2017 FACULTY Symposium on Teaching, Learning, Research & Creative Works

Thursday, March 2, 2017 from 3:00 PM – 6:30 PM
UMass Lowell Inn & Conference Center
50 Warren Street
Lowell, MA 01854

- Research Lightning Talks
- Teaching Lightning Talks
- Interactive Demonstration of Digital Measures

Keynotes from:
Dr. Stephen Pennell
Recipient of the 2016 Manning Prize for Excellence in Teaching
Dr. Meg Bond
Director, WAVES: Women Academics Valued & Engaged in STEM

www.uml.edu/research/symposium

Artwork by Samantha Anthony
# AGENDA

### 3:00 p.m. - 3:10 p.m. Welcome
- Julie Chen, Ph.D., Vice Chancellor for Research & Innovation
- Julie Nash, Ph.D., Vice Provost for Student Success

### 3:10 p.m. - 3:20 p.m. Keynote: Reflections of a Reluctant Teacher
- Stephen Pennell, Ph.D., Professor of Mathematical Sciences
  Recipient of the 2016 Manning Prize for Excellence in Teaching

### 3:20 p.m. - 3:30 p.m. Keynote: WAVES: Women Academics Valued & Engaged in STEM
- Meg A. Bond, Ph.D., Professor of Psychology
  Director, Center for Women & Work
  Director, NSF ADVANCE Institutional Transformation Project

### 3:40 p.m. - 4:25 p.m. Small Group Session I
a) Teaching & Learning & Transformational Education Panel Discussion
   - Individualizing Feedback to Teacher Candidates Using the Teaching Channel & SWIVL Technology
     Michelle Scribner-MacLean, Graduate School of Education
   - Implementing Competence Progress Modules in Organic Chemistry
     Khalilah Reddie, Chemistry
   - Expanding Use of Reduced Cost Text Resources
     Christopher Hansen, Mechanical Engineering
b) Research Lightning Talks
c) Research Lightning Talks

### 4:25 p.m. - 4:30 p.m. Break

### 4:30 p.m. - 5:20 p.m. Small Group Session 2
a) Teaching Lightning Talks
b) Research Lightning Talks
c) Research Lightning Talks

### 5:30 p.m. - 5:40 p.m. Remarks by Chancellor Jacqueline Moloney

### 5:40 p.m. - 5:50 p.m. Remarks by Provost Michael Vayda

### 5:50 p.m. - 6:00 p.m. Remarks by Vice Chancellor Julie Chen

### 6:00 p.m. – 6:30 p.m. Networking Reception
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2016 Faculty Awards for Teaching Excellence

**College of Fine Arts, Humanities and Social Sciences**

Pouya Afshar, *Art & Design*
Rebecca Stone, *Criminology & Justice Studies*
David Kingsley, *Economics & Global Studies*
Matthew Hurwitz, *English*
Jenna Vinson, *English*
Elizabeth Herbin-Triant, *History*
Timothy Crain, *Music*
José Jorge Mendoza, *Philosophy*
Joshua Dyck, *Political Science*
Stephanie Block, *Psychology*
Mary Duell, *Psychology*
Cheryl Najarian-Souza, *Sociology*
Danielle Boutwell, *World Languages & Cultural Studies*

**College of Health Sciences**

Mahdi Garelnabi, *Biomedical & Nutritional Sciences (formerly Clinical Laboratory & Nutritional Sciences)*
Brenda Geiger, *Biomedical & Nutritional Sciences (formerly Clinical Laboratory & Nutritional Sciences)*
Erika Lewis, *Physical Therapy*
Laura Punnett, *Public Health (formerly Work Environment)*
Joel Tickner, *Public Health (formerly Community Health & Sustainability)*
Heidi Collins Fantasia, *School of Nursing*
Yuan Zhang, *School of Nursing*

**Francis College of Engineering**

John White, *Chemical Engineering*
Donald Leitch, *Civil & Environmental Engineering*
Michael Geiger, *Electrical & Computer Engineering*
Mufeed Mah’d, *Electrical & Computer Engineering*
Hunter Mack, *Mechanical Engineering*
Walter Thomas, *Mechanical Engineering*
Steven Grossman, *Plastics Engineering*
Graduate School of Education

Phitsamay Uy, Curriculum & Instruction

Kennedy College of Sciences

Rick Hochberg, Biological Sciences
Jeffrey R. Moore, Biological Sciences
Marina Ruths, Chemistry
Xinwen Fu, Computer Science
William Moloney, Computer Science
Mathew Barlow, Environmental, Earth & Atmospheric Sciences
John Lahoud, Mathematical Sciences
Marvin Stick, Mathematical Sciences
Timothy Cook, Physics & Applied Physics
Mark Tries, Physics & Applied Physics

Student Government Association’s Teacher of the Year Award

Khalilah G. Reddie, Chemistry

Manning School of Business

Karen (Jingrong) Lin, Accounting
Hieu Phan, Finance
Beth Humberd, Management
Tao (Tony) Gao, Marketing, Entrepreneurship and Innovation
Juheng Zhang, Operations and Information Systems
University of Massachusetts Lowell
Promotion and Tenure, 2016

Promotion to Associate Professor with Tenure

Shelley Barish          English
Abigail Chandler       History
Yu Cao                 Computer Science
Jessica Garb           Biological Sciences
Nancy Goodyear         Biomedical & Nutritional Sciences
Sandra Lim             English
Karen (Jingrong) Lin   Accounting
Annette McDonough      School of Nursing
Shakil Quayes          Economics
SangHyun Suh           Accounting
Stacy Szcesiul         Curriculum & Instruction
Todd Tietchen          English
Jenifer Whitten-Woodring Political Science
Yuanchang Xie          Civil & Environmental Engineering
Seongkyu Yoon          Chemical Engineering

Approved for Tenure as Associate Professor

Hongwei (Harry) Zhu     Operations & Information Systems

Promotion to Associate Librarian with Tenure

Sara Marks              Librarian
**Promotion to Full Professor**

Diana Archibald  
Oliver Ibe  
John Kaag  
Benyuan Liu  
Yan Luo  
Ramaswamy Nagarajan  
Vinod Vokkarane  
Xingwei Wang  
Alan Williams

