

# 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 2018 Summit ~

The 2018 Mount David Summit, held on 23 March, 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 must develop as scholars in their own right, and be 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 or artistic work 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, composers, musicians, 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 a wide range of skills and expertise that enrich students' liberal arts experience.

# 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  
Gene Alan Clough Fund for Science Education  
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 Dorothy Dole Johnson '41 Fund for Student Research in the Sciences  
The John and Sally Kelsey Prize for Neuroscience Student Research  
Dennis and Jo-Linda Keith Endowed Fund for Chemistry Research  
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, 23 March 2018

 indicates a presentation focused on environmental sustainability

**1:15 -1:45 PM**  
**Perry Atrium**

**Musical Prelude:** *Tico Tico* by Paco de Lucía (b. 1947)  
Bates Brass Ensemble

*Alan Carr, Music, bass trombone and ensemble director*

#### **Call to the Summit**

Fanfare: Allegro vivace from *Gloria* by John Rutter (b. 1945), performed by the Bates Brass Ensemble and Bates College Choir

*Alan Carr, Music, bass trombone and ensemble director; and John Corrie, Music, choir director*

#### **Welcome**

A. Clayton Spencer, President

Kathryn Graff Low, Interim Vice President for Academic Affairs and Dean of the Faculty

**1:45 -6PM**  
**Pettengill Hall**

#### **18th Annual Barlow Off-Campus Study Photography Exhibition**

**Perry Atrium**

#### **Radical Collaboration in the SciFi Literature Classroom**

Students in English 152, American Literature since 1900, use 3D design and virtual reality to create the imagined cities of science fiction: explore these new worlds.

*Tiffany Salter, English, advisor; Kai Evenson and Cori Hoover, Information and Library Services, technology consultants*

*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, classical and medieval studies, European studies, mathematics, physics and astronomy, politics, psychology, and sociology

**Pettengill G10**

#### **Coherence, Hermeneutics, and World-Entering in So-called New Media: Please Come Listen to Us**

Students in DN/MU 337, Atelier, consider multimedia art making, and how to integrate many modes of expression, from music and dance to video, written and spoken word, and computer code: expect the unexpected.

*Moderator: William Matthews, Music*

**Pettengill G21**

#### **Community-Based Research in Educational Studies**

As part of their capstone in education, students in Education 450, Seminar in Educational Studies, undertook community-engaged research on youth perspectives on race, discipline, and restorative practices, and on the effectiveness of literature circles in English Language Learning classrooms at Lewiston High School

*Moderator: Patricia Buck, Education*

**1:45 – 3:00 PM**  
**Pettengill G52**

**Literary Readings by Creative Writing Thesis Students**

Senior creative writers offer readings of their short fiction and graphic novels

R.J. Bingham '18: Gray Matter: Short Stories about Race and Growing Up—A Look into My Senior Creative Writing Thesis

Katherine Blandford '18: Kate and Käthe: (Mis) Adventures in Graphic Novel Form

Kate Bouchard '18: *Love, Lemon*

Claudia Krasnow '18: Pray For Me, I Steal Money

*Moderator: Jessica Anthony, English*

**Pettengill G65**

**Your BFF: Student Organizers Preview and Discuss the Inaugural Bates Film Festival**

Students in Rhetoric 391J, Film Festival Studies, discuss the development and production of the first Bates Film Festival, underway during Summit Weekend and including screenings of twelve films and several shorts as well as panel discussions and a screenwriting master class (see back page of the program for more information)

*Moderator: Jonathan Cavallero, Rhetoric*

**Pettengill 116**

**Sustainability Initiatives at Bates** ♻️

The Bates Ecoreps talk about a variety of efforts at Bates to advance the college's ambitious environmental sustainability goals

Adair Andre '18, Marissa Bale '19, Elizabeth Eareckson '21, Katharine Gaillard '19, Nell Houde '18, and Sophie Landes '21

*Moderator: Tom Twist, Sustainability Manager*

**Pettengill 162**

**Research Issues in Latin America**

Students discuss the historical and enduring impact of colonization in Latin America

Cristopher Hernandez Sifontes '18: *Procesos y Vidas: The Spanish Inquisition in Spain and Its Colonies*

Anna Roy '18: Colonization, Decolonization, and Conditional Cash Transfer in Bolivia

*Moderator: Baltasar Fra-Molinero, Latin American Studies and Spanish*

**Concurrent Session II**

**3:15 – 4:30 PM**

**Perry Atrium**

**Poster Session II:** Biochemistry, biology, chemistry, economics, mathematics, neuroscience, and psychology

**3:15 – 4:30 PM**

**Pettengill G21**

**Navigating Identity and Culture at Home and Away**

How do French-speaking students navigate French learning in high school, and how do students abroad navigate sexual exploration? Two videos and a research talk address these cultural boundaries

