



# 2016 ACADEMIC SYMPOSIUM

MONDAY – SATURDAY, APRIL 25 – 30

## POSTER SESSION

Saturday, April 30

Dion Student Center 11:00 AM-1:00 PM



SAINT MICHAEL'S  
COLLEGE FOUNDED  
1904

WE APPRECIATE THE  
SUPPORT OF VERMONT  
BIOSCIENCES ALLIANCE

## MONDAY: APRIL 25

### FINE ARTS: MUSIC RECITALS

7:00 PM – McCarthy Art Center

The String Orchestra, directed by Susan Summerfield & Fran Pepperman-Taylor  
Voice students of Allison Devery  
Piano students of Arielle Hanudel  
The Chorale, directed by Nathaniel G. Lew  
... and more SMC student musicians!

## TUESDAY: APRIL 26

### FINE ARTS: MUSIC RECITALS

7:00 PM – McCarthy Art Center

Emily Eckel, '17 bassoon  
Voice students of Adam Hall  
Piano students of Arielle Hanudel  
... and more SMC student musicians!

## WEDNESDAY: APRIL 27

### MEDIA STUDIES, JOURNALISM & DIGITAL ARTS

Wednesday – 4:00 – 6:00 PM – Third Floor of Dion Family Student Center, Roy Event Room and Archway Lobby  
Senior Projects Exhibit (Simultaneous Exhibits)

Monica Andreani, '16: *Unknown Epidemic: Using the Media to Fight Rare Diseases* (Web Documentary)  
Olivia Caravella, '16; Kate Gleason, '16: *Coming into Focus: Documentaries and the Progression of Film Storytelling in the Digital Age* (Documentary Film)  
Matt Cibotti, '16; Reilly Dillion, '16: *Millennials on the Move: Traveling in the 21st Century* (Documentary Film)  
Bridget Conway, '16: *Worthwhile: Sustaining Our Planet and the Nonprofits Who Fight for It* (Book)  
Stephanie Faughnan, '16: *The Fandom Voice: Fan Perspectives on Their Role in the Media* (Book)  
Sean Faust, '16; Connor Vandagriff, '16: *Guarding the Flame: Classic Automobiles and Their Custodians* (Documentary Film)  
Lauren Friedgen, '16: *Shifting Shelters: Materials, Structures, and Mindsets of the Alternative Home* (Book)  
Christina Friml, '16: *Dear Stranger: Anonymous Confessions in a Modern World* (Book)  
Emily Garrand, '16: *Where's the Buzz: Bees, Beekeepers, and Their Roles* (Book)  
Scott Gaudion, '16; Tim Gaudion, '16: *Legally Dealing Drugs: The Drug Approval and Distribution Process* (Web Documentary)  
Meaghan Glendon, '16: *Suctioned: Examining How Digital Devices are Affecting Parent-Teen Relationships* (Book)  
Sarah Haselton, '16: *The Stitch: An Analysis of Quilting History, Social Practices, and Changing Trends* (Book)  
Joseph Humes, '16: *Lighting Up on Trash: Landfill Solar in the United States* (Book)  
Morgan Jenkins, '16: *The Soul of Music: How Music Has the Ability to Bring Us to Life* (Web Documentary)  
Candice Kalil, '16; Amanda O'Neill, '16: *Behind the Distance: Work, Family, Relationships and Long Distance Communication in a Digital Age* (Documentary Film)  
Shannon Krehely, '16: *Story Time Across the Pond: An Analysis of American Adaptations of British TV Programs* (Book)  
Paige Leahy, '16: *Let There Be Darkness: Exploring Light as One of the Largest Growing Pollutants* (Book)  
Haley Lebel-Stephen, '16: *Can You Hear Me? An Exploration of Personal Audio Environments* (Book)  
Meaghan Lynch, '16; Julie Shea, '16, Jessica St. George, '16: *The Talk: Sexuality Education in a Promiscuously Prude America* (Documentary Film)  
Jenna Maksian, '16: *Press Snooze: An Investigation of Sleeping, Napping, and Dreaming* (Web Documentary)  
Katherine McGuinness, '16; Michael Comitini, '16: *Cutting Consumption: An Exploration of Excess within the Fashion Industry and the Rise of Eco-friendly Clothing Companies* (Book)



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**Kathryn Miyahira, '16; Paul Detzer, '16:** *Not Forgotten: Death and The Evolution of Memorialization in the 21st Century* (Documentary Film)

**Erin Murphy, '16:** *Intronet: An Exploration of Introversion in the Digital Age* (Book)

**Marianna Nowacki, '16; Kaylee Sullivan, '16:** *Your Reviews Reviewed: Exploring the Change in Business-Customer Relationships Due to Review-based Sites* (Web Documentary)

**Maya Richmond, '16:** *Pumping Irony: An Updated Exploration of Female Bodybuilding* (Web Documentary)

**Dory Robins, '16:** *Who Am I Now? Chinese Adoptees and Cultural Identity* (Web Documentary)

**Ryder Schumacher, '16; Ben DiNardo, '16, Kristian Nammack; '16:** *A Newer England: Reimagining the Oldest Region in America* (Documentary Film)

**Susanna Shigo, '16:** *Cabin Fever: A Behind the Scenes Look at American Summer Camps* (Book)

**Anna Ste. Marie, '16:** *Justifying Reparation: Using Restorative Justice to Address Harm, Obligations, and Community* (Book)

**Leah Valletta, '16:** *Spiritual Healing: An Exploration of Alternative Spiritual Communities* (Book)

**Kristina Yannotta, '16:** *This is How We Learn: A Look into How Students with Dyslexia Learn in a Digital Age* (Web Documentary)

**Mark Yetter, '16:** *What's Next? Examining Mental Health Following a Life in Sports* (Book)

## THURSDAY: APRIL 28

### 5TH ANNUAL EXPERIENTIAL LEARNING SHOWCASE

**Opening Reception: 4:30 PM, Thursday, April 28th, McGrath Room, Dion Center.**

**Showcase hours: April 29 – May 4, 9:00 AM –5:00 PM Closed Sunday, May 1.**

A Visual & Narrative Celebration of Student Experience: Designed to spur reflection by participants and visitors alike, the Showcase features a gallery of narratives and student-chosen “artifacts” representing poignant—and often unexpected—learning moments gleaned from their hands-on experiences within or beyond the college campus.