**Promotion to Clinical Associate Professor**

Laurie Soroken

**Promotion to Senior Lecturer I**

Dina Bozicas  
George Chigas  
Zahra Fardmanesh-Karimy  
Charles Ormsby  
Rita Sullivan  
Lori Weeden  
Naomi Wernick

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Promotion to Full Professor

- Diana Archibald, English
- Oliver Ibe, Electrical & Computer Engineering
- John Kaag, Philosophy
- Benyuan Liu, Computer Science
- Yan Luo, Electrical & Computer Engineering
- Ramaswamy Nagarajan, Plastics Engineering
- Vinod Vokkarane, Electrical & Computer Engineering
- Xingwei Wang, Electrical & Computer Engineering
- Alan Williams, Music

Promotion to Clinical Associate Professor

- Laurie Soroken, School of Nursing

Promotion to Senior Lecturer I

- Dina Bozicas, English
- George Chigas, World Languages & Cultural Studies
- Zahra Fardmanesh-Karimy, Mathematical Sciences
- Charles Ormsby, Mathematical Sciences
- Rita Sullivan, English
- Lori Weeden, Environmental, Earth & Atmospheric Sciences
- Naomi Wernick, Biological Sciences
New Faculty Hires for Academic Year 2016

College of Fine Arts, Humanities and Social Sciences

Art
Timothy DeVoe    Visiting Instructor

Criminal Justice
Kimberly Kras    Assistant Professor
Arie Perliger    Professor
Jill Portnoy    Assistant Professor

Philosophy
Nicholas Evans    Assistant Professor
Luis Oliveira    Visiting Lecturer

Political Science
Aaron Smith-Walter    Assistant Professor

Psychology
Joseph Gonzales    Assistant Professor

World Language & Cultures
Hope Anderson    Assistant Professor
Mamadou Samb    Assistant Professor

College of Health Sciences

Biomedical & Nutritional Sciences
Sabrina Noel    Assistant Professor
Boce Zhang    Assistant Professor

Physical Therapy
Edgar Torres    Clinical Associate Professor
Amanda Salacinski    Clinical Associate Professor

Public Health
Natalia (Natasha) Palacios    Assistant Professor
Angela Wangari Walter    Assistant Professor
Francis College of Engineering

Chemical Engineering
Gulden Camci-Unal  Assistant Professor
Dongming Xie  Associate Professor

Civil & Environmental Engineering
Danjue Chen  Assistant Professor
Raj Kumar Gondle  Lecturer

Electrical & Computer Engineering
Dodamege Thanuka Wickramarathne  Assistant Professor
Hualiang Zhang  Associate Professor

Mechanical Engineering
Arcan Dericioglu  Visiting Professor
Fuqiang Liu  Associate Professor
Marianna Maiaru  Assistant Professor

Plastics Engineering
Javier Vera Sorroche  Assistant Professor

Graduate School of Education

Curriculum & Instruction
A.J. Angulo  Professor
John McKenna  Assistant Professor

Honors College
Rachel Mansfield  Visiting Assistant Professor
Julian Zabalbeascoa  Visiting Assistant Professor

Kennedy College of Sciences

Biological Sciences
Nicolai Konow  Assistant Professor
Erin Smith  Lecturer
Chemistry
Dionyios Christodouleas  Assistant Professor
Manos Gkikas  Assistant Professor
Lawrence Wolf  Assistant Professor

Computer Science
Wenjin Zhou  Assistant Professor
Yelena Rykalova  Visiting Lecturer

Environmental, Earth & Atmospheric Sciences
Richard Gaschnig  Assistant Professor

Physics
Nishant Agarwal  Assistant Professor
Ofer Cohen  Assistant Professor
Archana Kamal  Assistant Professor

Manning School of Business

Accounting
Heeick Choi  Assistant Professor

Finance
Iskander Arifin  Visiting Assistant Professor

Management
Karoline Evans  Assistant Professor
Elissa Magnant  Visiting Instructor
Jose-Mauricio Galli Geleilate  Assistant Professor
Erica Steckler  Assistant Professor
Peter Tashman  Assistant Professor

Marketing, Entrepreneurship & Innovation
Mark Yi-Cheon Yim  Assistant Professor

Operations & Information Systems
Amit Deokar  Assistant Professor
Nichalin Summerfield  Assistant Professor
## FY 16 Membership of the Transformational Education Committee

<table>
<thead>
<tr>
<th>Name</th>
<th>College/Office</th>
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<tbody>
<tr>
<td>Alkim Akyurtlu</td>
<td>Francis College of Engineering</td>
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<tr>
<td>Holly Butler</td>
<td>Entrepreneurship &amp; Economic Development</td>
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<td>James Canning</td>
<td>Honors College (Dean)</td>
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<td>Nicole Champagne</td>
<td>College of Health Sciences</td>
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<td>Laura Christianson</td>
<td>Manning School of Business</td>
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<tr>
<td>Ann Dean</td>
<td>College of FAHSS</td>
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<td>Greg Denon</td>
<td>Career and Co-op Services</td>
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<td>Kerry Donohoe</td>
<td>Registrar</td>
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<td>Leslie Farris</td>
<td>Kennedy College of Sciences</td>
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<td>Rebecca Foco</td>
<td>College of Health Sciences</td>
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<td>Patricia Fontaine</td>
<td>Graduate School of Education (Dean)</td>
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<td>Alice Frye</td>
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<td>Peter Gaines</td>
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<td>Michael Graves</td>
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<td>Anita Greenwood</td>
<td>Graduate School of Education (Dean)</td>
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<td>Paula Haines</td>
<td>Director of Assessment</td>
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<td>Christopher Hansen</td>
<td>Francis College of Engineering</td>
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<td>Andrew Harris</td>
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<td>George Hart</td>
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<td>Whit Kaufman</td>
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<td>Ellen Keane</td>
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<td>Margaret Knight</td>
<td>College of Health Sciences</td>
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<td>James Koh</td>
<td>Student Affairs &amp; Enrichment (Dean)</td>
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<td>Scott Latham</td>
<td>Manning School of Business (Interim Dean)</td>
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<td>Jason Lawrence</td>
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<td>Silas Laycock</td>
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<td>Kenneth Levasseur</td>
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<td>Charlotte Mandell</td>
<td>Vice Provost of Undergraduate Education</td>
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<td>Sanjeev Manohar</td>
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<td>Information Technology</td>
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<td>Stephen Norton</td>
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<td>Thomas Piñeros-Shields</td>
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<td>Jialun Qin</td>
<td>Manning School of Business</td>
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<td>Sheila Riley-Callahan</td>
<td>Centers for Learning</td>
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<td>Michelle Scribner-MacLean</td>
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<td>James Sherwood</td>
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<td>Richard Siegel</td>
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<td>Christoph Strobel</td>
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<td>Jenifer Whitten-Woodring</td>
<td>College of FAHSS</td>
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TRANSFORMATIONAL TALKS
The committee offered a second year of topics in this series of informal, practical, hour-long conversations on a variety of topics related to teaching, advising, and assessment. Designed for the sharing of ideas, the series draws on existing campus expertise to open up engaging exchanges among faculty and staff. Topics for 2015-16 included:

