

The Mount David Summit

The Mount David Summit is an annual celebration of student research, artistic work, and community-based scholarship at Bates College. Each year students from all classes present their work to each other and to faculty, staff, family, and community members in a symposium format at the end of the winter semester. The Summit spotlights the rich and varied academic activities of Bates students across the disciplines and honors the vibrant intellectual life of the college.

Named for the landmark "mountain" on the campus, the Summit is guided by the motto of the college
—*Amore ac Studio*—
loosely translated, With Love and Zeal, With Ardor and Devotion:
devotion to scholarship, creativity, and the life of the mind.

The Mount David Summit is sponsored by the Office of the Dean of the Faculty.
We are grateful to Ralph T. Perry '51 and Mary Louise Seldenfleur,
who have been generous and devoted supporters of the Summit since its first year.

~ About the 2017 Summit ~

The 2017 Mount David Summit, held on March 31, features the research, creative work, and performances of students from all Bates classes. It is organized into four sessions, three in the afternoon and one in the evening. The summit program is published in this booklet; students' abstracts are available in a separate booklet or on the Web.

The faculty believes that all Bates students are developing as scholars in their own right, and are ready to articulate and defend their ideas in a public forum. The college's major programs of study, and especially the senior thesis/senior project requirement, are designed both to prepare students and challenge them to conduct original research and contribute to our knowledge of the world. Many students who present their work at the Mount David Summit are senior thesis writers, approaching the summit of their academic career at Bates. Their presentation—which might be a research poster, a short talk, or a video documentary—represents hundreds of hours of work, remarkable commitment to their studies, and a synthesis of all that they have learned at Bates. Other presenters are at different points in this journey; they may be first-years just beginning to explore ideas in depth, or they may be sophomores or juniors in the process of developing the skills and insights that will serve their thesis work in the future. The artists who participate in the summit—the poets, fiction writers, essayists, dancers, actors, ceramic artists, and photographers—bring to their work a combination of technique, cultural and intellectual context, ways of thinking and seeing the world, and raw talent that is nurtured in a liberal arts environment.

The kind of individualized education celebrated at the Mount David Summit would not be possible without the unflagging dedication of faculty advisors. Bates faculty work one-on-one with seniors on the thesis; in this process they are both demanding and supportive, guiding research methods, thoughtful interpretation, and effective writing. Many Bates staff members—assistants in instruction, lab technicians, writing and quantitative reasoning specialists, museum curators, theater designers, digital media specialists, librarians and archivists, and community-engagement staff—also work closely with student-scholars. These members of the Bates community offer students a wide range of skills and expertise.

Thank you

At Bates we believe that every student is an emerging scholar.

Supporting student research and creative work requires wisdom, time, and resources. Bates student researchers and their faculty mentors thank the many individuals and foundations whose contributions to these funds help make student research vibrant, challenging, and filled with discovery.

We are deeply grateful to alumni, parents, faculty and friends whose support sustains research opportunities for our students.

The Bates Fund
The Arthur and Helen Baer Foundation Student Research Support Fund for Studio Art Majors
The Professor Leland and Claudina Bechtel Fund
The Blanchard Fund for Student-Faculty Research in Economics
The Bonner Leader Program
The Bruce Bouley Fund for Geology
The Bertha A. Bauer, M.D. Student Thesis Support Fund for the Department of Art and Visual Culture
John R. Cole Prize for Outstanding Achievement in History
The Class of 2000 Endowment for Community Service
The Penelope Ellis Fund
The Moses Feldman Family Foundation Student Research Grants
The Hamill Family Fund for Student Fieldwork and Research in Anthropology
The Hoffman Fund for Student Research
The John and Sally Kelsey Prize for Neuroscience Student Research
The Dorothy Dole Johnson '41 Fund for Student Research in the Sciences
The Walter A. Lawrance Student Research Fund
The Susan Majeski McKnight '70 Fund for Environmental Studies
The Morrill Family Research Fund
The Vincent Mulford Internship and Research Fund
The Natt Family Fund in Biology
The Philip J. Otis Fund
The Helen A. Papaioanou Fund
The Anthony B. and Raeflyn R. Pelliccia Fund
The Charles Franklin and Evelyn Minard Phillips Fund
The Linda E. Rawlings Student Research Fund for Mathematics
The Ruggles Scholar Research Fund
The Sargent Student Research Fund
The Scher Fellowship Fund
The Ellen Seeling Design Fellowship Fund
The Michael I. Sklar '94 Music Research Fund
The Stangle Family Research Fund for Economics and Law
Tanaka Memorial Foundation
The Dr. Jason M. Tanzer Fund
The Sarah H. Trafton Memorial in the Bates-Morse Mountain Reserve Fund
The Aaron R. Winkler '92 Fund for Student Research in Biology

Mount David Summit

Schedule of Events

Friday, 31 March 2017

1:30 -1:45 PM
Perry Atrium

Call to the Summit:

Swingtime by John Wasson (b. 1956), Performed by the Bates Brass Ensemble
Jamie Fagan '20, trumpet; Grace Purinton '20, trumpet; Leah Sturman '17, horn; Mike Connolly '17, trombone; Gabe Nelson '20, euphonium; Kyle Zollo-Venecek '17, drumset

Alan Carr, Music, bass trombone and musical director

Welcome

A. Clayton Spencer, President

Matthew R. Auer, Vice President for Academic Affairs and Dean of the Faculty

1:45 -6PM
Pettengill Hall

17th Annual Barlow Off-Campus Study Photography Exhibition

Perry Atrium

Rome and the East: Students in Classical and Medieval Studies/History 283, Rome and the East: Digitizing and Communicating History, share their digital approaches to the history of Roman expansion into the Near East, including political, cultural, and material interactions. How can digital tools enhance scholarship and public engagement of classical history?