**Muzna Ali, '17:** *Internship, Office of the Chief Medical Examiner*

**Erin Buckley, '16:** *MOVE Core Team leader, Outdoor Volunteer Efforts*

**Andrea Gemme, '16:** *Rock and Ice Climbing Instructor, Wilderness Program*

**Mary Joyce, '16:** *Purple Knights Leadership Academy*

**Emma Kalamarides, '16:** *LEAP Retreat Leader, Campus Ministry*

**Tyler Lucey, '17:** *Summer Research Award Recipient*

**Queren Marte, '17:** *Extended Service, Mobilization of Volunteer Efforts*

**Karianne Shetter, '17:** *Executive Editor, Defender*

**Cameron Thirkell, '17:** *Pharmacy Technician, CVS*

**Meghan VanStry, '17:** *Study Abroad, Tanzania*

**Nate Whitten, '16:** *Staff Sergeant, Vermont Air National Guard*

**Tylik Williams-Prince, '16:** *Vice President, Student Association*

**Mike Wojcik, '16:** *Emergency Medical Technician, SMC Rescue*

**Manuela Yeboah, '17:** *Resident Assistant*

## FRIDAY: APRIL 29

### BIOLOGY

**Friday, 2:00 – 5:30 PM – Jeanmarie Hall 378**

**Biology Department's Research Presentations – Profs. Paul Constantino, Mark Lubkowitz, Declan McCabe, Dagan Loisel**

**2:10 Allison Bergeron, '16:** *Animal Venoms—Development of New Target Therapies for Cancer Treatment*

**2:30 Bryanna Evoy, '16:** *Phase Analysis in a Reduced Model of the Leech Heartbeat System*

**2:50 Charles Poston, '16:** *Spontaneous Mutations in Yeast: Exploring Causes and Implications*

**3:10 Peter Keefe, '16:** *The Development of Autoimmune Diseases Following Maternal Alloimmunization Against Fetal Platelet Antigens*

**3:30-3:40 Break**

**3:40 Michelle O'Donnell, '16:** *Characterizing the Diversity of Tetherin in Vermont Eastern Bobcats (*Lynx rufus*)*

**4:00 Kelsie Miller, '16:** *Impact of Zooplankton Sampling Net Mesh Size on Diet Selectivity Indices of a Zooplanktivorous Fish*

**4:20 Nicole Traugh, '16:** *Analysis of SUT1 Promoter from *Zea mays**

**4:40 Shane Williams, '16:** *High Transcription Conditions Stimulate A-to-C Transversions in APN1 Deficient *Saccharomyces cerevisiae**

**5:00 Anthony Guccione, '16:** *The Presence of Tufts in Teeth and How They Determine Diet*

## BUSINESS ADMINISTRATION & ACCOUNTING

Friday, 3:00 – 5:00 PM – Saint Edmund's Hall 102

Managerial Ethics Team Presentations – Prof. Robert Letovsky

- 3:00 Robert Kelly, '19; Riley Mitiguy '19; Joseph Robertson '19: *The Ethics of Firearms Marketing*
- 3:10 Alex Koch, '18; Matt O'Toole '18: *The Ethics of State Lotteries*
- 3:15 Dante Digioia, '18; Hannah Ferris '17; Olivia Hart '18; Janelle Robinson '19; Yuran Tian '19: *Too Big to Fail?*
- 3:25 Georgina Finneran, '18; Natalie Jackson, '19; Megan LeCours, '19; John Tony Linderson, '18; Haley Spillane, '18: *Portrayal of the Human Body and Its Effects on Advertising*
- 3:30 Grace Campbell, '18; Ashley Jennings, '18: *Hiding the Impacts of Fracking: An Issue of Ethics*
- 3:45 Emily Clinch, '19; Nick Hella, '18; Lucas Kaplan, '18; Colin O'Brien, '19: *Concealed Carry in the Workplace: An Ethical Dilemma?*
- 4:00 Finn Hopkins, '19; Daniel Haynes, '19; Shannon Greene, '19; Mark Kehoe, '19: *Moral Manufacturing: The Ethics Behind Genetically Modified Organisms*
- 4:15 Matthew Arnold, '18; Elizabeth Cosentino, '18; Daniel du Feu, '18; Pun Sanitwannakul '18: *The Ethics of Pharmaceutical Pricing*
- 4:25 Benjamin Guilmette, '19; Charlotte Hurley, '19; Coleman McIntire, '19; Sean Mitchell, '19: *Ethical Issues behind Automobile Industry Recalls*
- 4:30 Joseph Burke, '19; Benjamin Flaherty, '19: *What would you do? Whistleblowers and Business*

## CHEMISTRY

Friday, 1:30 – 5:00 PM – Jeanmarie Hall 373

Senior Seminar Honors Proposals – Profs. Alayne Schroll, Christina Chant

- 1:30 Jessica Jablonski, '16: *Identification of RNA Polymerase Holoenzyme Formation Inhibitors in Bacteria*
- 2:15 Nathan Dean, '16: *Surface Enhanced Fluorescence from Magnesium Nanoparticles*
- 3:00 Ellen Murchie, '16: *Coxsackievirus A20 as an Oncolytic Virotherapy Agent for Ex Vivo Pancreatic Ductal Adenocarcinoma Cells*
- 3:45 Greg Hamilton, '16: *Affordability of Novel Chronic Disease Therapies: An Analysis of Gilead's New Hepatitis C Treatment in Light of Past HIV Drugs*