Sept. 8. Universal Design and Access for All Students: Resources that support every student's learning and support students with disabilities. **Jody Goldstein**

Sept. 29 Managing Behavior for Productive Learning: Tactics and techniques to help manage the classroom and keep students focused and on-task. **Anita Greenwood and Bohdan Zaryckyj**

Oct. 27 GRIT: Getting Students Over the Mid-Semester Hump: Understand the impact of resilience and perseverance to help students stay motivated. **Kimberly Merriman**

Nov. 17. Mentoring Undergraduate and Graduate Students to Complete Theses: Balance feedback and cultivate independence to challenge students in their long term projects. **James Sherwood and Todd Avery**

Feb. 3 Tools to Transform Teaching – **Spencer Ross and Fred Martin**

March 9 Understanding and Assisting ESL Users – **Jennifer Sia**

April 5 Transformational Advising and the Core Curriculum – **Kristen Rhyner and Paula Haines**

April 20 Your Best-Ever First Weeks of the Semester- **Natalie Houston**

NOVEMBER 10, 2015 THIRD ANNUAL SYMPOSIUM ON TEACHING AND LEARNING
A new format for this annual event put the spotlight on past and current recipients of Transformational Education teaching and learning grants.

Panel presenters: **John Brown – Education;**
**Matt Hurwitz – English;**
**Marie Frank – World Languages and Cultures;**
**Jessica Garcia – Chemistry**

Open mic session: Faculty from across campus stepped up to the microphone with impromptu comments about successful innovations in teaching they had enacted.
FEBRUARY 16, 2016 CONVERSATION DINNER

Educational Advisory Board consultant Jeff Martin spoke to a gathering of campus academic leaders on the topic of “Scaling Teaching Innovations.” The talk was followed by dinner and a provocative conversation about and broad consideration of campus priorities for improving teaching, learning, advisement, and assessment.

MINI-GRANT PROGRAM: EXPANDING USAGE OF OPEN-TEXT MATERIALS

The Committee solicited proposals and issued mini-grants that encouraged faculty to help reduce student costs by taking advantage of or creating original open source course materials.

Funded projects were completed by the following faculty:

- Milena Gueorguieva - English
- Xiaoxia Newton - Education
- Ramon Castillo, Alan Williams, Garrett Michaelson - Music
- Fang Lai - Plastics Engineering
- Wego Wang - Engineering Technology
- Kenneth Levasseur - Mathematics
- John Brown - Education
- Hongwei Zhu - Operations and Information Systems
- Michael Pierson - History
- Adrian Cruz, Cheryl Llewellyn, Richard Hudak - Sociology

PEDAGOGY SUBCOMMITTEE

Anita Greenwood; Donna Mellen, Fred Martin, Art Mittler, Steve Mishol, Chris Strobel, Silas Laycock, Patricia Fontaine, Ken Levasseur, Julie Nash, George Hart.

Awarded three 2015-16 Innovations in Teaching Mini-Grants:

John Brown: Fieldwork Experience: Literacy Teachers and High School Students at the MFA
Matthew Hurwitz: Scaling up Service Learning in First Year Writing
Thomas Sloan: “ForClass” application in Global Supply Chain course (ForClass is a web-based application that allows students to read case studies and input responses to Questions.)

Streamlined process was developed for 2016-17 Innovations in Teaching Mini-Grants
ADVISING SUBCOMMITTEE
Continued expansion of Advising Affinity Group Listserv. This platform encourages cross-campus discussion of key policies for effective transactional advisement and the sharing of strategies for transformational advising.

ASSESSMENT SUBCOMMITTEE

Hosted workshop led by Massachusetts Department of Higher Education Director for Learning Outcomes Assessment. Paired 10 faculty—from UMass Lowell and three partner community colleges—in hands-on work using assignment design to increase attention on learning outcomes and improve student learning.

Please join us for a special Transformational Education Assignment Design Workshop
Facilitated by Bonnie Orcott
Director of Learning Outcomes Assessment
Massachusetts Department of Higher Education

Friday, January 29, 2016
2:00 - 4:30 p.m.
UMass Lowell Campus Recreation Center • Meeting Room 111

Want to encourage students to demonstrate their learning in:
- Critical Thinking
- Quantitative Literacy, or
- Written Communication?

Participants should come to the workshop with an assignment that seeks to address one or more of these outcomes. Assignments may be from any discipline or level of course, and can be either simple or complex. The workshop process will invite collaboration with other faculty, and will help you fine-tune both your expectations for student learning and the instructions you give to students.

If you have any questions about the FREE event, contact:
Paula_Haines@uml.edu
978.934.4186

Please send your RSVP to assess@uml.edu by Tuesday, January 26.