Julia Nemy '18 and Victoria Dobbin '18: An Image of Local *Francophonie*: Djiboutian Experiences in Lewiston and Cultural Transmissions at Lewiston High School

**3:15 – 4:30 PM**  
**Pettengill G21**

Margaret Trombly '18: Study-Abroad Students as Sex Tourists

*Moderator: Alexandre Dauge-Roth, French and Francophone Studies*

**Pettengill G50**

**Social Roles and Expectations in Japanese Literature, Film, and Anime**

How are Japanese culture and social norms reified and challenged in fiction, film, and anime?

Garrett Anderson '18: Revolutionizing "Girl": *Revolutionary Girl Utena's* Portrayal of Adolescent Change against Normative Expectations

Anh Chu '18: Mother Blaming? Representation of Mothers in *Kokuhaku* (2010)

Kai Lindsey '18: Is This a Dream, or Am I a Cat?

*Moderator: Brian Ruppert, Asian Studies and Japanese*

**Pettengill G52**

**Evaluating Gleaning as a Strategy for Addressing Food Waste and Food Insecurity in Androscoggin County** ♻️

Students in Environmental Studies 308, Urban and Regional Food Systems, and Domi Frideger '21, examine how to reclaim wasted food in ways that advance environmental sustainability, food security, and community well-being.

*Moderator: Francis Eanes, Environmental Studies*

**Pettengill G65**

**Contemporary Social Issues: Sociological Perspectives**

Senior sociology majors offer short talks on a wide range of thesis topics, from South Africa to White Street

Dylan Carson '18: Highway to Nowhere: The Rise of Non-Places and Supermodernity

Raye Chappell '19: Stay Woke: Exploring Racial and Ethnic Outgroup Usage of African American Vernacular English

Anna Franceschetti '18: Drug Use on the Coast: Examining the Opioid Epidemic in Maine Lobster Fishing Communities

Samantha Grant '18: Treat and Desist: Assessing the Feasibility of a Police-Assisted Addiction Recovery Initiative in Lewiston, ME

Jane Hodell '18: The Stigma of AIDS in South Africa: The Effect of Individual Health Seeking

Brigid Quinn '18: Town and Gown: A Look into the Relationship between Bates College and the Surrounding Neighborhood

Hannah Singer '18: The Happiness Paradox: Social Media's Impact on Emotional Expression and Feeling Rules

Laura Wolfley '18: Navigating the "In-between": Sociological Research on Negotiating Multiple Racial and Ethnic Identities among Biracial and/or Bicultural Students at Bates College

*Moderator: Emily Kane, Sociology*

**3:15 – 4:30 PM**  
**Pettengill 116**

**1381 to 2018: Explorations in Art and Literature**

Explorations in literary analysis, art history, and curatorial practice from Chaucer to the Iraq War

Roderick Pratt '18: Order, Surplus, and Silence: Latent Narratives of 1381 in the *Canterbury Tales*

Sophie Mortman '18: Dystopia in Toni Morrison

Matthew Johnson '18: Egon Schiele, Sanctifier of the Damned: Viennese Expressionism and the Culture of Prostitution

Sophie Jensen '19: Independent Study on the Curatorial Process

*Moderator: Sue Houchins, African American Studies*

**Pettengill 162**

**Performance, Choreography, and Collaboration: The Dance Research Process**

Dance majors discuss their thesis work, from theory to performance

Sofia Elbadawi '18, Riley Hopkins '18, and Keila Ching '19

*Moderator: Rachel Boggia, Dance*

**Pettengill 257**

**Climate Change, Sustainable Practices, and the Enduring Value of the Environment**

Environmental studies at Bates offers students interdisciplinary explorations of science, policy, humanities, and the experience of being attuned to the world and our impact on it

Caitlin Keady '18 and Sarah Sachs '18: Establishing a Localized Offset Program for Bates Travel Emissions ♻️

Erin Hazlett-Norman '19: Cosmivision in Resistance: Cultural Values, Food Sovereignty, and One Andean Indigenous Community's Struggle for Autonomy and Collective Resilience in the Face of Neocolonialism and Climate Change

Kawai Marin '18: Rooted in Movement: A Search for the Sacred among the Trees

*Moderator: Holly Ewing, Environmental Studies*

**Concurrent Session III**  
**4:45 – 6:00 PM**

**Perry Atrium**

**Poster Session III:** Art and visual culture, biochemistry, biology, chemistry, economics, education, environmental studies, geology, history, mathematics, neuroscience, physics and astronomy, politics, and psychology