## COMPUTER SCIENCE

Friday, 3:15 PM– 5:30 PM – Jeanmarie Hall 362

Hot Topics in Computer Architecture Research – Prof. John Trono

- 3:15 Brandon MacPherson, '16: *Memory Persistence*
- 3:35 Chris O'Brien, '17: *Accelerating Asynchronous Programs through Event Sneak Peek*
- 4:00 Riley Faszewski, '17: *EOLE: Paving the Way for an Effective Implementation of Value Prediction*
- 4:20 Kaitlin Greene, '17: *SHRINK: Reducing the ISA Complexity via Instruction Recycling*
- 4:45 David Lake, '16: *Efficient Execution of Memory Access Phases Using Dataflow Specialization*
- 5:05 James Hodge, '16: *LaZy Superscalar*

## EDUCATION

Friday, 1:30 – 3:30 PM – Saint Edmund's Hall 104

Images of Education: Lenses for Teaching and Learning – Profs. Becky Wigglesworth, James Nagle, Jonathan Silverman, Mary Beth Doyle, Valerie Bang-Jensen, Claudine Bedell

- 1:30 Victoria Dinger, '17 *Welcomes and introduction*
- 1:35 Laura Verville, '17: *Exploring Digital Citizenship within the Classroom: Using Blogs to Link Everyday Technology to Beneficial Classroom Use*
- 1:45 Rachel Carey, '18: *Recognizing Diversity and Connections in our Local and Global Communities: A Fourth-Grade Social Studies Unit on Haiti*
- 1:55 Tori Barrows, '18: *Poverty: From Child Labor to Hunger, A Global Perspective*
- 2:05 Megan Priester, '18: *Blastoff: A Journey Through Space*
- 2:15 Kelsey Buchanan, '18: *Picasso: Transforming Vision for the 20th Century*
- 2:25 Dan Brogan, '18: *Teaching with Technology*
- 2:35 Kelsey Buchanan, '18: *Teaching with Technology*
- 2:45 Gabriella Elmoussaoui, '17: *Kathleen Krull: Nonfiction with a Nosy Twist*
- 2:53 Jessica Bachand, '17: *What Do You Do With A Book Like This?*
- 3:00 Amy O'Rourke, '17: *Bringing Nature Alive in the Classroom: An Author Study of Nic Bishop*

- 3:10 Ian Bennett, '18; Shannon Connery, '18; Theodore McLean, '18: *Drawing Cognitive Development in Adolescents*  
3:20 Katelyn Crandall, '18; Kristen Merchant, '18; Caitlin Barry, '18: *Emotional Development: The Stages of Adolescence through a Display of Digital Imagery*

## ENGLISH

Friday, 2:30 – 3:30 PM – Saint Edmund's Hall 211

Fall Senior Seminar Honors Presentations – Prof. Tim Mackin

- 2:30 Lexi Goyette, '16: *"Pushed": a Novella*  
2:40 Shannon Krehely, '16: *The Duality of Scarring in Toni Morrison's Beloved*  
2:50 Riley Stefano, '16: *The Language of Sexuality: Unveiling the Eroticism in Jane Austen's Pride and Prejudice*  
3:00 Mollie Moore, '16: *Reconstructing Gender: A Century of Gender Evolution in Dystopian Literature*

Friday, 3:00 – 4:15 PM – Jeanmarie Hall 364

EN Senior Seminar: "The Sublime" – Prof. Joan Wry

- 3:00 Ava Marcucci, '16: *"Modification[s] of power" in Antony and Cleopatra*  
3:15 Karleen Richardson, '16: *The Nature and Development of Mountaintop Sublimity*  
3:30 Reilly McSharry Dillon, '16: *The Wind Has Risen: Love for Taking Over the World*  
3:45 Sarah Haselton, '16: *The Sublime Nature of Mary Shelley's Frankenstein*  
4:00 Daviah Lawrence, '16: *Gender and Parental Issues in Mary Shelley's Frankenstein*

Friday, 4:30 – 6:00 PM – Jeanmarie Hall 364

Boxing Day (The Structurality of Structure) – Prof. Nat Lewis

- 4:30 Briana Brady, '16: *Melville's Direction in Moby-Dick*  
4:45 Brianna McKinley, '16: *A Broken Mirror: Problems of Language and Representation in To the Lighthouse*  
5:00 Shannon McQueen, '16: *Mavericks and Manipulation: Narrative Influence in Pride and Prejudice*  
5:15 Cory Warren, '16: *The Work of Trauma: Mimesis & Memory in Kieslowski's Blue*

## FINE ARTS

Friday, 4:00 – 4:45 PM – Saint Edmund's Hall 109

History of Music – Prof. Nathaniel Lew

- 4:00 Tyler Lucey, '17: *Benjamin Britten's Music for Children*

History of Art – Terryl Kinder

- 4:20 Adrienne D'Elia, '16: *Visualizing Art and Activism in the Internet Age*

## GLOBAL STUDIES

Friday, 12:15 – 2:15 PM – Saint Edmund's Hall 205

Global Challenges & Engagement – Prof. Katie Kirby

- 12:15 Mohamed Kamel Ishnaiwer, MATESOL '16: *Time for a Change: English Teaching in Palestine*  
12:45 Kaly Spilhaus, '16: *Tourism as a Tool for Development: A Study of Marginalization in Peru, Nepal, and Tanzania*  
1:15 Victoria Hellwig, '16: *Sustainable Gardening: Enhanced Nutrition and Food Sovereignty in Uganda*  
1:45 Mackenzie Breen, '16: *That which makes Them Breathe does not Make Them Feel Alive: Empowering Women after Sexual Violence in the Democratic Republic of the Congo*