Visitors to UMass Lowell:
The UMass Lowell CRC (Campus Recreation Center) is located at
322 Aiken Street, Lowell MA 01854
Visitors may park directly across the street in the East Campus Garage,
11 Pawtucket Street, Lowell MA 01854
Visitors without a UMass Lowell ID will need to press the call button at the gate and let our parking attendants know that you are here for the workshop.
Research and Innovation

Julie Chen
Vice Chancellor
Research and Innovation

Steve Tello
Senior Associate Vice Chancellor
Entrepreneurship and Commercialization

Anne Maglia
Associate Vice Chancellor
Research Administration and Compliance

Arlene Parquette
Director
Strategic Industry Partnerships/UMass Innovation Institute Business Development

Rekha Paleyanda
Director
Office of Technology and Commercialization

Elaine Major
Director
Office of Institutional Compliance

Theresa (Teri) Hamelin
Director
Core Research Facilities

Tom O'Donnell
Director
Innovation Hub

Susan Puryear
Director
Office of Research Administration

Tom Ferraguto
Director
Saab ETIC Nanofabrication Lab (NFL) and Building Manager

Nancy Saucier
Director
New Ventures Development

Nancy Desjardins
Assistant Director
Grant Accounting

Holly Butler
Project Director
Entrepreneurial Initiatives DifferenceMakers

Linda Gladuennis
Assistant Director
Grants and Contracts Administration
University of Massachusetts Lowell Seed Funding

2016 Creative Economy Awards

Pouya Afshar (Assistant Professor, Art) - “Community Animation Partnership: Creating a Platform for Dialogue through Animation”

MinJeong Kim (Associate Professor, Graduate School of Education), Phitsamay Uy (Assistant Professor, Graduate School of Education) and Allyssa McCabe (Professor, Psychology) - “Reviving the Forgotten Tales of Childhood: Turning Narratives of Southeast Asian Families into Children’s Multicultural Literature”

Chad Montrie (Professor, History) - “Urban Waters Revolution”

2016 Science and Technology Awards

Yu Cao (Assistant Professor, Computer Science), Katherine Tucker (Professor, Biomedical and Nutritional Sciences), Yunsheng Ma (Associate Professor, Medicine UMass Medical), Wei Ding (Associate Professor, Computer Science UMass Boston), Benyuan Liu (Associate Professor, Computer Science), Yan Luo (Associate Professor, Electrical and Computer Engineering), Jongsoo Lee (Assistant Professor, Mathematics and Biostatistics), Suzanne Leveille (Professor, Nursing UMass Boston), Jill Macoska (Professor, Biological Sciences UMass Boston), J. Herbert Stevenson (Associate Professor, Family Medicine/Sports Medicine UMass Medical) and Hong Yu (Professor, Quantitative Health Sciences, UMass Medical) - “Center for Digital Healthcare”

Holly Yanco (Professor, Computer Science), Bryan Buchholz (Professor, Work Environment), Pei-chun Kao (Assistant Professor, Physical Therapy), Haim Levkowitz (Associate Professor, Computer Science), Kate Saenko (Assistant Professor, Computer Science), Herb Stevenson (Associate Professor, Sports Medicine UMass Medical), Winnie Wu (Assistant Professor, Physical Therapy) and Adam Norton (NERVE Center Manager, UMass Lowell) - “NERVE Center: Designing Better Robot Systems for People”

Seongkyu Yoon (Assistant Professor, Chemical Engineering), Mark Klempner (Exec. Vice Chancellor, UMass Medical) and Carl Lawton (Associate Professor, Chemical Engineering) – “BioManufacturing Innovation Institute (BMII)”
2016 Internal Seed Awards

Chris Allen (Assistant Professor, Criminal Justice) and Rebecca Stone (Lecturer, Criminal Justice) – “Examining University Allegations of Alleged Sexual Misconduct”

Doreen Arcus (Associate Professor, Psychology) – “School Discipline Decisions among Educators, Administrators, and School Resource Officers by Region: Students with Disabilities and the School-to-Prison Pipeline”

Kacey Beddoes (Assistant Professor, Sociology) and Joseph Hartman (Dean, College of Engineering) – “Characterizing the Epistemological Foundations of Global Engineering Competency”

Michael Ciuchta (Assistant Professor, Marketing) and David Kingsley (Professor, Economics) – “Experimental Games in Entrepreneurial Finance”

Jennifer Fish (Assistant Professor, Biological Sciences) and Sarah McMenamin (Assistant Professor, Biology, Boston College) – “Defective BMP Signaling as the Cause of Nager Syndrome”

James Forest (Professor, Criminal Justice), Allyssa McCabe (Professor, Psychology) and Neil Shortland (Research Associate, Criminal Justice) – “Using Narrative Analysis to Detect Level of Threat in Online Expressions of Malicious Intent”

Ingrid Hess (Assistant Professor, Art) – “We All Need Peace”

Elissa Johnson-Green (Assistant Professor, Music), John-Morgan Bush (Lecturer, Music) and Wael Kamal (Lecturer, Art) – “We’ve Got the World on a String: A Documentary Project”

Pei-Chun Kao (Assistant Professor, Physical Therapy) and Mahdi Garelnabi (Associate Professor, Biomedical and Nutritional Sciences) – “Neurophysiological Effects of Exercise on Gait Rehabilitation following Stroke”

Jayant Kumar (Professor, Physics) and Ramaswamy Nagarajan (Associate Professor, Plastics Engineering) – “Non-Invasive Sending of Blood Metabolites using Raman Spectroscopy”

Taras Lyubchenko (Associate Professor, Biomedical and Nutritional Sciences) and Anna Rumshisky (Assistant Professor, Computer Science) – “Computational Model for the Discovery of New Treatment Targets in the Autoimmune Diseases”
Jill Lohmeier (Associate Professor, Curriculum and Instruction) and Stephen Mishol (Associate Professor, Art) – “Getting Our Heads Out of the Sand: A Sustainability and Climate Change Awareness Campaign”

Kelsey Mangano (Assistant Professor, Biomedical and Nutritional Sciences) and Sabrina Noel (Research Associate Professor, Biomedical and Nutritional Sciences) – “Diet, Inflammation and the Gut Microbiota”

Nese Orbey (Associate Professor, Chemical Engineering) and Nancy Goodyear (Assistant Professor, Biomedical and Nutritional Sciences) – “Stability and Controlled Release of Hydrogen Peroxide from Silica Based Hydrogels for Treatment of Wound Infections”

Sheree Pagsuyoin (Assistant Professor, Civil Engineering) and Hongwei Sun (Associate Professor, Mechanical Engineering) – “Development of Functionalized Filter Media for Water Treatment Applications”

Kate Swanger (Assistant Professor, Environmental, Earth and Atmospheric Sciences) and Kelsey Winsor (Post Doctorial Associate, Environmental, Earth and Atmospheric Sciences) – “A New History of Ice Sheet Retreat in Rhode Island and It’s Climate Change Context”

Herpreet Kaur Thind (Assistant Professor, Public Health) – “Total Student Health at UML”

Miko Wilford (Assistant Professor, Psychology) and Misha Rabinovich (Assistant Professor, Art) – “To Plea or Not to Plea: A Virtual Simulation of Plea-Bargain Scenarios”

Yi-Ning Wu (Assistant Professor, Physical Therapy) and Momotaz Begum (Assistant Professor, Computer Science) – “Feasibility of an Artificially Intelligent Home-Based Rehabilitation System for Children with Cerebral Palsy using Wearable Technologies”
Enlightened Bites (EBites) Workshops (Spring/Fall 2016)
Adrianna (Andy) Morris Director
Tel. 978.934.2898

EBites is a lunch-time workshop presented (during Fall and Spring Semesters) that covers a wide range of topics for faculty, and staff to support the research community.