Note: Within each event, students are listed in the order in which they will speak

Concurrent Session I

1:45 – 3:00 PM

Perry Atrium

Poster Session I: Biochemistry, biology, chemistry, geology, German, politics, and psychology.

Collaboration of Ash Glazes Applied to Ceramic Pots

Ceramic artists present their work and discuss their materials and artistic processes.

Max Breschi '18 and Creighton Foulkes '17

Advisor: Susan Dewsnap, Art and Visual Culture

Pettengill G10

Research in Chemistry and Physics

Seniors discuss their research in biochemistry, organic chemistry, and computational astrophysics.

Cormac Walsh '17: A Review of Designer Steroids and in vitro Liver Toxicity of Dietary Supplements Containing Dymethazine and Methylstenbolone

William Browns '17: The Synthesis of GalNAC in the Total Synthesis of M3 Glycans

Charlie Colony '17: Experiments with the Periodic Equatorial Beta Plane

Moderator: Jeffrey Oishi, Physics

Pettengill G21

Research in Biology

Seniors discuss their research on maximizing pollinator health, respiratory physiology, and developmental biology.

1:45 – 3:00 PM

Nathan Diplock '17: Comparing the Pollinator Abundance and Diversity Supported by Native and Non-Native Ornamental Plants within Four Genera

Andrew Lachance '17: Persistence of Hyperoxia-induced "Maturation" of the Hypoxic Ventilatory Response (HVR)

Max Nguyen '17: The Role of Transcription Factor Nfe2 in Zebrafish Development

Alex Ulin '17: Use of Chromatin Immunoprecipitation and qPCR in 24 Hours-post-fertilization Zebrafish (*Danio rerio*) Embryos to Show Direct Regulation of *nrf* genes by Ahr1B

Moderator: Larissa Williams, Biology

Pettengill G52

Reading Women's Writing from England, Japan, and Latin America

What are the political implications of studying women's writing exclusively? What common threads weave across space and time in women's writing? Students in three different courses come together to discuss their discoveries.

Ted Burns '19, Danielle Ward '20, Sofie Gardephe '18, and Claudia Krasnow '18 and members of English 222, Seventeenth-Century Literature: Early Women's Writing; Interdisciplinary Studies 255, Modern Japanese Women Writers; and Spanish 315, Latin American Women Writers

Moderators: Stephanie Pridgeon, Spanish; Joanna Sturiano, Japanese; and Myra Wright, English

Pettengill G65

Research in Psychology and Neuroscience I

The first of two sessions featuring research talks by psychology and neuroscience majors.

Sadie James '17: The Effects of Gender and Sexuality in the Classification of Stalking

William Koller '17: Alexithymia and Emotion Regulation in Depression and Anxiety

Kate Moody '17: Developmental Trajectory of Oxytocin-dependent Changes in Psychosocial Adjustment across Adulthood

Azure Reid-Russell '17: Examining Interpersonal Deficits in Borderline Personality Style: Comparing Attachment and Biosocial Models

Moderator: Susan Langdon, Psychology

Pettengill 116

Island Identities in Disjuncture: Local Forms of Sociopolitical Critique in the Maldives and the Shetland Islands

Island communities develop unique strategies to combat depopulation and economic insecurity; senior honors students examine the Maldives and the Shetlands.

Anan Ahmed '17 and Katherine McNally '17

Moderator: Loring Danforth, Anthropology

1:45 – 3:00 PM
Pettengill 162

Dance: Creation, Process, History

Senior dance majors discuss the process of developing dance works, and dance history students reflect on the contributions of twentieth-century dance innovators George Balanchine, Bill T. Jones, and Anna Sokolow.

Mallory Cohen '17 and Laura Pietropaoli '17: Senior Theses in Dance: Text, Relationships, and Creative Processes in Performance

Samuel Hersh '18, Becca Howard '19, and Claire Sickinger '19: Exploring Dance History: Important Figures and Their Impact

Moderator: Rachel Boggia, Dance

Concurrent Session II
3:15 – 4:30 PM

Perry Atrium

Poster Session II: Art history and museum studies, biochemistry, biology, economics, mathematics, neuroscience, physics, psychology, religious studies, sociology, and theater.

Pettengill G10

Off-Campus Study: Homestays while Abroad

What is the impact of living with a family while studying abroad? Recent study-abroaders weigh the value.

Chris Crum '17, Rosy DePaul '17, Samantha Grant '18, Grace Jurkovich '18, Amy Katz '17, Ariscell Tavarez '17, and Matthew Winter '18

Moderator: David Das, Office of Off-Campus Study

Pettengill G21

Knowledge and the Public Good: Exploring Intersections of Theory and Practice

The Harvard Center for Community Partnerships' 2017 Community-Engaged Research Fellows discuss their senior research with community partners.