## MODERN LANGUAGES

Friday, 3:00 – 6:00 PM – Jeanmarie Hall 168 – Prof. Carolyn Lukens-Olson

- 3:00 Mary Gannon, '16: *Critique de l'Eglise catholique dans "l'Ingénu," "Micromégas," et "Les Lettres persanes"*  
3:30 Mary Gannon, '16; Abigail Goudey, '16; Kathryn Miyahira, '16: *El viaje al lago Edén: Federico García Lorca en Vermont*

## PHILOSOPHY

Friday, 2:00 – 4:15 PM – Saint Edmund's Hall 332

Flying over the Abyss: On the Non-identifiable – Prof. John Izzi

- 2:00 Briana Brady, '16: *The Necessity of Looping in Georges Bataille and Virginia Woolf*  
2:30 Cory Warren, '16: *Unconcealing Aesthetic Origins in Heidegger and Blanchot*  
3:15 Karla Clithero, '16: *On Nothing's Authority*  
3:45 Kevin Imperia, '16: *Levinas and Bataille on Love*

## POLITICAL SCIENCE / INTERNATIONAL RELATIONS

Friday, 1:30 – 3:30 PM – Saint Edmund's Hall 106

Leveraging Resources: the Roles of Power, Money and Violence – Prof. Trish Siplon

- 1:30 Theresa Barsanti, '16: *Pay to Play: The Role of Cost of Attendance in Men's Ice Hockey*
- 1:50 Elizabeth Callahan, '16: *Influence of Water Rights in the Israeli-Palestinian Conflict*
- 2:10 Sam Fogg, '16: *The Financial Networks of ISIS*
- 2:30 Erin Irons, '16: *The Evolution of Anti-Abortion Terrorism: Examining Attacks by Christian Extremists as Acts of Domestic Terrorism in the United States*

## PSYCHOLOGY

Friday, 2:00 PM – 4:30 PM – Saint Edmund's Hall, Farrell Room

Independent Research – Prof. Renee Carrico

- 2:00 Psi Chi Honor Society Induction
- 2:20 Brian Lothrop, '16: *Sleep and Subsequent Stress-Induced Cardiovascular Reactivity within College Students*
- 2:35 Caitlin Smith, '16: *Social Perception: Investigating College Students with Autism Spectrum Disorder (ASD)*

Honors Research

- 2:50 Emily Benton, '16: *Procrastination in Undergraduates and its Effects on Well-Being*
- 3:20 Kristen Isabelle, '16: *The Cross-Cultural Friendships of Academic English Program Students*
- 3:40 Karin Parodi, '16: *Habituation in Zebrafish as a Model for ADHD*
- 4:00 Allison Shea, '16: *Exercise Habits, Personality Type, and Subjective Well-Being*
- 4:20 Presentation of Awards: Honors Research in Psychology, Senior Psychology Student of the Year

## RELIGIOUS STUDIES

Friday, 2:45 – 7:00 PM – Jeanmarie Hall 290 – Prof. Edward Mahoney

- 2:45 Emma Kalamarides, '16: *Educating Catholics: A look into catechetical textbook series through a Vatican II lens*
- 3:15 Maria Rengucci, '16: *The Origins of Kosher: an Analysis of Jewish Food Culture and Tradition*
- 3:45 Sarah Nickerson, '16: *Changing Charism?: Influence of Vatican II on Dominican Sisters*
- 4:15 Christopher Bartolotta, '16: *The Rule of Saint Benedict and its Predecessors: Augustine, John Cassian, and The Rule of the Master*
- 5:00 Victoria Barnum, '16: *Allusions to Islam: Past and Present Orientalism in American Visual Culture*
- 5:30 Sarah Carilo, '16: *A Place for Religion in the Public Elementary Classroom: Teaching about Religion and an Analysis of a Multicultural Approach*
- 6:00 Eva Chavez, '16: *The New Liberation Theology: An Analysis of the Thought of Jung Mo Sung*
- 6:30 Kristen Beaulieu, '16: *Charity and Justice in the Social Teaching of Saint John Paul II*

## SOCIOLOGY AND ANTHROPOLOGY

Friday, 4:00 – 6:00 PM – Jeanmarie Hall 166 – Profs. Vince Bolduc, Adrie Kusserow

- 4:00 Rachel Sanborn, '16: *Individualism and the SMC Student*
- 4:10 Keri Giguere, '16: *Individualism and the SMC Student*
- 4:20 Erin Connor, '16: *Individualism and the SMC Student*
- 4:30 Caitlin Shea, '16: *Individualism and the SMC Student*
- 4:45 Amanda Carpenter, '16: *Cultural Concepts of Pregnancy and Birth in Madagascar*

## STUDY ABROAD - RESEARCH AND PRACTICUM

Friday, 3:00 – 5:00 PM – Jeanmarie Hall 377, Peggy Imai

- 3:00 Briana Brady, '16: *How to be a Woman: Portraits of Moroccan Womanhood*
- 3:20 Margaret (Meggie) Burns, '16: *Mental Health in the Region of Araucania, Chile*
- 3:40 Hailey Dubuque, '17: *Bee Gardens in New South Wales: A Practicum with the Mullumbimby Community Garden*
- 4:00 Andie Gemme, '16: *The Meaning behind Migration: Environmental Changes and Threats Facing Nomadic Herding Communities*
- 4:20 Natalie Ledue, '16: *The Social Capital Available to Women during Child Bearing Years Across Three Cultural Contexts*
- 4:40 Meghan VanStry, '17: *Perceptions of Water in Kizanda Village, Tanzania*

# SATURDAY: APRIL 30

## COMPUTER SCIENCE

Saturday, 9:00 – 11:15 AM – Jeanmarie Hall 362

Many-core, GPU and Concurrency-based Computer Architecture Topics – Prof. John Trono