- **Introductory Series of Presentations (Fall 2016)** by the research and innovation team reporting to Julie Chen, Vice Chancellor for Research and Innovation was offered for new and existing faculty.
  - These workshops included overviews of Research Administration, Core Research Facility, Institutional Compliance, Procard, UMass Innovation Institute, Technology and Commercialization; Innovation Hub, M2D2, and DifferenceMakers.

**New Interdisciplinary Initiatives (2016)**
- **Seed Grant success stories** (Fine Arts): Sue Kim, English
- **Creative Economy Grant success stories** (Fine Arts): Phitsamay Uy, Chad Montrie, Pouya Afshar, Tommaso Tempeсти
- **Seed Grant success stories** (Science and Engineering): KwokFan Chow, Murat Inalpolat, Marina Ruths, HsiWu Wong
- **S & T Grant success story**: (Science & Engineering) Yu Cao
- **Centers and Institutes**: (Julie Chen, Andrew Harris)

**Proposal Development**
- NextFlex, the Flexible Hybrid Electronics Manufacturing Innovation Institute and their Project submission Process (Joey Mead, Julie Chen)
- Advanced Functional Fabrics of America (AFFOA), Cheryl Gomes, Technical Program Manager

**Resources**
- Software applications available for faculty, staff and students (Nancy Fowler)
- International Service Learning Opportunities for Faculty (Fern MacKinnon)
- International Student & Scholar Process at UMass Lowell (Maria Conley)
- How to turn a 30-second sound bite on NPR into funding for your research (John Feudo, University Advancement)
- Enlightened Bites 3-Part Series: Tools to Drive to Innovation & Commercialization Success - Primer for Start-up Companies/Internal Innovation Efforts (sponsored by Nancy Saucier and Tom Ferraguto, and presented by Gary J. Ainsworth, Consultant/Senior Executive/Vice President of Operations – Product Design and Commercialization
  - The Three List Management System
  - Problems: Corner Them and Measure Them
  - Moving from Tactical to Strategic Planning
Undergraduate Research Program (Co-op Scholars)

Program Director: Adrianna (Andy) Morris; Program Coordinators: Vanessa Farzner, Jennifer Keene-Crouse, Fern MacKinnon

- The co-op scholar program provides a $4,000 co-op opportunity to high achieving, incoming early-action freshmen who maintain a required GPA during their freshmen year.
- The program continues to attract top students to the University.
- Highlights from 2016 for:
  - **Research** included new partnerships with Hanscom Air Force Base, the SPACE HAUC program, Athletics Department, and continued work with the Natick Soldier Center.
  - **Community** opportunities provided opportunities at the Methuen Police Department, the Mass Watershed, the Discovery Museum, Eforall and Thrive Together.
  - **Health** students, in addition to working on campus, participated at Circle Home (Nursing), WIC, and were Camp Assistants for the Roudenbush Community Center.
  - **Study abroad** selections included travel to Dublin, San Sebastian, Prague & Rome

<table>
<thead>
<tr>
<th></th>
<th>Summer 2016</th>
<th>2016-2017</th>
<th>Study Abroad</th>
<th>Total</th>
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<tbody>
<tr>
<td>Francis College of Engineering</td>
<td>43</td>
<td>7</td>
<td>9</td>
<td>59</td>
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<tr>
<td>Fine Arts Humanities &amp; Social Sciences</td>
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<td>21</td>
<td>5</td>
<td>38</td>
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<tr>
<td>Health Sciences</td>
<td>21</td>
<td>13</td>
<td>5</td>
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<tr>
<td>Kennedy College of Sciences</td>
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<td>7</td>
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<td><strong>Totals</strong></td>
<td><strong>102</strong></td>
<td><strong>48</strong></td>
<td><strong>24</strong></td>
<td><strong>174</strong></td>
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Emerging Scholars Program

The Emerging Scholars Program, presented by the Center for Women and Work matches qualified rising Juniors and Seniors in the College of Fine Arts, Humanities and Social Sciences with an experienced faculty partner to participate in cutting edge research. The program, which is year-long, awards students with a GPA of 3.25 or greater. Students work for 125 hours per semester and they receive $2,500 for the year.
Thank you Co-op and Emerging Scholars' Mentors for your Dedication

Kennedy College of Sciences

Biological Science
Jennifer Fish
Peter Gaines
Jessica Garb
Hwai Chen Guo
Nicolai Konow
Matthew Nugent

Chemistry
Kwok Fan Chow
Dionysios Christodouleas
Matthew Gage

Computer Science
Fred Martin
Holly Yanco

Physics
Partha Chowdhury
Supriya Chakrabarti
Cecil Joseph

Manning School

Francis College of Engineering

Chemical Engineering
Zhiyong Gu
Carl Lawton
Nese Orbey
Justin Pounders
Prakash Rai
HSiWu Wong
Seongkyu Yoon
Sean Galbraith

Civil & Environmental Eng.
Xiaoqi Zhang

Electrical & Computer Engineering
Tngshu Hu

Mechanical Engineering
Ertan Agar
Ali Amirkhizi
Linda Barrington
Patrick Drane
Christopher Hansen
Murat Inalpolat
James Sherwood

Plastics Engineering
Carol Barry
Stephen Johnston
Steve Driscoll

Emerging Scholars' Mentors

Education
Anita Greenwood
Jill Lohmeir

Emerging Scholars' Mentors 2015-2016

Education
Judith Davidson

History
Robert Forrant

Music
Elissa Johnson-Green

Psychology
Doreen Arcus
Patrice Faith Olivar
Richard Serna
Jana Sladkova
Yana Weinstein