Molly Pritz '17: Data Analysis of the St. Mary's WorkMed Occupational Medicine Integrated Disability Prevention Program

Yarisamar Cortez '17: Case Study of Organizational Power of Female Lime Agriculturalists in Rural Oaxaca, Mexico

Claire Brown '17: Adult Drug Courts and the Development of the Carceral State in Maine

Halie Lange '17: Creating a Pilot Education Program for Thorncrag Bird Sanctuary

Katherine Stevenson '17: Intersections of Mental Illness and Legislative Changes in Androscoggin Jail

Moderator: Darby Ray, Harvard Center for Community Partnerships

Pettengill G50

Research in the Social Sciences: Economics, Politics, and History

Social scientists discuss their senior research on sugar commodities forecasting, political empowerment in Bolivia, and the role on religion in the founding of Bates.

Andrew Segal '17: The Historical Ethos of Bates College: An Analysis of the Freewill Baptist Faith and Its Impact on Oren B. Cheney, Founder of Bates

3:15 – 4:30 PM

Tessa Holtzman '17: *Mi Bolivia está Cambiando*: The Effect of Decentralization on Ethno-political Mobilization in Bolivia

Dmitriy Redkin '17: Commodity Price Behavior with Focus on Storability

Moderator: Joseph Hall, History

Pettengill G52

Literary Readings by Creative Thesis Writers

Senior creative thesis writers offer readings of their poetry, fiction, and creative nonfiction.

Tristan Brossy de Dios '17: *Discothèquesque*

Laurel Fiddler '17: Excerpts from a Short Novel

Julia Grace '17: A Passage from *Foreigner Found*, A Novel

Evan Hansen-Bundy '17: Fiction

Zachary Kinsella '17: Poetry

Noah Levick '17: "What We Talk about When We Talk about Sports"

Julia Mason '17: Fiction

Zaynab Tawil '17: Poetry

Moderator: Jessica Anthony, English

Pettengill G65

Presidential Campaign Rhetoric

Opinions abound concerning the latest presidential campaign and election, but in this session, rhetoric students apply their analytical skills to the 2016 campaign.

Koya Nakata '17: Barack Obama and the Maternal Style: Rhetorical Response to Mass Shooting Epidemics

Amanda San Roman '17: Rhetorical Performance of a First Gentleman: A Rhetorical Analysis of Bill Clinton's 2016 Democratic National Convention Address

Ian Erickson '18: "No More Pussy-Footin' around!": Sarah Palin and the Act of Going Rogue

Gabriel Nott '17: Not a Laughing Matter: *Last Week Tonight with John Oliver*, the Performance of Public Intellect, and Burke's Frames

Moderator: Stephanie Kelley-Romano, Rhetoric

Pettengill 116

The Comparative Politics of Climate Change

Climate change is a global issue; some nations are part of the problem, while others have the most to lose. Students in Politics 236, The Global Politics of Climate Change, discuss the climate commitments of five countries.

Ryan Whittemore '19 (China), Marisol Hernandez '19 (Bangladesh), Owen Cardwell-Copenhaver '18 (Brazil), Danielle Cohen '19 (Egypt), and Matthew Bodwell '18 (Japan)

Moderator: James Richter, Politics

3:15 – 4:30 PM

Pettengill 162

Culture, Text, and Learning: Europe and the United States

A video screening and two talks explore education in the United States and Denmark, the role of place in German theater, and Zen underpinnings of contemporary classical music.

Duncan Reehl '17: One Hand Clapping: Hearing Zen in the Contemporary Western Art Music Piece *Recueil de Pierre et de Sable* by Joshua Fineberg

Gregory Fitzgerald '17: Contemporary Understandings of Berlin: An Analysis of Spatial Construction in *The One*

Woods Fairchild '18: A Cross-cultural Analysis of Danish vs. American Higher Education Student Motivation

Moderator: Raluca Cernahoschi, German

4:30 PM

Olin Concert Hall

Voice Recital: Students of Lurette Saul and Jazmin deRice

Concurrent Session III

4:45 – 6:00 PM

Perry Atrium

Poster Session III: Biochemistry, biology, chemistry, history, neuroscience, physics, psychology, sociology, and Spanish.

Pettengill G10

Presenting the World: Geographical Narratives from the Ancient World

Ancient geographers studied more than topography; they considered politics, history, anthropology, myth, and fantasy. Students discuss ancient geographers and six regions of the world they explored.

Shelbie McCormack '19, Jenna Powell '19, Hannah Austin '19, Andrew Cahill '18, Isabella Barrengos '19, and Zofia Ahmad '19

Moderator: Hamish Cameron, Classical and Medieval Studies

Pettengill G21

Senior Thesis Research in Philosophy

Senior majors present talks on their thesis scholarship in philosophy, from feminist theory to particularism to altruism.

Hanna Bayer '17: Interdependence and Compassion: Connecting Buddhist Ethics and Western Feminist Theory

Noah Jallo-Prufer '17: Advocating for an Ecofeminist Environmental Ethic: An Analysis of Val Plumwood's *Environmental Culture* and Margaret Atwood's *Oryx and Crake*, and an Endorsement of Their Shared Philosophy

Amar Ojha '17: Virtuous Particularism: The Case for Contextual Value and Moral Sensitivity

Sidney Parham '17: Evaluating Effective Altruism: Methods and Demandingness

Moderator: Susan Stark, Philosophy

4:45 – 6:00 PM
Pettengill G52

Contemporary Social Issues: Sociological Perspectives

Senior sociology majors discuss their research on identity, activism, childhood adversity, housing, English language learning, and stereotyping.