- 9:00 Mayra Alvarez, '17: *Fine-Grain Task Aggregation and Coordination on GPUs*
- 9:20 Conor Disher, '17: *RADISH: Always-on Sound and Complete Race Detection in Software and Hardware*
- 9:45 Alec Caputo, '17: *A Case for Core-Assisted Bottleneck Acceleration in GPUs: Enabling Flexible Data Compression with Assist Warps*
- 10:05 Colin Ebneht, '17: *Utility-Based Acceleration on Multithreaded Applications on Asymmetric CMPs*
- 10:30 Greg Valentine, '17: *CLEAN: A Race Detector with Cleaner Semantics*
- 10:50 Jeremy Baptista, '16: *Enabling Preemptive Multiprogramming on GPUs*

## ECONOMICS

Saturday: 9:00 AM – 12:30 PM – Jeanmarie Hall 375 – Prof. Herb Kessel

- 9:00 Tanner Pratt, '16: *What Impact do Administration Costs Have on Student Outcomes in Vermont's Public High Schools?*
- 9:30 Sophie Zschirnt, '16: *Factors Behind College Rankings: Why Colleges Move Up, Down, or Out*
- 10:00 Brianna Healy, '16: *Orphan Product Approval: A Comparison between the United States of America and the European Union*
- 10:30 Nathan Hodge, '16: *Effort and Compensation: An Analysis of NBA Players' Productivity in Contract Years*
- 11:10 Willow Smith, '16: *A Profile of the Global Online Gambling Industry: The Determinants of a Successful Market*
- 11:40 Tyler Rossmann, '16: *No Time to Waste: An Examination of the Economic, Environmental, and Social Implications of the Universal Recycling Act in the State of Vermont*
- 12:10 Michael McNally, '16: *The Price of a "Great Wall"*

## ENGLISH

Saturday, 9:00 – 11:15 AM – Saint Edmund's Hall 104

Writers Read Their Writing – Prof. Elizabeth Inness-Brown

- 9:00 Sarah Phelps, '16: *fiction*
- 9:10 Riley Stefano, '16: *fiction*
- 9:20 Colleen Knowles, '16: *poems*
- 9:25 Lucille Franklin, '16: *creative nonfiction*
- 9:35 Rahela Mohammad Akbar, '16: *fiction*
- 9:45 Lexi Goyette, '16: *fiction*
- 9:55 Tylik Williams-Prince, '16: *poems*
- 10:15 Troy Millette, '16: *poems*
- 10:25 Cory Warren, '16: *fiction*
- 10:30 Ian Richards, '17: *creative nonfiction*
- 10:40 Tristan Yerkes, '16: *poems*
- 10:45 Briana Brady, '16: *fiction*
- 10:55 Semiu Duwoju, '16: *poems*
- 11:00 Cody Wasuta, '16: *fiction*

## HISTORY

Saturday, 9:00 AM – 2:05 PM – Saint Edmund's Hall 102 – Prof. Jen Purcell

Understanding America: Local and National Pasts

- 9:00 Alyssa Hamel, '16: *Rediscovering the Past through Material Culture: The Essential Role of Object-based Learning in Museums*
- 9:15 Oanh Huynh, '16: *Secondary Education in the US since 1945*
- 9:30 Edward Pettengill, '16: *Jackson, Polk and the Western Expansion of the United States*
- 9:45 Justin Colletti, '16: *Command and Control: An Analysis of Leadership during the Cuban Missile Crisis Tracing the Past: Development and Decline*

Tracing the Past: Development and Decline

- 10:30 Renee Bousquet, '16: *The Black Death and the Progression of Medicine*
- 10:45 Peter Rollins, '16: *An Economic History of the Sugar Trade*
- 11:00 Doug Turaj, '16: *The Zenith of the Empire Where the Sun Never Sets: A Historiographic Discussion on the Rise and Fall of the British Empire*
- 11:15 Marcello Shelzi, '16: *The Decline of Heavy Industry in Northern New England*

## The 20th Century

1:00 Lucia Thomas, '16: *A Well Kept Secret: Bletchley Park and Signals Intelligence in World War II*

1:15 Dan Hack, '16: *The Development of Allied Air Strategy during the Second World War*

1:30 Zoe Doucette, '16: *Pearls, Pralines, and Progress: A History of the Girl Scouts*

## MATHEMATICS

Saturday, 8:30 – 11:30 AM – Jeanmarie Hall 378 – Prof. Joanna Ellis-Monaghan

8:30 Ahmed Alblawi, '18: *Graph Isomorphism*

8:50 Mariah Boudreau, '19: *Neural Networks in Autism*

9:10 William Kitterman, '17: *The Traveling Salesman Problem*

9:30 Tyler Malone, '18: *Random Graphs*

9:50 Lucas Margenot, '17: *Neural Networks and Schizophrenia*

10:10 Tyler Tolisano, '19: *A Graph Theoretical Approach to Fingerprint Matching*

10:30 Samantha Tremblay, '17; Conor Disher, '17: *The Prison Epidemic: Using Graph Theory to Model Contagion*

10:50 Melissa Westland, '16: *An Exciting Application of the Weierstrass Elliptic Function*

## POSTER SESSION

Saturday, April 30

Dion Student Center 11:00 AM-1:00 PM

## BIOLOGY

Christian Ayers, '17; Joshua Fabriziani, '18; Molly King, '18; Nicole Kordana, '18: *Comparison of shiner sample mitochondrial COI gene to known sequences*

Allison Bergeron, '16; Matthew Fay, '16; Aaron Gentile, '16; Charles Poston '16: *Species identity of tuna samples based on sequence of mitochondrial COI gene*

Alexander Boucher, '16; Erika Figueroa, '18; Alex Kimmel, '18; Shane Williams, '16: *Testing for Red Snapper mislabeling in Burlington, VT region using cytochrome c oxidase DNA barcoding*