Sociology
Cheryl Llewelyn

College of Health Sciences

Exercise Physiology
Eric James
PeiChun Kao
Connie Seymour
Yi-Ning Wu

Nursing
Brenna Quinn
Yuan Zhang

Public Health
Laura Punnett
Herpeet Thind

Biomedical and Nutritional
Thomas Wilson

Athletics
Michael Letzeisen
Christine Smith

College: Fine Arts, Humanities & Social Sciences

Economics
David Turcotte

Music
Elissa Johnson Green

Political Science
John Cluverius

Psychology
Doreen Arcus
Stephanie Block

English
Marlowe Miller
Jonathan Silverman

Criminal Justice
Kelly Socia
Melissa Morabito

Political Science
Jenifer Whitten Woodring

Psychology
Christopher Allen
Doreen Arcus
Michelle Haynes
Richard Serna

Difference Maker
Holly Butler
Graduate Research Assistants
Sharon Freeman, Program Coordinator

Faculty funded 375 Graduate Research Assistant contracts for FY16
(half/full, semester/academic year)

College of Engineering

<table>
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<th>Department</th>
<th>Fall 2015</th>
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<th>Academic Year</th>
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<tr>
<td>Chemical Engineering</td>
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<td>Civil Engineering</td>
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<td>6</td>
<td></td>
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<tr>
<td>Electrical &amp; Computer Engineering</td>
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<td>30</td>
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<tr>
<td>Mechanical Engineering</td>
<td>20</td>
<td>21</td>
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<tr>
<td>Plastics Engineering</td>
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<td><strong>Total</strong></td>
<td><strong>90</strong></td>
<td><strong>85</strong></td>
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College of Fine Arts, Humanities & Social Sciences, Graduate School of Education and Manning School of Business

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<th>Spring 2016</th>
<th>Academic Year</th>
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<tr>
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<td>Criminal Justice</td>
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<td>Economics</td>
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<td>3</td>
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<tr>
<td>Sociology</td>
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College of Health Sciences

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<tr>
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<td>1</td>
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<tr>
<td>Community Health</td>
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<td></td>
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<tr>
<td>Toxics Use Reduction Institute</td>
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<tr>
<td>Work Environment</td>
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<tr>
<td><strong>Total</strong></td>
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<td><strong>7</strong></td>
<td><strong>14</strong></td>
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College of Sciences

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<th>Academic Year</th>
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<tr>
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<td>Chemistry</td>
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<tr>
<td>Computer Science</td>
<td>15</td>
<td>12</td>
<td>6</td>
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<tr>
<td>Environmental, Earth &amp; Atmospheric Sciences</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Physics</td>
<td>12</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>43</strong></td>
<td><strong>38</strong></td>
<td><strong>15</strong></td>
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</table>
2016 Centers and Institutes

University Research Institutes & Centers

- Raytheon-UMass Lowell Research Institute (RURI) – Craig Armiento, Alkim Akyurtlu
- Nanomanufacturing Center – Joey Mead, Carol Barry
- Center for Promotion of Health in the New England Workplace – Laura Punnett
- Center for Women and Work – Meg Bond
- Center for Wind Energy – Chris Niezrecki
- New England Robotics Validation & Experimentation Center (NERVE) – Holly Yanco
- Center for Advanced Materials including HEROES – Jayant Kumar, Ramaswamy Nagarajan
- The UMass Lowell Center for Population Health and Health Disparities – Katy Tucker, Luis Falcon

University Engagement Centers

- Tsongas Industrial History Center – Sheila Kirschbaum, Anita Greenwood
- Center for Community Research & Engagement - Robin Toof, Andrew Hostetler
- Jack & Stella Kerouac Center for Public Humanities – Michael Millner

Seed Research & Engagement Centers

- Biomedical Terahertz Technology Center (BTTC) – Bob Giles
- Center for Asian American Studies – Ivy Ho, Sue Kim
- Center for Autism Research and Education (CARE) – Ashleigh Hillier
- Center for Digital Health – Yu Cao
- Center for Gerontology and Partnerships – Karen Melillo
- Center for Internet Security and Forensics Education and Research (iSAFER) – Xinwen Fu, Jie Wang
- Center for Program Evaluation – Jill Lohmeier
- Center for Public Opinion Research – Francis Talty, Joshua Dyck
- Climate Change Initiative – Juliette Rooney Varga, John Wooding
- Lowell Center for Space Science and Technology (LoCSST) – Supriya Chakrabarti
- Massachusetts Biomanufacturing Center – Carl Lawton, Seongkyu Yoon
- Radiation Laboratory – Partha Chowdhury, C. J. (Kim) Lister
Entrepreneurship & Economic Development

DifferenceMaker
www.uml.edu/differencemaker

<table>
<thead>
<tr>
<th>Staff first name last name</th>
<th>Staff Title</th>
<th>Staff Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holly Butler</td>
<td>Program Director</td>
<td><a href="mailto:Holly_Butler@uml.edu">Holly_Butler@uml.edu</a></td>
</tr>
<tr>
<td>Ha Pho</td>
<td>Program Manager</td>
<td><a href="mailto:Ha_Pho@uml.edu">Ha_Pho@uml.edu</a></td>
</tr>
<tr>
<td>3 to 4 Student Co-Ops –</td>
<td></td>
<td></td>
</tr>
<tr>
<td>rotates per semester</td>
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<td></td>
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</table>

Mission
DifferenceMaker is a campus-wide program that engages students of all majors and disciplines in creative problem solving, innovation and entrepreneurship. If a student has an idea or sees a problem they want to solve, they come to DifferenceMaker to receive various resources to help them pursue that idea or solve that problem.