**Pettengill G10**

**Choreography, Composition, and Code**

Have sensors, will make art: students in Dance 351, Advanced Composition Seminar; Music 237, Computers, Music, and the Arts; and Digital and Computational Studies 102, Design of Computational Systems, collaborated as choreographers, composers, and computationalists to develop performances that integrate dance, music, and computing

Maddie Hallowell '20, Colby Marsh '21, Kenza Nadifi '21, Tommy Sheils '21, Charlie Stewart '21, Libby Wellington '20, and Hanning Grace Xu '21

*Moderator: Matthew Jadud, Digital and Computational Studies*

**4:45 – 6:00 PM**  
**Pettengill G21**

**Brain Matters: Research in Neuroscience, Philosophy, and Psychology**

Seniors explore the brain and the mind through several disciplinary lenses

Katie Hartnett '18: To What Extent Does Prior Experience Influence Visual Perception?

Katrina Muñoz '18: ECT and DBS: Depression Treatments and Their Perceived Threat to Personal Identity

Olga Revzina '18: Round and Round Like a Squirrel on a Wheel: Exploring the Role of Negative Affect and Rumination in Pain Responses and Mood Changes

Sadie Homeier '18: STIs on the Rise

Hannah Prince '18: The Intricacies of Reflective Practice and Its Impact on a Cohort of Homeless Youth within an Education Program

*Moderator: Kathryn Low, Psychology and Office of the Dean of the Faculty*

**Pettengill G50**

**Religion, Politics, and Identity**

How does religion inform decisions, from the deeply personal to the global?

Joshua Moise-Silverman '18: Examining Jewish Ethical Responses to Molecular Three-parent Babies

Ezra Oliff-Lieberman '18 and Eliza Jimenez '18: (Dis)Remembering and Political Socialization: Transnational Perspectives on the Nakba

*Moderator: Cynthia Baker, Religious Studies*

**Pettengill G52**

**Research and the Public Good: Multi-disciplinary Explorations**

The 2018 Community-Engaged Research Fellows present their senior research conducted in collaboration with off-campus community partners.

Zofia Duarte '18: Examining Maine's Local Food Movement: Race and the Farmers Market

Jessica Duserick '18: Woodland Gardening Practices and the Bates Campus

Danielle Fournier '18: The Impact of Mentorship on At-Risk Lewiston Girls

Dylan Franks '18: Community-Based Filmmaking

Emily Halford '18: Evaluating Encounter Data from the Trinity Jubilee Center Free Clinic

Sophie Moss-Slavin '18: Awareness and Experience with Adverse Childhood Experiences in the Lewiston/Auburn Community

Allegra Sacco '18: Measurement for Quality of Life of Adults with Cerebral Palsy

Keenan Shields '18: Evaluating the Success of the Nutrition Center's Youth-Powered Cooking After-School Program

Joe Tulip '18: Oral Health Assessment of Hillview Housing Development

*Moderators: Darby Ray and Sam Boss, Harvard Center for Community Partnerships*

**4:45 – 6:00 PM**  
**Pettengill G65**

**Where is Science 2018? A Student-Faculty Panel Discussion**

In this turbulent political and cultural moment, what is the role of science? Students and faculty discuss the state and fate of science in the current zeitgeist

Sunjay Pai '18; Donald Dearborn, Biology; Lynne Lewis, Economics and Environmental Studies; Michael Retelle, Geology; and Larissa Williams, Biology

*Moderator: Ross Ackerman '19*

**Pettengill 116**

**Research in Chemistry and Physics**

Seniors in organic chemistry, physics, and astrophysics present their thesis research

Bennett Rollins '18: Fluorescence Lifetime Images in STED Microscopy

Michael Bancroft '18: Experiments with the Equatorial Beta Plane

Ke Zhao '18: Synthesis of Mannose Building Blocks for Preparation of *O*-Mannosylated Glycans

Catherine Merton '18: Synthesis of Building Blocks for *O*-Mannosylated Glycans

*Moderator: Travis Gould, Physics and Astronomy*

**Pettengill 162**

**Interdisciplinary Approaches to Health Care**

Health care is a complex, impactful system that benefits from the analytical perspectives of many fields in social and natural sciences

Jade Donaldson '18: Aging Pains: Perspectives on the Relationship between Aging and Pain in Older Adults in the State of Maine

Madelyn Heart '18: Projected Risks of Climate Change on Disease Vectors and Human Health in New England

Mats Terwiesch '18: Artificial Intelligence and Healthcare: Forecasting Patient Length of Stay at Central Maine Medical Center

