 P.M. // THOMAS ANDRE

Fabrication and Characterization of Multi-Metal Catalytic Aerogels

4:10 P.M. // LUKE EBERTH

Kinetic Modeling and Optimization of Catalytic Aerogels

4:10 P.M. // KAMIN SYLVIA

Experimentally Obtaining Diffusion Constants of Catalytic Aerogels

4:30 P.M. // MATTHEW FERDENZI

Design of a Diesel Particulate Generator



STEINMETZ DANCE PERFORMANCE

FRIDAY, MAY 11 ■ 4 P.M. ■ NOTT MEMORIAL

THE 2018 LOTHRIDGE FESTIVAL OF DANCE

FACULTY SPONSOR / DIRECTOR OF DANCE: MIRYAM MOUTILLET

FACULTY CHOREOGRAPHIES

REVEALED

CHOREOGRAPHED BY MIRYAM MOUTILLET

MUSIC BY ZOË KEATING

Emily Alston, Emily Jennings, Emma Kelly, Arielle Lawton, Rebekah Lindsey and Julia Waszak

DANCE EXPERIENCE

COLLABORATION DIRECTED BY MIRYAM MOUTILLET

Madison Altman, Shyan Brown, Cassandra Call, Brendan Coleman, China Campagnuolo, Isabella Demyan, Alex Kucinski, Rebekah Lindsey, Victoria Norton, Danielle Pinney and Felika Poblah

QUIESCENT

CHOREOGRAPHED BY LAURIE ZABELE CAWLEY

MUSIC BY CINEMATIC ORCHESTRA

Emily Alston, Madison Altman, Emma Kelly, Victoria Norton, Danielle Pinney, Abby Polott and Portia Taylor

RITUAL

CHOREOGRAPHED BY CAWLEY AND MOUTILLET

MUSIC BY L'ORCHESTRE DES CONTREBASSES

Sydney Conner, Isabella Demyan, Yixin He, Arielle Lawton, Rebekah Lindsey, Mayte Martinez, Abby Polott and Virali Shah

PLEASE NOTE: For safety reasons, the audience capacity of the Nott Memorial is limited, and space is available on a first-come, first-served basis. Overflow seating will be available in Reamer Campus Center auditorium, where the performance may be viewed on streaming video.

The order of pieces is subject to change and will be available in programs distributed at the performance.

STUDENT CHOREOGRAPHIES

BREATH OF FRESH AIR

CHOREOGRAPHED BY AYANAH DOWDYE / ANKOOR TALWAR / PHIL WRIGHT

MUSIC BY JASON DERULO, BRYSON TILLER, CHRIS BROWN

Ayanah Dowdye, Ankoor Talwar

IN THE MOOD TO DANCE

CHOREOGRAPHED BY MEGAN WELLS

MUSIC BY BBC BIG BAND ORCHESTRA

Cassandra Call, China Campagnuolo, Isabella Demyan, Alex Kucinski, Emily Rasmussen and Megan Wells

NO NEED TO SAY GOODBYE

CHOREOGRAPHED BY SYDNEY CONNER AND BIANCA MIELKE

MUSIC BY REGINA SPEKTOR

Brendan Coleman, Sydney Conner, Ayanah Dowdye, Bianca Mielke and Megan Wells

OPPRESSION

CHOREOGRAPHED BY SYDNEY CONNER

MUSIC BY MAX RICHTER

Isabella Demyan, Alex Kucinski, Bianca Mielke and Danielle Pinney

O RE PIYA

CHOREOGRAPHED AND PERFORMED BY SHREYA SRIVASTAVA

(O Beloved)

MUSIC BY SALIM-SULAIMAN



STEINMETZ DANCE PERFORMANCE

FRIDAY, MAY 11 ■ 4 P.M. ■ NOTT MEMORIAL



SOCIAL MEDIA

CHOREOGRAPHED BY BIANCA MIELKE

MUSIC BY LUDOVICO EINAUDI

Madison Altman, Sydney Conner and Megan Wells

STRENGTH IN NUMBERS

CHOREOGRAPHED BY BRENDAN COLEMAN

Madison Altman, China Campagnuolo, Ayanah Dowdye, Mayte Martinez, Bianca Mileke, Abby Polott, Portia Taylor and Shannon West