Hanna Chipman '17: Identity Negotiation: The Experiences and Intersections of East Asian American Youths

Sofia Gnabasik '17: Introversion-Extraversion and the Constitution of an Activist

Tara Humphries '17: Community Perspectives on Childhood Adversity, Trauma, and Family Dysfunction

Meghan Lynch '17: From Milking to Maintaining: Best Practices for Housing Code Enforcement in Lewiston

Gabriella O'Leary '17: Perceptions of Muslim Women: The Origin and Variation of Stereotypes among Students at Bates College

Julia Yankelowitz '17: Misconceptions of Bilingualism: Unpacking the Over-Diagnosis of Spanish-Speaking English Language Learners as Learning Disabled and Speech and Language Impaired

Moderator: Emily Kane, Sociology

Pettengill G65

Research in Psychology and Neuroscience II

The second session of research talks by senior neuroscience and psychology majors.

Andrew Moreau '17: Healing Trauma: A Guide to Social Recovery for Substance Abuse

Alexander Andonian '17: Data-driven Approaches for Investigating Molecular-Heterogeneity of the Brain

Alex Gogliettino '17: DNA Methylomics: Targeting TET1 as a Treatment for Intellectual Disability

Kate Berger '17: Predicting Emotional Responses to Social Exclusion: Immune Neglect, Emotion Regulation, and the Moderating Role of Dysphoria

Melody Altschuler '17: Theory of Mind Profile of School-Aged Children with Autism Spectrum Disorder

Moderator: Jason Castro, Neuroscience

Pettengill 116

Francophone Cultural Heritage in Transition: Senior Research

Senior French and Francophone studies majors screen their videos on art and culture, language, and immigration.

Lillie Shulman '17: A Universe in Transition: The Future of the Art World in France

Anna Sucsy '17: Comparing the Social Integration of Franco-Africans and French Canadians in Lewiston, ME

4:45 – 6:00 PM

Paul Runyambo '17: The Effect of Immigration and Interaction between Immigrants of Different Nationalities

Moderator: Alexandre Dauge-Roth, French and Francophone Studies

Pettengill 162

Study-Abroad Field Research

Many study-abroad programs foreground independent research; what are the challenges and opportunities of conducting fieldwork while abroad?

Bria Riggs '18: Evaluating a Squirrel Monkey Troop in Natural Rehabilitation: An Assessment of Population and Behavior of *Saimiri sciureus* in Preparation for Relocation from Sumak Allpa to Yasuní National Park, Ecuador

Julia Nemy '18: An Overview of Agriculture Production and Processes in the Diègo-Suarez, Diana Region of Madagascar

Alexa Adams '17: Credit Culture and Caterpillar Fungus: Examining the Local Economy of the Tarap Valley in Dolpa, Nepal, through an Anthropological Lens

Garrett Anderson '18: Visual Culture and Stereotypes of the Ainu of Northern Japan

Sadie Mae Palmatier '18: Tourism and the Environment in Bhutan: Current Perceptions of and Suggested Improvements to Tourism-Related Infrastructure

Moderator: Tina Mangieri, Office of Off-Campus Study

Benjamin E. Mays Center

Students in Theater 360, Theater for Social Change, Performance: *My America Too*

My America Too was originally produced by Center Stage in Baltimore, MD. The series of six short plays set around a kitchen table were filmed on the street at locations of high-profile killings in Sanford, FL; Cleveland, OH; Ferguson, MO; Staten Island, NY; Baltimore, MD; and Charleston, SC. The Bates production features student and staff actors and crew.

Justin Moriarty, Theater, director and producer; Katalin Vecsey, Theater, producer

Evening Session

7:30 PM

Schaeffer Theatre

Bates Dance Company Spring Dance Concert

Rachel Boggia and Julie Fox, Dance

This program of works by dance students and dance majors also will be presented Sunday, April 2, at 2:00 PM. An alternate program of works by dance students is presented on Saturday, April 1, at 5:00 PM, and on Monday, April 3, at 7:30 PM.

Tickets required. \$6 general admission; \$3 Bates faculty, staff, senior citizens, and non-Bates students; free for Bates students. For tickets, visit www.batestickets.com.

8:00 PM

Olin Concert Hall

Bates College Choir: *Messiah*, Parts 2 and 3, George Frideric Handel (1685-1759)

John Corrie, Music, director

Admission is free, though tickets are required. For tickets, please visit www.batesconcerts.eventbrite.com.

Mount David Summit Poster Presenters

Note: The number following each title indicates the location of the poster in the session