*Moderator: Karen Palin, Biology*

**Pettengill 257**

**Theater in Process: On Stage and Back Stage in Three Productions**

Actors, directors, dramaturgs, and stage managers break the fourth wall to discuss the creation of three Bates theatrical productions

Chaesong Kim '18: Research on Personal Narrative, Intimacy, and Technology in Theater through Making and Performing *엄마 (Dear Mom)*, an Interdisciplinary Multimedia Solo Performance

Nathaniel Stephenson '18: Reviving Gogol: *Diary of a Madman* in the Modern Scope

Rebecca Berger '19: Stage Managing *Diary of a Madman*

Ali Greene '20: Assistant Directing and Dramaturgy for *Angels in America*

Elizabeth French '18: Portraying Harper Pitt in *Angels in America*: A Process

*Moderator: Katalin Vecsey, Theater*



**Evening Session**

**7:30 PM**  
**Gannett Theater**

**엄마, (*Dear Mom*,) An open letter to mom in the form of multimedia solo performance**  
Chaesong Kim '18, thesis in directing

Other performances are on Saturday, 24 March, at 5 PM; Sunday, 25 March, at 2 PM; and Monday, 26 March, at 7:30 PM.

## 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 #
Paige Ahlholm '18	Effect of Collision Speed on Rate of Wing Wear in <i>Bombus impatiens</i> Bumblebees	12
Emily Bacon '18	mRNA Decay in <i>Borrelia burgdorferi</i>	21
Hannah Behringer '18	Assessing the Efficacy of a Chronic Disease Self-Management Program (CDSMP)	10
Brooke Benedict '18	Comparative Analysis of Chiral Solvating Agents for NMR Enantiomeric Differentiation of Amines	22
Gabe Benson '20	Potential Information on Reward Offered by <i>Lyonia ligustrina</i> Flowers	6
Katherine Bower '18	Behavioral Strategies for Mechanical Removal of Bacteria from the wings of <i>Bombus impatiens</i> Bumblebees	11
Anabel Carter '18	Mapping the Distribution of Resilin in the Wings of Bees and Wasps	8
Kwamae Delva '18	Analysis of High Velocity Outflows in 14 Compact Starburst Galaxies with Absorption-Line Spectroscopy at High Spectral Resolution	38
Allison Dewey '18	Perceptions of Helping Behaviors at Bates College	30
Emily Disler '18	The Imaging RNA Localization in <i>E.coli</i> and <i>Borrelia burgdorferi</i> Cells	17
Christopher Dsida '18	Glomerular Analysis in the Human Olfactory Bulb	26
Michael Florentino '18	A Mortal God: How Augustus Motivated, Maneuvered, and Molded a Disunited Republic into an Empire	23
Nate Frederick '19	RNA Aptamer Synthesis Targeting Tissue Plasminogen Activator	20
Jacob Freedman '18	Avian Communication in Adverse Weather Conditions: Migration Strategies of North American Warblers	3
Matt Glasgow '19	Reliability of Impedance in Diagnosing Gastroesophageal Reflux Disease	37
Matthew Goldberg '18	Numerical Solutions to Partial Differential Equations	25
Matthew Golden '20	A's B4 Bates/LMS	35
David Katzman '18	An Exploration of Bioinformatic Tools to Locate Transcription Start Sites in <i>Borrelia burgdorferi</i>	18
Gift Kiti '18	A Classroom Snapshot: Characterization of Introductory STEM Courses at Bates	14
Christopher Lietz '18	Comparative Analysis of Chiral Solvating Agents for NMR Enantiomeric Differentiation of Amines	22
Zachary Magin '18	The Relationship Between Purpose in Life and Salivary Cortisol Reactivity to a Social Stressor	31
Avery Margerum '18	Why Bates Needs a Course on Anarchy	34
Rose May '18	Characterization of the MHC Class II $\alpha$ in the Leach's Storm-Petrel	5