THE PATH

CHOREOGRAPHED BY SHANNON WEST

MUSIC BY THE HEAD & THE HEART

Alex Kucinski, Danielle Pinney and Shannon West

STUDENT DANCE CLUBS

AFRICAN QUEENS

CHOREOGRAPHED BY OUMOU ZAKARIA

MUSIC BY DJ FLEX, BABES WODUMO, FT MANPINTSHA

Jocelyne Akamaliza, Brown-Almaweri Baah-Nazoshnii and Emmanuella Opong

BALLROOM CLUB

CHOREOGRAPHED BY ARIELLE LAWTON AND KEVIN TRIGO

MUSIC BY QUEEN

Katherine Beal, Kyle Doney, Samuel Kemp, Arielle Lawton, Elizabeth Pinchman and Kevin Trigo

BHANGRA UNION

CHOREOGRAPHED BY TAYLOR ALLEN, MEGHANA DAMARAJU, DANIELLE GREGG, BRENDA LIN AND VIRALI SHAH

HIP HOP CLUB

CHOREOGRAPHED BY MADISON ALTMAN, BRENDAN COLEMAN, CHRISTIE DIONISOS AND MAYTE MARTINEZ

IN-UNISON STEP CLUB

CHOREOGRAPHED BY SHYAN BROWN AND SARAGRACE MAGRE

Richard Boakye, Shyan Brown, Jennifer Duran, Nahom Ghile, Christa Guerrier, Saragrace Magre, Catherine Nakato, Yesenia Negron, Felika Poblah, Sharda Ramcharan, Alba Santana and Larissa Umulinga

TERRA DANCE COMPANY

CHOREOGRAPHED BY BRENDA LIN

UNION DANCE TEAM

CHOREOGRAPHED BY SHANNON WEST

MUSIC BY BEYONCE

Kathryn Bangser, China Campagnuolo, Brendan Coleman, Sydney Conner, Isabella Demyan, Julia Greene, Alex Kucinski, Danielle Pinney, Abby Polott, Emily Rasmussen, Julia Waszak and Shannon West

FOR THIS PERFORMANCE, WE WOULD LIKE TO THANK:

William E. and Anna S. Lothridge / 1879 Fund

Charles D. Lothridge'44 / Edward Vilella Fellowship

Robert Bovard / Technical Director

Brittney Belz / Costume Coordinator

Andy Iorio / Musical Director-Audio Editor

Ryota Matsue / Photographer-Filmmaker

Theater and Dance Administrator / Victoria Rotondi

Work-Study / Ayanah Dowdye

STEINMETZ CONCERT 2018

FRIDAY, MAY 11 ■ 8 P.M. ■ MEMORIAL CHAPEL

UNION COLLEGE CHOIR

MUSIC DIRECTOR: SHOU-PING LIU

PIANIST: PALMYRA CATRAVAS

PROGRAM

CHICHESTER PSALMS

**Leonard Bernstein
(1918-1990)**

PART III

SOLOISTS:

Chujun Li, Elyse Clark,
Ryan Bosanko

SELECTIONS FROM MUSICAL "CANDIDE"

**Leonard Bernstein
(1918-1990)**

SOLOISTS:

Caroline McGuire,
Ryan Bosanko, Juliet Park,
Nate Gillespie, Sam Riordan,
Anthony Xu

"WEST SIDE STORY"

SOLOISTS:

William Garner, Elyse Clark,
Portia Taylor, Yixin He,
Juliet Park,
Hope Noonan-Stoner

CHARACTER ROLES:

Yizhi Lin, Lydia Hursh

MUSICIANS:

Palmyra Catravas (piano),
Richard Boakye (percussion),
Timothy Maines (bass)

CHOREOGRAPHER:

Yixin He

UNION COLLEGE CHOIR

Ryan Bosanko
Elyse Clark
Andrew Forte
William Garner
Nathan Gillespie
Yixin He
Lydia Hursh
Hayley Jones
Ian Krause
Emerson Levy
Chujun Li
Yizhi Lin
Jessica Matti
Caroline McGuire
Hope Noonan-Stoner
Juliet Park
Samuel Riordan
Katherine Treacy
Abigail Vogel
Anthony Yang Xu