Whitney Burgess, '16; Nicole Francis, '16; Ellen Murchie, '16; Nicole Traugh, '16: *Identifying salmon species using DNA barcoding of mitochondrial gene, cytochrome c oxidase*

Natalie Dalimonte, '17; Mary Ann Kelly, '16; Amanda Kempainen, '16; Natalie Ledue, '16: *DNA barcoding of COI gene in tuna samples from restaurants in Burlington metro area*

Kaylee Jackson, '17: *Comparing Total Suspended Solids, Rainfall, and Land Use*

Mary Ann Kelly, '16: *Comparative assessment of enamel tufts*

Amanda Kempainen, '16: *Enamel decussation patterns in carnivorans*

Meghan Lavoie, '16: *Characterization of innate immune gene APOBEC3H in the Vermont population of Eastern bobcat (*Lynx rufus*)*

Natalie Ledue, '16: *The role of enamel thickness in carnivoran dietary adaptation*

Ellen Murchie, '16; Nicole Francis, '16: *Identification of Novel Carbon Transport Genes in Maize Using Bulk Segregant Analysis and Next Generation Sequencing of Exome Libraries*

Sephorah Pierre, '16: *Differences in Benthic Macroinvertebrate Communities in Urban and Forested Streams*

Julia Snyder, '16: *Calcium-dependent sliding of actin thin filaments isolated from hearts with obstructive hypertrophic cardiomyopathy and donor controls does not differ*

Nicole Traugh, '16: *A zebra-band phenotype in maize results from a mutation of a PPOX-like gene protoporphyrinogen oxidase IX-like*

Mariah Witas, '18: *Comparing Nitrogen Levels and Land Use in Streams with the Lake Champlain Basin*

## BUSINESS ADMINISTRATION & ACCOUNTING

Danielle Barbato, '17; Morell Gaskins, '16; Grace Gunning, '17; Tom McElmury, '16; Lauren Sullivan, '17:

*NCAA Athlete Payments*

Cody J. Boissoneault, '17; Caleb G. Lothian, '17; Simon Pierre Shyaka, '16: *Ethical Issues within the Cocoa Industry*

Andrew Brown, '17; William Coates, '17; Carly Kondel, '17; Daniel Rathbone, '17: *High Frequency Trading: An in-depth analysis of the methods, effects, and ethics within the new technology of stock trading.*

Erica Bundrick, '16; Marissa Landry, '17; Benjamin C. Overslaugh, '17; Mathew Vlasich, '17: *CEO Salaries: Are CEO's paid too much?*

Nicholas Casalino, '16; Hua Fang, '17; Ethan K. Springer, '17; Andrew Thurston, '17: *Big Fat: Ethical Issues of Mass Market Food*

Justin Colletti, '16; Casey Curtin, '16; Indira Evora, '17; Maria Valentyn, '16: *Ethical Implications of Fracking*

Brent Murray, '17; Connor Murray, '17; Kyle Pembroke, '16; Jane Sclafani, '17: *Concealed Carry of Firearms at the Workplace*



## CHEMISTRY

- Megan Ackerman, '16:** *Activation of mitochondrial STAT-3 and reduced mitochondria damage during hypothermia treatment for post-cardiac arrest myocardial dysfunction*
- Nathan Dean, '16:** *Surface Enhanced Fluorescence from Magnesium Nanoparticles*
- Jillian Denhardt, '16:** *Effects of Acidic Deposition and Soil Acidification on Sugar Maple Trees in the Adirondack Mountains, New York*
- Robert (Sam) Ettenborough, '16:** *Effects of Agricultural Practices on Soil Chemical Properties in Monoculture Systems*
- Mohamed Fofana, '16:** *Folic acid supplementation at lower doses increases oxidative stress resistance and longevity in *Caenorhabditis elegans**
- Greg Hamilton, '16:** *Affordability of Novel Chronic Disease Therapies An Analysis of Gilead's New Hepatitis C Treatment in Light of Past HIV Drugs*
- Drew Herron, '16:** *Effect of Exopolysaccharides on the Hydrolysis of  $\beta$ -Lactoglobulin by *Lactobacillus acidophilus* CRL 636 in an in Vitro Gastric/Pancreatic System*
- Jessica Jablonski, '16:** *Identification of RNA Polymerase Holoenzyme Formation Inhibitors in Bacteria*
- Brody Jarvis, '16:** *Deamidation of N76 in Human  $\gamma$ S-Crystallin Promotes Dimer Formation*
- Ellen Murchie, '16:** *Coxsackievirus A20 as an Oncolytic Virotherapy Agent for Ex Vivo Pancreatic Ductal Adenocarcinoma Cells*
- Michelle Oberding, '16:** *Andexanet Alfa for the Reversal of Factor Xa Inhibitor Activity*
- Benjamin Peters, '16:** *Quantitative Analysis of Hard Metals in Middle Eastern Waters by Atomic Absorption Spectroscopy and Inductively Coupled Plasma Mass Spectrometry*
- Anna Prendeville, '16:** *Removal of Estrogenic Pollutants from Contaminated Water using Molecularly Imprinted Polymers*
- Chris Ricciardi, '16:** *Restoring Light Sensitivity in Blind Retinae Using a Photochromic AMPA Receptor Agonist*
- Alexandru Sasuclark, '16:** *Targeting tumor-initiating cells: Eliminating anabolic cancer stem cells with inhibitors of protein synthesis or by mimicking caloric restriction*
- Bharti Singh, '16:** *DNA Exposure to Buckminsterfullerene (C60): Toward DNA stability, Reactivity, and Replication*
- Katharine Tooke, '16:** *Superparamagnetic Iron Oxide Nanoparticles Conjugated with Epidermal Growth Factor as MRI Contrast*