<b>1:45 - 3:00 PM</b>	<b>Poster Session I</b>	<b>Wall #</b>
Kinsey Moser '18	Examining the Influence of Atmospheric and Weather Conditions on Nocturnal Bird Migration of Thrushes in Maine Using Acoustic Monitoring	4
Reed Mszar '18	Examining the Association between Familial Hypercholesterolemia (FH) and Diabetes Mellitus among Local FH Patients Enrolled in the CASCADE FH Registry	9
Sunjay Pai '18	The Impact of Bumblebee Wing Flexibility on Body Torque in Response to Varied Collisions	13
Halley Posner '18	Understanding Nuclear Politics	27
Laura Rand '18	Major Histocompatibility Complex (MHC) Class IIA in Storm-petrels	2
Kyle Schlueter '18	How Fidget Spinners Affect Attention: An Examination of Alerting, Orienting, and Executive Control	29
Hyewon Shin '18	Women in Business: The Experience of Asian American Women in the Tech Industry	36
Courtney Sinclair '18	Gender Representations in Diverse Picture Books	28
Daniel Sparks '18	The Effects of Restorative Justice on Adolescent Development in the State of Maine	32
Xiaomeng Wang '19	Imaging of RNA Localization in <i>B. burgdorferi</i>	16
Max Watson '18	Effects of Flower Density and Mixing of Rewarding and Unrewarding Flowers on Bumblebee Visitation Rates and Flower Constancy	7
Amelia Wilhelm '18	RNA Degradation in <i>Borrelia burgdorferi</i>	19
Frank Williams '18	The Feeling of Power and How It Impacts Shooter Bias	33
Brianna Wilson '18	Genetics is a Significant Factor in the Etiology of Postpartum Depression	1
Avery Wolfe '18	Striving for Just Sustainability in Transit Systems: A Case Study of Complete Streets Policies in Lewiston, ME ♻️	24
Kasey Wood '18	Elucidation of RNA Degradation Rates in the Causative Agent of Lyme Disease, <i>Borrelia burgdorferi</i>	15
<b>3:15 - 4:30 PM</b>	<b>Poster Session II</b>	<b>Wall #</b>
Joseph Alp '18	Designing TET Enzyme Inhibitors to Enhance Learning and Memory	17
Brielle Antonelli '18	Role of AMPA Glutamate Receptors in the Hypoxic Ventilatory Response (HVR) of Hyperoxia-reared Neonatal Rats	1
Ethan Benevides '18	Effects of Shipping Stress on Carotid Body Responses in Newborn Rats	4
Rachel Blaustein '18	Investigation of Zebrafish <i>alas2</i> Gene and Its Role in Hypochromia Seen in <i>Nfe2</i> Knockout Embryos	8
Ethan Blitstein '18	The Mathematics behind Digital Signatures	22
Jason Boisvert '18	Role of <i>Nfe2</i> and Related Factors in Mitigating Phthalate Toxicity	9

<b>3:15 - 4:30 PM</b>	<b>Poster Session II</b>	<b>Wall #</b>
Andrea Boitnott '18	TET1 Mediated Hypermethylation of DNA Enhances Learning and Memory in a Mouse Model of Pitt-Hopkins Syndrome	16
Gabriel Burton '18	Cryptanalysis and Information Theory	24
Alanis Carmona '18	Obesity Resistance via the Deletion of Laminin alpha-4 through Upregulation of UCP-1	11
Sally Ceesay '18	Hypoxic Ventilatory Response and Acclimatization	5
Maria-Anna Chrysovergi '18	Population Genetics of the Bloodworm, <i>Glycera dibranchiata</i> , in the Gulf of Mexico	10
Gabriella Chua '18	Designing TET Enzyme Inhibitors to Enhance Learning and Memory	18
Raegine Clouden Mallett '18	Translation Efficacy of flaB from <i>Borrelia burgdorferi</i> : Effects of Change in Secondary Structure of mRNA Leader Region	31
Peter Cottingham '18	Role of the GABA <sub>A</sub> and GABA <sub>B</sub> Receptors in the Hypoxic Ventilatory Response of Neonatal Rats	3
Hanna De Bruyn '18	Does Scene Category Information Persist after Backwards Masking?	37
John Dello Russo '18	Establishing the Thermoneutral Zone of Neonatal Sprague-Dawley Rats	2
Caroline Gettens '18	Targeting TET2 to Enhance Cognition	20
Samuel Hersh '18	Investigation of Kinetics of Phosphoinositide Metabolism in tsA201- and HT22-Cells	14
Clarke Jones '18	Elliptic Curve Cryptography	25
Anna Kandel '18	Applications of the Underlying Chemistry in PbTiO <sub>3</sub> for the Design of Lead-free Perovskites	27
Caitlin Keady '18	Lattice-based cryptography and the GGH cryptosystem	21
Kiana Keller '18	Regulation of Calcium Release by Inositol 1,4,5-Trisphosphate Receptor-binding Protein Released with Inositol 1,4,5-Trisphosphate (IRBIT) through Interaction with Inositol 1,4,5-Trisphosphate Receptors (IP3R)	12
Samuel Lagerstrom '18	Witness Behavior: An Evaluation of Cues	35
India Lissak '18	Neuroepigenetics: Targeting TET3 Inhibition as a Mechanism for Improving Memory in Patients with Alzheimer's Disease	19
Oriana Lo Cicero '20	Doping Studies of Brownmillerite Thermoelectric Materials	28
Melanie Mait '18	The Role of Nfe2 in the Development of the Inner Ear in Zebrafish	6
Dylan Malone '18	Elliptic Curve Cryptography	25
Gabriel McGinn '18	Elliptic Curve Cryptography	25
Rakiya Mohamed '18	A Comparative Analysis on Lead Detecting Instruments and Commercial Home Kits	32
Gwen Muscato '18	Use of Western Blotting and Chromatin Immunoprecipitation to Investigate Nfe2 Binding in Zebrafish ( <i>Danio rerio</i> )	7
Anirudh Nambiar '18	The NTRU cryptosystem	23