| 1:45 - 3:00 PM | Poster Session I | Wall # |
|-----------------------|---|---------------|
| Madelyn Auvinen '17 | Importance of the Inflammatory Response in Linking Periodontal Disease and Diabetes Mellitus | 4 |
| Alex Brown '17 | Synthesis of the <i>O</i> -mannose Linked Human Natural Killer-1 (HNK-1) Epitope | 13 |
| Madeline Bruno '17 | Quantifying the Effect of Fluorine on the Viscosity of Silica-undersaturated, Alkali-rich Melts in the NaAlSiO ₄ -KAlSiO ₄ series | 20 |
| DeAundre Bumpass '17 | Reducing Microbial Populations on Fresh Produce Using Suma Eden | 2 |
| Olin Carty '17 | The Effect of Fluorine on Melt Viscosity in Jadeite-Leucite Melts | 18 |
| Kelsey Chenoweth '17 | Methane Emissions above and below a Local Ditch Plug in Sprague River Marsh, Phippsburg, ME | 15 |
| Maitri Chittidi '17 | Shattering the Granite Ceiling: An Examination of Women's Electoral Success in New Hampshire | 25 |
| Claire Coleman '17 | Kingdom Animalia: Clinical Applications of Animal-assisted Therapy and the Human-Animal Interaction | 32 |
| Isobel Curtis '17 | Forest Composition and Eastern Hemlock Physiology at the Bates-Morse Mountain Conservation Area in Response to Pathogenic Insect, Hemlock Woolly Adelgid | 6 |
| Marcus Delpeche '17 | Implicit Perception in Object Substitution Masking: An Examination of Lexical vs. Semantic Activation | 33 |
| Marina Dickson '17 | The Effect of Domestic Politics on Korea-Japan Relations | 26 |
| Emma Dunn '17 | The Effects of Two Biotic Stressors on Carbon Allocation in Two Coniferous Trees | 5 |
| Jake Flaherty '17 | The Effect of Humility on the "Hubris Penalty" | 28 |
| Tremearne Hotz '17 | Utilization of DNA Methylation to Treat Memory Deficits | 11 |
| Maddie Inlow '17 | The Impact of Socioeconomic Status on Concussion Awareness of Maine High School Students | 8 |
| Emma Jarczyk '17 | The Pursuit of Epigenetic Changes to Improve Long-Term Memory and Learning in Pitt-Hopkins Syndrome | 12 |
| Anna Kingston '17 | A Process Evaluation of The Picture Book Project | 29 |
| Peder Knoth '17 | Faces, Emotions, and Blurry Words | 34 |
| Colin Kraft '17 | Petrology of the Hastingsite-Riebeckite Granite of Mt. Cabot, NH | 19 |
| Rosemary Leahey '17 | The Role of Airborne Microbes in the Bates College Museum of Art | 1 |
| Zoe Moss '17 | Real vs. Believed Empowerment: Moving beyond the Individual Economic Empowerment of Neo-Liberalism | 24 |
| Will Murray '20 | A War on Social Networks | 27 |
| Evan Nece '17 | Prevalence, Risk Factors, and Resistance Mechanisms of <i>Staphylococcus aureus</i> and Methicillin-Resistant <i>Staphylococcus aureus</i> in the Student Population of Bates College | 3 |

| 1:45 - 3:00 PM | Poster Session I | Wall # |
|------------------------|---|---------------|
| Nick Orlando '17 | Diverse Picture Books in an All-White World | 31 |
| Randy Peralta '18 | What's on Your Bookshelf? Availability and Demographics of Multicultural Literature in the Unites States | 30 |
| Halley Posner '18 | The Fourteenth-Century British Archer: New Technology or Appropriation of the Old? | 21 |
| Alison Ricciardi '17 | The Structure and Function of Fiber Anatomy in the Early Seed Plant Order Cycadales | 7 |
| Daniel Stames '17 | Assessing the Effectiveness of Using <i>Typha latifolia</i> and <i>Typha angustifolia</i> as Proxies for Estimating Seasonal Methane Emissions on Maine's Various Southeastern Salt Marshes | 16 |
| Yacine Sylla '17 | Isotopic Evidence for Nutrient Cycling in Two <i>Zostera marina</i> Meadows in Cape Cod, MA | 14 |
| Devin Ullerick '17 | Breaking the Mold: An Analysis of the "Male Gaze" in Rainer Werner Fassbinder's Films of the New German Cinema | 22 |
| Jessica Vocaturo '17 | Characterizations of Waterboarding: Media-Government Relations in the Post-9/11 Era | 23 |
| Raissa Vodounon '17 | Combating Medication Misuse: Pictograms for Safe Medication Use and Disposal | 9 |
| Gwenyth Williams '17 | Paleoenvironmental Reconstruction from the Sediment Record of the Varved Proglacial Linnévatnet, Svalbard, Norwegian High Arctic | 17 |
| Chase Winham '20 | A War on Social Networks | 27 |
| Kyle Zollo-Venecek '17 | The Relationship of Phosphorus, Iron, and Aluminum in the Lake Auburn Water Reservoir | 10 |
| 3:15 - 4:30 PM | Poster Session II | Wall # |
| Abbey Bierman '17 | Effects of Multiple Species' Songs Playback on Song Learning in the Carolina Wren in a Rehabilitation Setting | 3 |
| Milan Brankovic '17 | A Survey of Adaptive Quadrature Methods | 15 |
| Audrey Burns '17 | A Thesis in Acting: Helena in <i>A Midsummer Night's Dream</i> | 28 |
| Spencer Burt '17 | Effectiveness of Cognitive Stress Reappraisal in Mediating Test Anxiety among College Students | 27 |
| Andrea Cardenas '17 | Prism-based Optical Fingerprint Scanners | 24 |
| Lisa Choi '17 | Researching Research: Examining Perspectives, Planning, and Execution of Community-based Research Projects at Bates College | 32 |
| Soohee Choi | The Effect of Group-Level Uncertainty on the Choice of Brand-Name vs. Generic Products | 25 |
| Grace Clunie '17 | Examining the Role of Colorblindness in Students' Attitudes toward Race and the Criminal Justice System at Bates College | 34 |
| Danielle Fournier '18 | Markets on the Move: A Comparative Study of Mobile Vending in Buenos Aires, Hanoi, and Cape Town | 12 |
| Gabby Froehlich '17 | Identifying Diversity of the Major Histocompatibility Complex I in <i>Oceanodroma leucorhoa</i> | 4 |
| Sophia Gottlieb '17 | Spatially Resolving Mass Distribution in Compact Galaxies | 22 |