Services & Programs

![DifferenceMaker Services & Programs]

- Process
  - Raising Awareness
  - Building Skills & Concepts
  - Supporting Business Formation

- Activities
  - Freshman Orientation
  - Convocation
  - Freshman Seminar
  - Lego Problem Solving
  - DifferenceMaker Mixers
  - Principles Course
  - Entre. Major/Minor/Grad. Programs
  - College Competitions
  - Workshops
  - Alumni Mentors & Speakers
  - Faculty Workshop
  - $50K Idea Challenge
  - DM Central
  - Innovation Hub
  - Hawk Hatch
  - EforAll
  - VentureWell, MIT Lemelson
Milestone Accomplishments FY2016 (July 2015 – June 2016)

- Coordinated the Student and Alumni Celebration with 120 attendees including students, alumni, faculty and staff (October 2015)
- Worked with Prof. Deb Finch to launch the MSB Freshman DM Seminar (Spring 2015)
- Managed first Hawkathon event with student team and engaged 78 student participants from 17 colleges (March 2016)
- Piloted multiple mentor matching and matched 11 teams to 24 mentors (June 2016)
- Presented DM at Deshpande and received various interest from other universities wanting to adopt DM materials and processes (June 2016)
- Revamped the DM summer Boot Camp and received good feedback from the student teams (June 2016)

Impact Summary:

**OUR IMPACT**

- **STUDENTS REACHED**: 20,441
- **COMPANIES FORMED BY TEAMS**: 14
- **TEAM PATENTS FILED OR APPROVED**: 6
- **WINNING TEAMS**: 52
- **DEDICATED ENTREPRENEURIAL SPACES**: 4
- **AWARDED TO STUDENTS**: $153,000
- **RAISED BY TEAMS**: $368,000

Goals/Initiatives for FY 2017

- Engage 5 new alumni in the Mentor Program
- Facilitate a DM workshop at the Deshpande Symposium in June 2017 to expand publicity and grow the program to other universities
- Engage 3 DM student teams in outside competitions and entrepreneurial programs
OFFICE OF TECHNOLOGY COMMERCIALIZATION (OTC)
https://www.uml.edu/Research/OTC/

<table>
<thead>
<tr>
<th>Staff Name</th>
<th>Staff Title</th>
<th>Staff Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rekha Paleyanda, Ph.D.</td>
<td>Director</td>
<td><a href="mailto:Rekha_paleyanda@uml.edu">Rekha_paleyanda@uml.edu</a></td>
</tr>
<tr>
<td>Rajnish Kaushik, Ph.D.</td>
<td>Assistant Director</td>
<td><a href="mailto:Rajnish_kaushik@uml.edu">Rajnish_kaushik@uml.edu</a></td>
</tr>
<tr>
<td>Vijayendra Kumar, Ph.D.</td>
<td>Technology Analyst</td>
<td><a href="mailto:Vijayendra_kumar@uml.edu">Vijayendra_kumar@uml.edu</a></td>
</tr>
<tr>
<td>Jenna Petrillo</td>
<td>Operations Coordinator</td>
<td><a href="mailto:Jenna_petrillo@uml.edu">Jenna_petrillo@uml.edu</a></td>
</tr>
</tbody>
</table>

Mission
The Office of Technology Commercialization's (OTC) mission is to facilitate the commercialization of innovative UML technology arising from government, foundation and industry sponsored research from the laboratory to the marketplace. We assist faculty in the developing their ideas into commercially viable products, nurture mutually beneficial relationships between the University and industry, promote innovative and entrepreneurial culture at the University, and contribute to the economic vibrancy and well-being of the Commonwealth. Via the development and launch of new products and services that benefit the public good, OTC activities help generate revenue to support the University’s research and education goals, as well as foster economic growth.

Services & Programs
- Identify, review and protect UML intellectual property (IP) generated by faculty
- Actively market IP to commercial entities to partner with and license UML technologies
- Negotiate Confidentiality, material transfer and license agreements
- Generate financial returns for UML from licensing fees, equity, royalties etc.

Milestone Accomplishments FY2016 (July 2015 – June 2016)
- UMass received a total of $3.8 million in revenue from the sale of Anterios, a start-up company spun out in 2006 to Allergan, a global pharmaceutical company, for $90 million upfront with a potential for additional milestone payments. Based on IP from Drs. Steve McCarthy and Bob Nicolosi, Anterios is developing a platform for injection-less delivery through the skin and botulinum toxin-based treatment of conditions like excessive sweating, acne, and crow's feet. Collaborating in developing the technology were Profs. Tom Shea, Tom Wilson and Carl Lawton.
- OTC actively supported and promoted faculty pitches to the Mass Clean Energy, UMass President's Office Technology Funds and MTTC Commercialization Seed Fund, leading to UML receiving 2 out of 8 (25%) awards of $25,000 and 4 out of 8 (50%) Phase 2 awards of $40,000, winning a total of $210,000 in commercialization funds. (Drs. Mead and Kokil; Drs. Schmidt, Sajo, Kurup and Wang for the two Funds resp.) The TD Fund was established in 2004 to close the gap between basic research and product development, making UM technologies attractive for licensing by a commercial partner.
• OTC raised the profile of UML by encouraging grant submission by faculty, public presentations and entry into competitions to raise awareness of the quality of UML IP. This has translated into increased recognition and follow-on funding:
  • Jayant Kumar was selected from several applicants as a semi-finalist at the Mass Clean Energy Center in June
  • Dan Schmidt and Pradeep Kurup were invited to present at the MATTO Food Forum in May and generated much interest among the audience.
  • Dr. Kurup received a 'National Innovation Award' at Tech Connect 2016; [as well as an NSF PFI:AIR-TT Award for $222,000 in follow-up of the team's FY15 NSF-iCorps award.]
  • To define the commercial pathway for a software invention, OTC connected a faculty-student team led by Viktor Podolisky to a mentor, to successfully obtain a $50,000 NSF I-Corps Awards. OTC works closely with the new venture initiative, in identifying potential startup technologies for NVI pipeline.
  • OTC successfully licensed UML IP to and facilitated the spin-out of startup companies such as Immunotrex Educational, Immunotrex Biologics, OrthoClose, Weave Visual Analytics, Solasgasoline, Radect and Eirion.
  • OTC supported Spinout companies, Solasgasoline in their successful attempts to obtain an SBIR Phase I award from the NSF, and Radect in their application for an SBIR Phase I award from the Air Force Research Laboratory.
  • OTC continued to collect and distribute licensing revenues from companies like, Sevo Nutraceuticals, Metabolix, Boston Scientific, and Anterios.