<b>3:15 - 4:30 PM</b>	<b>Poster Session II</b>	<b>Wall #</b>
Sadie Mae Palmatier '18	The Community Rating System: Incentives for Building Climate Resilience ♻️	33
Ivette Partida '18	Isolation of in vitro Ubiquitylated Encephalomyocarditis Virus 3C Protease Conjugates	30
Imad Rajwani '18	Cryptanalysis and Information Theory	24
Samuel Rickerich '18	Lattice based cryptography and the GGH cryptosystem	21
Meg Robinson '20	Bismuth-Based Transparent Conducting Metal Oxides	29
Julia Rosen '18	The Mathematics behind Digital Signatures	22
Rachael Rosow '18	The Influence of the Framing Effects of Behavioral Intention to Download a Public Health App	36
Bridget Ruff '18	A History of Equation Solving from the Babylonians to Galois	26
Caleb Stotz '18	Natural Gas Well Implementation on the Susquehanna River: A Hedonic Property Value Analysis	34
Haoyu Sun '19	Drug Discovery Research: TET1 Enzyme Inhibitor	15
Kelly Wassarman '18	Designing TET Enzyme Inhibitors to Enhance Learning and Memory	18
Rayne Whitten '18	Maxi-K Channels: Dependent on Phosphoinositides	13
Benjamin Wilson '18	The NTRU cryptosystem	23
Emma Zulch '18	Isolation of in vitro Ubiquitylated Encephalomyocarditis Virus 3C Protease Conjugates	30
<b>4:45 - 6:00 PM</b>	<b>Poster Session III</b>	<b>Wall #</b>
Caroline Andy '18	Fluorescent Spatial Probing of <i>B. burgdorferi</i> Transcritome Organization	4
Mansib Tahsin Arko '21	Rohingya Exodus: The Impact on Bangladesh	26
Lindsey Beauregard '18	"Zonal" Molecular Organization of Olfactory Bulb Mitral Cell Layer Based on Gene Expression	17
Allison Berman '18	Using Shortridge Effectively to Benefit the Phippsburg Community: A Look at Experiential Outdoor Educational Models and a Proposal for a Summer Camp	9
Chris Bradna '20	Automatic Selection of Galaxies with Signatures of Extraplanar Gas in the MaNGA Survey	25
Hazel Cashman '18	The Postglacial Riverton Stage of Glacial Lake Israel: Important for the Occupants of the Israel River Complex?	11
John Doyle '18	Eelgrass Carbon Storage in the Gulf of Maine	12
Woods Fairchild '18	Examining Authentic Movement Conscious Dance as a Method for Increasing Mental Well-being among College Students	33
Becca Ferguson '18	Understanding Youth Contributions to Indigenous Sovereignty and Climate Justice through an Analysis of the #noDAPL Movement	15
Emma Goff '18	Judicial Decision Making on the Supreme Court of the United States: A Case Study of Roe v. Wade	28