| 3:15 - 4:30 PM | Poster Session II | Wall # |
|-------------------------|---|---------------|
| Hannah Graves '17 | Stress on College Campuses: Testing the Efficacy of Two Stress Resilience Techniques | 26 |
| Emma Katz '17 | The Effect of the Dispersion of Non-rewarding Flowers on Pollination by Bumblebees (<i>Bombus impatiens</i>): A Lab Study | 7 |
| Fahim Sakil Khan '20 | Galaxy Spectroscopy in 3D | 23 |
| Ryan Mahar '17 | Maze Navigation and Learning in Juvenile Leach's Storm Petrels | 6 |
| Reed Mszar '18 | Familial Hypercholesterolemia (FH): A Registry-based Analysis of Local FH Trends | 11 |
| John Neufeld '17 | Caffeine and Color Memory Recall in Free-flying Bumblebees | 9 |
| Matthew Parrino '19 | Solving Sparse Eigensystems with Fluid Dynamic Applications | 20 |
| Kelsey Pearson '17 | The Hero's Journey and Soul Retrieval Therapy | 30 |
| Celine Pichette '17 | The Effects of Forestry Management on Network Metrics of Bee Pollinators | 8 |
| Calvin Reedy '17 | Bates Museum of Art Internship | 29 |
| Joshua Rines '17 | Spatially Resolving Mass Distribution in Compact Galaxies | 22 |
| Katharine Rosenthal '17 | "Television! Teacher, mother, secret lover": Consequences of Alcohol and Drug Portrayals in Television and Film on Recreational Substance Use Behaviors and Attitudes | 33 |
| Wade Rosko '17 | Understanding the Variability of Indian Monsoons: Combining Data and Models | 18 |
| Erik Saberski '17 | The Fourier Transform: How This Amazing Tool Works and a Few Applications | 16 |
| William Sheehan '17 | Testing Physical Correctness of Fluid Dynamic Simulations | 19 |
| Julia Smachlo '17 | Influence of Chronic Hypoxia on Developing Respiratory System | 2 |
| Monata Song '17 | Age Dependent Pattern of Hypoxic Ventilatory Response in Postnatal Japanese Quail | 1 |
| Nathan Stephansky '17 | Resistance to Drought in Four New England Hardwood Species | 10 |
| Leah Sturman '17 | The Matrix Graphical Realization Problem | 14 |
| Katherine Traquina '17 | Sexual Violence in Early Tibetan Buddhist Conversion Lore | 31 |
| Desirae Valentin '17 | Maine Municipal Wastewater Treatment: The Use of Anaerobic Digestion in Greenhouse Gas Mitigation | 21 |
| Michael Varner '17 | Vector Autoregressions with Machine Learning | 13 |
| Gabriel Whitehead '17 | Comparative Analysis of Building Thermal Efficiency at Bates College | 17 |
| Bruno Zicarelli '17 | Major Histocompatibility Complex (MHC) Class IIA in Storm Petrels | 5 |

| 4:45 - 6:00 PM | Poster Session III | Wall # |
|------------------------|---|---------------|
| Matthew Ameduri '19 | An Invisible Predicament: Wabanaki Healthcare | 31 |
| Niccolò Bigagli '17 | Nonlinear Dynamics of Vertical-Cavity Surface-Emitting Lasers (VCSELs) Subject to Optical Injection and Feedback | 15 |
| Gina Ciobanu '17 | Elementary Aspirations Programs: Bridging the Gap for Underserved Students | 25 |
| Matthew Collie '17 | Bidirectional Communication and Neuropeptide Modulation between Buccal A Cluster Neurons and Feeding Central Pattern Generator Neurons in the Pond Snail, <i>Helisoma trivolvis</i> | 1 |
| Jade Donaldson '18 | Role of Locus Coeruleus in Cocaine Memory Reconsolidation | 19 |
| Tayla Duarte '17 | Investigating the Neural Dependence of Caudal Fin Regeneration in Zebrafish (<i>Danio rerio</i>) | 3 |
| Evan Ferguson-Hull '17 | Numerical Simulation of Constrained, Rigid Body Motion | 16 |
| Lauren Goldman '17 | The Effect of Psychological Distance on Reactions to Infidelity | 30 |
| Sarah Holmes '17 | Analyzing the Development of the Mouse Accessory Olfactory Bulb Using Select Plane Illumination Microscopy | 18 |
| Riley Hopkins '18 | Let's Move It: Body Image | 23 |
| Grace Huang '17 | Changes in Gene Expression during Development in the Mouse Brain | 17 |
| Samra Husremovic '18 | Highly Selective Ru/TiO ₂ Catalysts for HDO of Phenolic Compound: Effects of Support Structure and Partial Substitution of Nickel for Ruthenium | 8 |
| Robert Ibarra '17 | How Does Socioeconomic Status Affect Student Developmental Outcomes in Restorative Circles? | 24 |
| Aashu Jha '17 | Nonlinear Dynamics of Vertical-Cavity Surface-Emitting Lasers (VCSELs) Subject to Optical Injection and Feedback | 15 |
| Robert Jones '17 | Western Blot Analysis and Expression Vector Design for <i>Borrelia burgdorferi</i> Ribonucleases | 12 |
| Madeline McLean '17 | Role of Nfe2 and Oxidative Stress on Zebrafish Inner Ear Development | 6 |
| Liam McLoughlin '19 | An Invisible Predicament: Wabanaki Healthcare | 31 |
| Kevin Melvin '17 | Homeless Youth's Perspectives on Barriers to Education | 27 |
| Ankrish Milne '17 | AKT Modulates Cardiac Regeneration in Zebrafish | 2 |
| Alec Montes de Oca '17 | Manipulation of Defendant Race and Race Salience and Its Effects on Ratings of Guilt | 21 |
| Jacob Pantazis '17 | Roles of Nfe2-Related CNC bZIP Factors in Response to Oxidative Stress as Induced by Mono (2-ethylhexyl) Phthalate | 5 |
| Maggie Paulich '17 | The Effect of Race on the Meaning of Positive Stereotypes of African Americans | 28 |
| Emmett Peterson '17 | Lyme Disease: Gene Regulation of Bpur and FlaB in <i>Borrelia Burgdorferi</i> | 11 |
| Nevo Polonsky '17 | A Mechanistic Comparison of Catalytic Transfer Hydrogenation and Hydrodeoxygenation using Ru/TiO ₂ Catalysts | 9 |
| Bronwyn Purcell '17 | The Relationship between Pretend Play and the Sociemotional Development of Preschoolers as a Function of Gender and Birth Order | 26 |