HEAVENLY VOICES GOSPEL CHOIR

Fernanda Arevalo
Richard Boakye
Palmyra Catravas
Mallory Croak
Andrew Elliott
Gretchel Hathaway
Victoria McDonnough
Gianna Morton
Mariam Musah
Catherine Nakato
Marlie Norbrun
Princess Ojukwu
Dami Oluwadara
Emmanuela Oppong
Lola Oyetuga
Cynthia Paz
Jasmin Ramirez
Enrique Roman
Heguens Saint-Fort
Nathan Sears
Edwin Palma Solis
Portia Taylor
Sapphire Tubbs

UNION COLLEGE AND COMMUNITY ORCHESTRA

MUSIC DIRECTOR: SHOU-PING LIU

PROGRAM

SYMPHONY NO. 5 IN E MINOR, OP. 64

**Pyotr Ilyich Tchaikovsky
(1840-1893)**

II. Andante cantabile,
con alcuna licenza

CLARINET CONCERTO NO. 2 IN E-FLAT MAJOR, OP. 74

**Carl Maria von Weber
(1840-1893)**

II. Romanze: Andante
con moto

SOLOIST:

Leo Minami
*First Prize Winner of
the 2018 Steinmetz
Concerto Competition*

NORTH WOODS

Elyse Clark

"THE WOUNDED HEART" FROM TWO ELEGIAC MELODIES, OP. 34

**Edvard Grieg
(1843-1907)**

CONDUCTOR:

Alexander Heywood

*PRINCIPAL

+ASSOCIATE PRINCIPAL

VIOLIN I

Heather Chan, *Concertmaster*
Gabrielle Beauregard
Bob Brannon
Jennifer Cornell
Josine van Heek
Alexander Heywood+
Rebekah Lindsey
Virginia Boyle Traver
David Wilkinson

VIOLIN II

Carol Blom
Daniel Knorr+
Celia A. Murray
Teresa Gatta-Norton*
Cheryl Szczepkowski
Han Xu

VIOLA

Karl O. Brosch+
Amy Clodgo
Peggy Gerardi
Pui Yee Hung
Andy Park
Andrew Snow*

CELLO

David Gordis+
Hannah Hoyt
Matthew Miller
Andre O'Neil*
Soroush Roane
Joanne Bonafede

BASS

Timothy Maines+
Giushi (William) Yao*

FLUTE

Elizabeth Day*
Beth Devlin+
Norman Thibodeau, guest

UNION COLLEGE JAZZ ENSEMBLE

MUSIC DIRECTOR: PROF. TIM OLSEN

OBOE

Diane Baltazar*
Jeannette Storch+

CLARINET

Kathryn Brannon+
Leo Minami*

BASSOON

Jennifer Fullam*
Kate Jarrard+
Jessica Li

HORN

Gus Birkhead* (Mozart)
Kristen Lindstrom
James Henry Scott*
Josef Schmee
Charles D. Thompson

TRUMPET

Peter Fitzgerald*
Nicholas Meixsell
Daniel Toland

TIMPANI

Amy Reichardt

TROMBONE

Brock Mendoza
Bob Reifsnyder*
Harmon Tunison,
bass trombone

TUBA

Jason Sindoni

PROGRAM

IN THE MOOD

Joe Garland

ST. LOUIS BLUES MARCH

W.C. Handy

BLUE

Bobby Shew

TANK!

Yoko Kanno

BLUE

Thomas Gansch

BUGLER'S HOLIDAY

Leroy Anderson

FOUR BROTHERS

Jimmy Giuffre

HEY JUDE

Lennon/McCartney

CLARINET

Marina DeLuca
Lisa Walendziak

ALTO SAX

Lauren Elder
Kyle Miller
Nate Sears

TENOR SAX

Andrew Elliott
Jonathan Fields
Joel Jailall

BARI SAX

Alex Pradhan

TRUMPET

Ryan Bosanko
Francis Kailey
Nick Meixsell
Zachary Porat
Dan Toland

TROMBONE

Scott Koszer

TUBA

Jason Sindoni

PIANO

Nate Gillespie

GUITAR

Arden Kellner
Andrew Toledo

BASS

John Hursh
Khoa Tran

DRUMS

Parker Foresman
Andrew Giordano