<b>4:45 - 6:00 PM</b>	<b>Poster Session III</b>	<b>Wall #</b>
Dacota Griffin '18	The Relationship between Substrate Characteristics and Japanese Knotweed Invasion along the Saco River, ME and NH	10
Fahim Khan '20	Automatic Selection of Galaxies with Signatures of Extraplanar Gas in the MaNGA Survey	25
Charles Lipscomb '18	Energetic Gaseous Outflows from Compact Starburst Galaxies	24
Henry Loeffler '18	Heterogeneity of Biophysical Properties within the Mitral Cell Layer of the Mouse Olfactory Bulb	19
Zhe Luo '18	A Strategy to Cope with Discrimination? A Study of East Asians Taking on English Names	34
Maria Maza San Vicente '18	Creative Cognition through Shared Mental Models	23
Kiyona Mizuno '18	Mold-Making and Slip-Casting Ceramics	29
Senyo Ohene '20	Energetic Gaseous Outflows from Compact Starburst Galaxies	24
Sarah Panzer '18	Self-Compassion as Potential Moderator between Negative Social Comparison and Negative Self-Perception among Social Media Users	35
Summer Peterson '18	Implicit Effects of Diminutive Gendered Language Usage	32
Dylan Rasch '18	Synthesis of D-Apiose for Manufacturing and Researching Luteoside A, B, and C	3
Benjamin Roop '18	Computational Analysis of Genomic Patterning in the Brain	20
Stephen Rowe '18	Targeting Terrorist Leaders	27
Aria Sanders '18	A Literature-based Comparative Analysis of Triacylglycerides Present in Breast Milk and Infant Formula and their Contribution to Infant Metabolism	6
Gwen Savino '18	Depth of Processing in Object Substitution Masking	36
Emma Schiller '18	An Investigation into the Effects of Electronic Healthcare Records in Improving Patient Outcomes in Hospitals in the United States	8
Allen Schroeder '21	Positional Cloning of the Genetic Mutation and Histological Analysis of Femoral Nerve Axonal Degeneration in the NM4803 Mouse Mutant	2
Julie Self '18	The Role of Diagnostic Objects in the Temporal Dynamics of Visual Scene Categorization	21
Hannah Slattery '18	Impervious Surface Cover: Impact on Sedimentation Rate and Dissolved Oxygen in the Hart Brook Watershed, Lewiston, ME ♻️	13
Ariel Abonizio Soares '20	Being Here: Photographing the Body	30
Ariel Abonizio Soares '20	Being Here: Photographing the Body	31
Nicole Taikeff '18	The Unifying Mechanisms of Obesity and Type II Diabetes in Relation to Insulin Resistance	5
Sophia Thayer '18	Tourism as an Industry of Dispossession: Malaga Island and Wabanaki Presence along Maine's Coast	14
Kenyata Venson '18	The Effects of Cannabis on the Endogenous System in Glaucoma	1
Gillian Wilcox '18	Glomerular Structure and Extracellular Matrix Composition in the Human Olfactory Bulb	18

**4:45 - 6:00 PM**

**Poster Session III**

**Wall #**

Chialin Yu '18

Studying Smallpox Evolutions under the SIR Model

16

**Coherence, Hermeneutics, and World-Entering in So-called New Media  
DN/MU 337 Class Participants**

Sekerhi Anderson '18  
Mike Hogue '20

Matt Lopez De Leon '20  
Kenny Shaw '18

Muskan Verma '21

**Community-Based Research in Educational Studies  
EDUC 450 Class Participants**

Allison Berman '18  
John Collantes '18  
Meghan D'Arcy '18  
Hanna De Bruyn '18  
Brooke Drabkin '18

Mollie Hoopes '18  
Eliza Jimenez '18  
Emily Manter '18  
Talia Martino '18


Maria Maza San Vicente '18  
Mickoy Nichol '18  
Callie Reynolds '18  
Hannah Singer '18

**Radical Collaboration in the SciFi Literature Classroom: Wordbuilding Utopia in 3D Virtual Reality  
ENGL 152 Class Participants**

Andrew Berg '20  
Ryan Carlson '21  
Helen Carr '21  
Will Cole '21  
Sofia Esquibies '21

Isa Garcia-Moreno '20  
Esme Goldfinger '21  
William Holland '20  
Caroline Kerrigan '20  
Jag Lally '20

Emily Lufburrow '19  
Alyssa Rohan '20  
Maya Seshan '20  
Eliza Statile '19  
William Sylvia '20

**Evaluating Gleaning as a Strategy for Addressing Food Waste and Food Insecurity in  
Androscoggin County   
ENVR 308 Class Participants**

Adair Andre '18  
Alexandra Armstrong '18  
Anika Becker '19  
Allison Berman '18  
Joakim Cohen '18

Ayden Eickhoff '19  
Madelyn Heart '18  
Calvin Johnstone '19  
Emerson Krull '19

Ashley Kulesza '18  
Dylan Metsch-Ampel '19  
Noah Morasch '18  
Julia Nemy '18  
Sarah Sachs '18