| 4:45 - 6:00 PM | Poster Session III | Wall # |
|--------------------------|---|---------------|
| Ali Rabideau '17 | Let Our Stories Scatter the Seeds: An Exploration in Communicating the Spirit of the Center for Wisdom's Women | 32 |
| Phathutshedzo Rambau '17 | Honey Bee (<i>Apis mellifera</i>) Exposure to Pesticides: Determination of Residual Pesticides in Beeswax and Honey In Maine | 10 |
| Sophie Samdperil '17 | How Do Individuals Use and Navigate the Chilean Spanish Language to Display, Subvert, and Perpetuate Chilean Hegemonic Order? | 33 |
| Emma Smith '17 | Expression and Purification of Ubiquitin-protein E3 Ligases Arih1, Arih2, and DTX3L using <i>E. coli</i> and Bac-to-Bac Baculovirus Expression Systems | 7 |
| Leah Spingarn '17 | The Effect of Individuals' Valuation of Moral Foundations and Motivation on Implicit Biases toward Gay and Lesbian Targets | 29 |
| Melani Tayer '17 | The Family-oriented Jury: Families of Trial Participants and their Impact on Jury Decision Making | 20 |
| Sarah Tobin '17 | Synthesis of the Xylose Building Block in the <i>O</i> -Mannosylated m3 Glycan | 13 |
| Joseph Tocci '17 | Synthetic Approach for the Ligand Binding Moiety Scaffold, Rbo5P, in a-Dystroglycan | 14 |
| Hannah Tolan '17 | The Impact of Priming College Students to Think in an Individualist or Collectivist Manner on Feelings toward the Myers-Briggs Type Indicator and Career Planning | 22 |
| Hannah Wilson '17 | Putting the "Tree" into Tree Street Youth: Mental Health, Green Space, and Increasing Access to Natural Environments | 4 |

Rome and the East: Digitizing and Communicating History
CM/HI 283 Class Participants

Michael Bennett '19
Jamie Fagan '20
Ian Hillenbrand '17
Andrew Jarnryd '17

Charlotte Jeffrey '18
Tristan Kane '20
Lexi Kemp '19
Will Langhoff '20

Tessa Liebes '19
Parker Strong '18
Matthew Zecca '18

Seventeenth-Century Literature: Early Modern Women's Writing
ENG 222 Class Participants

Matthew Berdon '19
Katherine Blandford '18
Jeremy Cairns '19
Chandler Crans '18
Sophie Gardephe '18
Caroline Gettens '18

Julia Grace '17
Michael Horowicz '17
Jonathan Kaufman '17
Hope Logan '18
Claire MacKay '20
Alex Master '19

Nathan Moreau '17
Max Petrie '18
Gaby Shpilsky '19
Lena Szeto '18
Danielle Ward '20

Modern Japanese Women Writers
INDS 255 Class Participants

Elijah Acevedo '18
Ted Burns '19
Emily Dean '19
Logan Douglas '20

Nico Lemus '19
Samantha Purnell '18
Duncan Reehl '17
Michael Somkuti '19

Zaynab Tawil '17
Lily Yang '19

Latin American Women Writers
SPAN 315 Class Participants

Elsa Case '17
Rosy DePaul '17
Kylie Johnson '17
Claudia Krasnow '18

Meghan Lynch '17
John McReynolds '17
Randy Peralta '18
Sophie Samdperil '17

Amanda San Roman '17
Kevin Tejada '17
Nicolas Visser '18

My America Too
Cast and Crew

Cast

Michael Driscall '19
Colby Harrison '17
Essence Hill '17
Samuel James '17
Brennen Malone '17

Mary Meserve
Daniel Kuan Peebles '17
James Reese
Fergus Scott '17
Samuel Wheeler '17

Collaborators

B. Christine McDowell
Hannah Miller '14
Justin Moriarty

Phathutshedzo Rambau '17
Divyamaan Sahoo '17
Katie Van Patten '17

Kati Vecsey
Lucas Wilson-Spiro '15

Seventeenth Annual Barlow Off-Campus Study Photography Exhibition

Alexa Adams '17
 Nicholas Bardin '17
 Ethan Benevides '18
 Niccolò Bigagli '17
 Adam Blau '18
 Andrea Boitnott '18
 Alexandra Buonfiglio '18
 Hazel Cashman '18
 Sarah Centanni '17
 Chun-Yen Chao '18
 Kelsey Chenoweth '17
 Molly Chisholm '17
 Gina Ciobanu '17
 Kate Cuthbert '17
 Nathan Dana '17
 Rosy DePaul '17
 Emily Disler '18
 Alyssa Dole '17
 Maddy Ekey '17
 Woods Fairchild '18
 Zan Fisher '17