## ECONOMICS

- Erica Kamerzel, '16:** *Renewable Portfolio Standards: Solar Energy Investment in the United States*
- Roberta Molokandov, '16:** *Intergenerational Mobility in the United States: Comparing the Cases of Jewish Post-Soviet and Cuban Immigrants*
- Catherine Tierney, '16:** *A Bright Future for Solar Energy*

## ENVIRONMENTAL STUDIES

- Anika Bieg, '17:** *Understanding soil phosphatase activity as an index of soil biological P limitation in nitrogen polluted forests*
- Rachel Boyle, '16; Savannah Clinton, '16; Brian Teed, '16:** *Permaculture: Cultivating and Restoring Food Systems*
- Casey Ciapciak, '16:** *U.S. Urban Waterway Restoration: the Case of Boston*
- Elizabeth Cubberley, '16; Shelley Ziemann, '16:** *Northern Forest Restoration in Light of a Changing Climate*
- Aaron Gentile, '16:** *Soil respiration response to long-term nitrogen pollution and short-term phosphorus amendments*
- Noah El-Naboulsi, '16; Silas Rainville, '15/16:** *Modern Agriculture and Forest Buffer Restoration*
- Andie Gemme, '16:** *When Push Comes to Shove: The Realities of Energy in Vermont and New Hampshire*
- Tori Hellwig, '16:** *Lost in the Supermarket: New Americans and the Vermont Food System*
- MegEllen Kimmett, '16; Joseph Murphy, '16; Jeremy Heyner, '16:** *Habitat Restoration for Continental-scale Flyways*
- Naomi Major, '16; Shannon Cunnane, '16:** *Restoring Reclaimed Mining Sites in Colorado*
- Alexandra Novak, '17:** *Reducing Food Waste and Improving Student Composting at SMC*
- Daniel Ushkow, '16; Dr. Heather Darby; Prof. Scott Lewins:** *Organic Methods of Pest Control for Hops growers in Vermont*

## FINE ARTS – ART

- Judson Browning, '16:** *Six Months of Consumption*
- Victoria Hellwig, '16:** *Green Paintings*

## FINE ARTS – THEATRE

- Mckenzie Bergan, '17:** *Dramaturgy for "A Midsummer Night's Dream"*
- Patrick Cornacchio, '18:** *Dramaturgy for "The Crucible"*
- Anna-Maria Forger, '17:** *Costume Design for "A Midsummer Night's Dream"*
- Melissa Hickox, '18:** *Stage Management for "The Crucible"*
- Jordan Moore, '16:** *Stage Management for "A Midsummer Night's Dream"*

## GENDER STUDIES

- Madison Braz, '17:** *Women Helping Battered Women, Community Engagement Internship and Women Helping Battered Women, Education Internship*

## GLOBAL STUDIES

Kaly Spilhaus, '16: *Tourism as a Tool for Development: A Study of Marginalization in Peru, Nepal, and Tanzania*

Maria Rengucci, '16: *The Global Coconut: International Coconut Production and Its Impact on 21st Century Foods (Sri Lanka, Thailand, and the Philippines)*

Maggie Dougherty, '16: *Fast Fashion and the Evolution of the Global Fashion Industry*

Bridget Conway, '16: *The International Cocoa Industry: A History of Exploitation and a Future in Fair-Trade*

Jake Jarecki, '16: *The Air We Breathe: Air Pollution in India, China, and Japan*

Sean Faust, '16: *Precious Drops: Water Scarcity and Possible Solutions in Singapore, Saudi Arabia, and Australia*

## MATHEMATICS

Katelyn Bania, '16: *Generating Spirographs and the Mathematical Rose*

Marcella Daley, '17: *Non-Orientable Surfaces*

Rachel Field, '17: *Gyroid Surface*

Brianna Healy, '16: *Fractal Landscape Generation*

Nathan Hodge, '16; Logan David, '16: *Spinning tops: physics that will make you dizzy*

Boris Li, '17: *Fibonacci Pineapples*

Celsey Lumbrá, '16; Mackenzie Edmondson, '16: *Archimedean Solids*

Kristen McCarthy, '16: *Stereographic Projections of Loxodromes*

Bethany Ramrath, '17: *Hyperbolic Crocheting*

Melissa Westland, '16: *Topics in Knot Theory*

## MEDIA STUDIES, JOURNALISM & DIGITAL ARTS

Selected Senior Research Projects

## POLITICAL SCIENCE / INTERNATIONAL RELATIONS

Erin Irons, '16: *The Quest for Bodily Autonomy: A Comparative Analysis of the Effect of Reproductive Health Policy for Poor Women of Color in the 1960s-1970s and Today*

## PSYCHOLOGY

Emily Benton, '16: *The Arbors at Shelburne*

Nicole Bogucki, '16: *Camp Ta-Kum-Ta*

Elizabeth Bradley, '16: *Lakeview House*

Mackenzie Breen, '16: *Team Phoenix - PTSD*

Jacqueline Clark, '16: *JFK Elementary School*

Alicia Copeland, '16: *Team Phoenix - Emotional Distress*

Julia Dugan, '16; Caroline French, '16; Taylor Kroes, '16: *Not So Mainstream: Mental Health and Classroom Performance*

Stephanie Kallahan, '16: *Team Phoenix - Oppositional Defiance Disorder*

Mariah Kelley, '16: *Social and Academic Anxiety in the Context of the High School Classroom*

Alison Mancini, '16: *"He Didn't Hit Me, But He Didn't Have To": The Hidden Repercussions of Emotional Abuse*

Sabrina Marasco, '16: *Team Phoenix - Depression*

Morgan Mazanec, '16: *The Limitations of Psychopharmacological Treatment for Schizophrenia*