**Posters: Topics in Public Key Cryptography  
MATH 495H Class Participants**

Ethan Blitstein '18  
Gabriel Burton '18  
Clarke Jones '18  
Caitlin Keady '18

Dylan Malone '18  
Gabriel McGinn '18  
Anirudh Nambiar '18  
Imad Rajwani '18

Samuel Rickerich '18  
Julia Rosen '18  
Benjamin Wilson '18

**Your BFF: Student Organizers Preview and Discuss the Inaugural Bates Film Festival  
RHET 391J Class Participants**

Luc Alper-Leroux '20  
Vicky Arjoon '19  
Gil Connolly '18

Jackson FrenchRobitaille '18  
Erin Fuller '18  
Tessa Liebes '19

Brian Pansius '18  
Sierra Ryder '18  
Marisa Sittheeamorn '18



Gillian Coyne '19  
Grant DeWald '18

Sarah McCarthy '18  
Nathaniel Merchant '18

Lena Szeto '18

### **Eighteenth Annual Barlow Off-Campus Study Photography Exhibition**

Hannah Behringer '18  
Allison Berman '18  
Adam Blau '18  
Molly Brooks '19  
Margaret Carroll '18  
Chun-Yen Chao '18  
Andrew Chen '19  
Frederick Cheng '18  
Anh Chu '18  
Anna Clements '18  
Victoria Dobbin '18  
Leah Dy '18  
Becca Ferguson '18  
Claudia Glickman '19  
Erin Hazlett-Norman '19  
Justin Hoden '18

Katie Hughes '19  
Hannah Johnson '18  
Julia Juenemann '18  
Grace Jurkovich '18  
Julia Kavanagh '18  
Joshua Leiner '18  
Emily Lufburrow '19  
Raegine Clouden Mallett '18  
Avery Margerum '18  
Hiram Martin '19  
Kylie Martin '19  
Madeline McGonagle '18  
Sophia Merelas '18  
Ned Moreland '19  
Sophie Mortman '18  
Katrina Muñoz '18

Nicholas Osborn '19  
Eileen O'Shea '18  
Chloe Oslin '18  
Maria Anna Paone '18  
Martha Rabura '20  
Laura Rand '18  
Bria Riggs '18  
Sarah Sachs '18  
Jack Sapoch '18  
Anna Setzer '19  
Jack Shea '18  
Jon Sheehan '19  
Hannah Smith '18  
Olivia Stockly '18  
Julian Stolper '19  
Jin Wei '20  
Ryan Whittimore '19

### **Bates Brass Ensemble**

Chris Bradna '20, drumset/percussion  
Samuel Britner '21, trumpet  
Alan Carr, director, bass trombone  
Jamie Fagan '20, trumpet  
Gabe Nelson '20, euphonium

Chloe Oslin '18, trombone  
Grace Purinton '20, trumpet  
Ian Robertson '21, trumpet  
Gavin Schuerch '18, horn  
John Turner '21, trombone

### **Bates College Choir**

#### *Sopranos*

Annie Canning '20  
Sarah Douglas '19  
Elizabeth Eareckson '21  
Amelia Keleher '21  
Jhansi Kolli '21  
Xinyuan Zhang '19

#### *Altos*

Zoe Chamberlain '20  
Kathryn Cleary '19  
Eva Goldstein '18  
Colleen Hoyt '20  
Eliza Kissick '20  
Catherine Merton '18  
Muskan Verna '21  
Keqing Zhu '20

#### *Tenors*

Chris Bradna '20  
Kwamae Delva '18  
Ella Ross '19  
Luis David Molina Rueda '20

#### *Basses*

Henry Buckley '19  
James Erwin '18  
Sam Findlen-Golden '20  
Sam Hersh '18  
Enton Lam '21  
Andrew Mikula '19  
Senyo Ohene '20  
Patrick Reilly '21

## Also on Summit Weekend

### **Friday, 23 March**

7:00 PM, Olin Concert Hall

Africana Fashion Show

7:00 PM, Olin 104

Bates Film Festival Screening: *Crime + Punishment*

9:00 PM, Olin 104

Bates Film Festival Panel: Community and Security

10:00 PM, Olin 104

Bates Film Festival Screening: *Frank Serpico*

12:00 Midnight, Olin 104

Bates Film Festival Screenings: *I Still Know What You Did Last Summer* and *Small Platelet Dining*

### **Saturday, 24 March**

9:00 AM, Olin 104

Bates Film Festival Screening: *The Father and the Bear*

10:30 AM, Olin 104

Bates Film Festival Panel: Memory and Meaning

11:30 AM, Pettengill G52

Bates Film Festival Panel: Women in Media

2:00 PM, Olin 104

Bates Film Festival Screening: *The Light of the Moon*

4:15 PM, Olin 104

Bates Film Festival Screening: *Sonita*

### **Sunday, 25 March**

12:30 PM, Olin 104

Bates Film Festival Screening: *By the Time It Gets Dark*

2:45 PM, Pettengill G52

Bates Film Festival Live Short Film Commentary

3:00 PM, Pettengill G52

Bates Film Festival Master Class: Inside the Writer's Room, with Trey Callaway P'20