Danielle Fournier '18
 Sofia Gnabsik '17
 Samantha Grant '18
 Ian Hillenbrand '17
 Aashu Jha '17
 Grace Jurkovich '18
 Annie Kandel '18
 Praneet Kang '17
 Jamo Karsten '17
 Amy Katz '17
 Jonathan Kaufman '17
 Caitlin Keady '18
 Anna Kreitzer '19
 Hope Logan '18
 Emma Marchetti '17
 Madeline McGonagle '18
 Katherine McNally '17
 Reed Mszar '18
 Gwen Muscato '18
 Denali Nalamalapu '17
 Julia Nemy '18

Gabriella O'Leary '17
 Beanie O'Shea '18
 Teal Otley '18
 Sadie Mae Palmatier '18
 Halley Posner '18
 Noel Potter '17
 Duncan Reehl '17
 Bria Riggs '18
 Ben Roop '18
 Sarah Sachs '18
 Julie Self '18
 Lillie Shulman '17
 Parker Strong '18
 Anna Sucsy '17
 Becca Titcomb '17
 Alex Ulin '17
 Sophie Wagener '17
 Gillian Wilcox '18
 Matthew Winter '18
 Laura Wolfley-Payán '18
 Patrick Wood '17

Bates College Dance Company

Dancers

Sydney Anderson '20
 Matt Baker '17
 Isabella Barrengos '19
 Flannery Black-Ingersoll '19
 Olivier Brillant '17
 Michaela Britt '17
 Madeline Bruno '17
 Topher Castaneda '20
 Sarah Centanni '17
 Maya Church '20
 Peter Cottingham '18
 Charlotte Cramer '19
 Isabella Del Priore '19
 Jess Duserick '18
 Sofia Elbadawi '18
 Woods Fairchild '18
 Sophie Gardephe '18
 Jessy Garson '17
 Shae Gwydir '20
 Maya Haber '18
 Colby Harrison '17
 Johanna Hayes '19

Samuel Hersh '18
 Essence Hill '17
 Riley Hopkins '18
 Becca Howard '19
 Sara Hoyer '17
 Praneet Kang '17
 Jonathan Kaufman '17
 Angie Kemfack '19
 Helen Keyes '17
 Chaesong Kim '18
 Charlie Klein '17
 Yesul Lee '19
 Ellie Madwed '20
 Brennen Malone '17
 Anna Marr '17
 Mickai Mercer '19
 Nina Moskowitz '20
 Abby Myers '19
 Alexandria Onuoha '20
 Lila Patinkin '20
 Caleb Perlman '19
 Jorge Piccole '18

Michaela Pinette '19
 Ali Rabideau '17
 Alison Ricciardi '17
 Divyamaan Sahoo '17
 Alexia Sahué '19
 Sukanya Shukla '20
 Claire Sickinger '19
 Cece Snow '17
 Amanda Sobotka '19
 Jane Spardel '17
 Ariscell Tavarez '17
 Eliza Tilbor
 Becca Titcomb '17
 Jane Tran '19
 Amy Turtz '19
 Emilio Valadez '18
 Xin (Judy) Wang '20
 Libby Wellington '20
 Chase Winham '20
 Kasey Wood '18
 Louisa Woodhouse '19
 Hanchen Zhang '19

Choreographers

Flannery Black-Ingersoll '19
 Mallory Cohen '17 (thesis)
 Peter Cottingham '18
 Charlotte Cramer '19
 Samuel Hersh '19
 Essence Hill '17

Sara Hollenberg '19
 Riley Hopkins '18
 Chaesong Kim '18
 Elizabeth Lau (applied dance faculty)
 Yesul Lee '18
 Mickai Mercer '19

Jorge Piccole '18
 Geoffrey Pyke '18
 Alison Ricciardi '17
 Claire Sickinger '19
 Sukanya Shukla '20
 Libby Wellington '20

Crew and Collaborators

Seker Anderson '18
 Saleha Belgaumi '18
 James Brown '17
 Theo Eagle '17

Julia Gutterman '20
 Maddie Hallowell '20
 Colby Harrison '17
 Zach Jonas '20

Aimee Oakes '20
 Jason Ross '19
 Samuel Wheeler '17

Bates College Choir*Sopranos*

Anne Canning '20
 Hanna Chipman '17
 Sarah Douglas '19
 Sarah Freyd '19
 Amelia Green '17
 Sara Hoye '17
 Aubyn Link '17
 Madeline McLean '17
 Ella Westerfield '20

Altos

Zoe Chamberlain '20
 Kathryn Cleary '19
 Marina Dickson '17
 Colleen Hoyt '20
 Eliza Kissick '20
 Wanyi Lu '19
 Angie O'Connell '17
 Hannah Tolan '17

Tenors

Christian Bradna '20
 Colby Harrison '17
 Brennen Malone '17
 Ryen Martinez '17

Basses

Olivier Brilliant '17
 Henry Buckley '19
 Ben Campbell '17
 Declan Chu '17
 Samuel Hersh '18
 Kiernan Majerus-Collins '18
 Andrew Mikula '19

Violin

Elliot Chun '19
 Adam Zupancic '19

Double Bass

Ian Clarkson '18

Cello

Kevin Franco '17

Timpani

Grace Link '19