Fiona Moynihan, '16: *Childhood Bipolar Disorder: Epidemic or Misdiagnosis?*

Nicole Noelting, '16: *Art from the Heart at UVM Medical Center*

Danielle Prevost, '16: *Winooski Family Center*

Abigail Rajotte, '16: *JFK Elementary Alternative Classroom*

Kelsey Ryan, '16: *Team Phoenix - ADHD/PTSD*

Allison Shea, '16: *Team Phoenix - ADHD*

Jesse A. Suhaka, '15: *Nicotine Enhancement and Withdrawal-Induced Reinforcer Devaluation: Opioid System Involvement*

Rebecca Trayner, '16: *Team Phoenix - Cognitive Impairment*

Candace Washington, '16: *Cathedral Square: The Wright House*

## PHYSICS

Alexandra Brown, '17: *Geometry of Torus Knots*

Matthew Donohue, '16: *Star Track: Converting Celestial Coordinates to Local Sky*

Jacob Malenfant, '16: *The Quantum Mechanics of Ammonia Inversion*

Rachel Persson, '17: *Charging at a Virtual Wall*

# SOCIOLOGY AND ANTHROPOLOGY

Rebecca Holland, '18; Meghan Burrows, '16; Alexa Mullin, '18: *A Survey of Non-Profit Organizations in Chittenden County: 100 United Way Partners*

## RESEARCH FUND AWARDS

Below is a list of students who received funding through Saint Michael's College to conduct original research and creative activities during the summer of 2015. In addition, many SMC students conducted research off campus at institutions across the country.

### Students sponsored by the Board of Trustees and the Alumni Fund for Undergraduate Research

The primary use of the Alumni Fund is to support student research under the supervision of a faculty member. Research is carried out full-time for 8-10 weeks during the summer.

Megan Ackerman '16	Aaron Gentile '16	Daniel Ushkow '16
Rahela Mohammad Akbar '16	Andrew Herron '16	Katrina Wiesner '17
Anika Bieg '18	Zachary LaPoint '17	
Rachelle Chevalier '16	Tyler Lucey '17	
Jillian Denhardt '16	Jesse Alexander Suhaka '15	

### Michael H. Gianni Fund for Science

The endowment supports the efforts of the Chemistry and Biology Departments to provide increased student-faculty summer research opportunities.

Gregory Hamilton '16

### John C. Hartnett, Ph.D. '43 Endowment

Funding from the endowment is used to support the educational experience and research opportunities of students majoring in Biology at Saint Michael's College.

Bryanna Evoy '16	Natalie Ledue '16	Shane Williams '16
Mary Ann Kelly '16	Michelle O'Donnell '16	
Amanda Kempainen '16	Charles D.V. Poston '16	

### Leavy Fund for Chemistry

The Leavy Fund for Chemistry supports undergraduate research experiences in Chemistry by funding summer research experiences, equipment and supplies for research and travel to present research at national conferences.

Alexandru Sasuclark '16

### National Institutes of Health/Vermont Genetics Network

Meghan Lavoie '17	Julia Snyder '17
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### National Science Foundation

Federal competitive grant programs

Kaylee Jackson '17	Mohamed Fofana '16	Christopher Ricciardi '16
Alexander Boucher '16	Nicole Francis '16	Bharti Singh '16
Sean Brennan '16	Brianna Healy '16	Nicole Traugh '16
Alexandra Brown '17	Erin Irons '16	Samantha Tremblay '17
Erin Buckley '17	Ellen Murchie '16	Melissa Westland '16
Laura Cipriano Crapino	Noah El-Naboulsi '16	Mariah Witas '18
Conor Disher '17	Sephorah Pierre '16	

### Vice President for Academic Affairs Awards

These projects are funded, in part, by the generosity of our annual fund donors that make gifts to the annual operating funds of the college.

Nicole Corneau '17	Elise Genereux '16	Zack Minior '17
Conor Floyd '16	Victoria Hellwig '16	Caitlin Shea '16
Andrea Gemme '16	Michael McNally '16	Julia Wagner '18

# 2016 ACADEMIC SYMPOSIUM SCHEDULE

## MONDAY: APRIL 25

Fine Arts: Music McCarthy Arts 7:00-9:00 PM

## TUESDAY: APRIL 26

Fine Arts: Music McCarthy Arts 7:00-9:00 PM

## WEDNESDAY: APRIL 27

Media, Journalism and Digital Arts Dion Family Center 4:00-7:00 PM

## THURSDAY: APRIL 28

Experiential Learning Showcase Opening Reception Dion Family Center, McGrath Room, 4:30 PM  
Showcase hours: April 29–May 4, 9-5 PM Closed Sunday, May 1

FRIDAY: APRIL 29	LOCATION	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM
Biology	JM 378			2:00-5:30				
Business Administration and Accounting	STE 102				3:00-5:00			
Chemistry	JM 373		1:30-5:00					
Computer Science	JM 362				3:15-5:30			
Education	STE 104		1:30-3:30					
English	STE 211		2:30-3:30					
	JM 364				3:00-6:00			
Fine Arts	STE 109					4:00-5:00		
Global Studies	STE 205	12:15-2:15						
Modern Languages	JM 168				3:00-6:00			
Philosophy	STE 332			2:00-4:15				
Political Science/ International Relations	STE 106		1:30-3:30					
Psychology	STE Farrell			2:00-4:30				
Religious Studies	JM 290			2:45-7:00				
Sociology and Anthropology	JM 166					4:00-6:00		
Study Abroad Research and Practicum	JM 377				3:00-6:00			

SATURDAY: APRIL 30	LOCATION	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM
Computer Science	JM 362		9:00-11:15					
Economics	JM 375		9:00-12:30					
English	STE 104		9:00-11:15					
History	STE 102		9:00-2:30					
Mathematics	JM 378		8:30-11:30					

ALL DEPARTMENT POSTER SESSION DION STUDENT CENTER 11:00 AM-1:00 PM

*Enjoy live music presented by students on the 300's field all afternoon.*



Coordinated by the Undergraduate Research Committee