OTC Activity Snapshot, by the numbers:

<table>
<thead>
<tr>
<th>Technology Licensing Revenues</th>
<th>$2,976,000</th>
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</thead>
<tbody>
<tr>
<td>Innovation Commercialization Funding</td>
<td>$482,000</td>
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<tr>
<td>Inventive Activity</td>
<td>33 Invention Disclosures received</td>
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<tr>
<td>Patent applications filed in FY16</td>
<td>33</td>
</tr>
<tr>
<td>Patents issued to UML</td>
<td>13</td>
</tr>
<tr>
<td>Outside/Corporate Engagement Activity</td>
<td>161 IP related Agreements</td>
</tr>
<tr>
<td>Entrepreneurial Activity</td>
<td>5 Startups Formed</td>
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</table>

Unit Goals/Initiatives for FY 2017

• Increased outreach to faculty and leadership of all schools at UML to understand their needs, identify potential for various kinds of IP, encourage a culture of innovation and increase the number and quality of disclosures to OTC. Expand portfolio of educational programs offered to faculty (and students).
• Grow collaborations with government and industry partners, leverage network for research funding to bring the technology to the license-ready stage. Represent UML at industry conferences in focus areas to increase contact with potential partners.
• Assist licensees to succeed by introduction to additional funding sources, ensuring the growth and viability of a startup beyond the "seed" stage.
**Faculty Invention Disclosures FY16**

In FY16, 27 individual faculty members contributed to one or more invention disclosure. In FY16, there were 34 inventive contributions made by faculty.

<table>
<thead>
<tr>
<th>Faculty Member</th>
<th>College</th>
<th>Department</th>
<th>No. of CIDs</th>
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<tbody>
<tr>
<td>Akyurtlu, Alkim</td>
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<td>Hansen, Christopher</td>
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<td>Mechanical Engineering</td>
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<tr>
<td>Therrien, Joel</td>
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<td>Orbey, Nese</td>
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<td>Lee, Yongwoo</td>
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<td>Shen, Mengyan</td>
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<td>Nagarajan, Ramaswamy</td>
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<td>Handelman, Gary</td>
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<td>Manohar, Sanjeev</td>
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*Note: Faculty members are acknowledged for each disclosure in which they are a named coinventor.*
### Faculty Whose Inventions Were Issued or Granted Patents in FY16

#### Patents Issued in FY16

<table>
<thead>
<tr>
<th>Invention</th>
<th>Issued Patent No.</th>
<th>Country of Filing</th>
<th>Intellectual Property Title</th>
<th>Inventors</th>
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<tr>
<td>2006-017</td>
<td>US 9,078,294</td>
<td>United States</td>
<td>Nanoheater Elements, Systems and Methods of Use Thereof</td>
<td>Julie Chen *, Charalabos Dounandjis, Claus Rebholz, Teikichi Ando</td>
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<td>2010-011</td>
<td>US 9,080,001</td>
<td>United States</td>
<td>Flame-Retardant Derivatives</td>
<td>Jayant Kumar, Ramaswamy Nagarajan *, Bon-Chol Ku, E. Bryan Coughlin, Sethumadhavan Ravichandran, Subhalakshmi Nagarajan</td>
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<td>2006-003</td>
<td>2631927</td>
<td>Canada</td>
<td>Botulinum Nanoemulsions</td>
<td>Robert J Nicolosi *, Jon Edelson</td>
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<td>2011-003</td>
<td>US 9,163,114</td>
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<td>Biodegradable Shape Memory Polymer</td>
<td>Bridgetta Bushmill *, Amit Laxman Garie</td>
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<td>2010-003</td>
<td>US 9,139,690</td>
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<td>BISPHENOLA (BPA) FREE EPOXY RESINS</td>
<td>Daniel Schmidt *, Kin Chan</td>
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<td>2013-017</td>
<td>US 9,156,924</td>
<td>United States</td>
<td>Novel Polymerization Initiating System and Improved Method to Produce Highly Reactive Olefin Functional Polymers</td>
<td>Rudolf Faust *, Jack Ebert</td>
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<td>2007-010</td>
<td>US 9,173,970</td>
<td>United States</td>
<td>NOVEL BIODEGRADABLE BONE PLATES AND BONDING SYSTEMS</td>
<td>Jeffrey Weinzweig, Anshuman Shrivastava, Stephen P McCarthy *</td>
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<td>2014-018</td>
<td>US 9,333,096</td>
<td>United States</td>
<td>Prosthetic Limb</td>
<td>Jonathan de Alderete *, Erin Keaney, Brian Donoghue</td>
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<td>2012-003</td>
<td>5945605</td>
<td>Japan</td>
<td>Polymerization Initiating System and Method to Produce Highly Reactive Olefin Functional Polymers</td>
<td>Rudolf Faust *, Philip Dimitrov, Rajeev Kumar, Jack</td>
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### INTELLECTUAL PROPERTY BY COLLEGE - FY16

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<td>33</td>
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<td>Patent Applications Filed</td>
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<td>14</td>
<td>5</td>
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<td>Patent Applications Published</td>
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<td>Patents Issued</td>
<td>7</td>
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*Graduate School of Education, The Manning School and The College of Fine Arts, Humanities & Social Science did not have IP recorded in FY16*
UMPO Technology Development Fund Awardees 2016

<table>
<thead>
<tr>
<th>PI(s)</th>
<th>Department</th>
<th>Award Amt</th>
<th>Technology</th>
<th>Docket No(s)</th>
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<tbody>
<tr>
<td>Carol Barry, Joey Mead</td>
<td>Plastics Engineering</td>
<td>$25,000</td>
<td>Commercialization of Corrosion Resistance Coating with improved durability</td>
<td>UML 2014-010, UML 2014-022</td>
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<td>Daniel Schmidt,</td>
<td>Plastics Engineering</td>
<td>$25,000</td>
<td>Vinyl hydroxyl ether resins (VHER) : A new family of resins</td>
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MTTC Innovation Commercialization Seed Fund Phase 2

<table>
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<tr>
<td>Daniel Schmidt</td>
<td>Plastics Engineering</td>
<td>$40,000</td>
<td>Bisphenol A (BPA) Free Epoxy Resins for Food Can Liners</td>
<td>UML 2010-003</td>
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<tr>
<td>Pradeep U. Kurup</td>
<td>Civil Engineering</td>
<td>$40,000</td>
<td>Versatile Electronic Tongue for Environmental Monitoring and</td>
<td>UML 2013-007</td>
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<td>Emo Sajo</td>
<td>Physics</td>
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<td>Radiation detection and monitoring for radiation safety and medical applications employing self-powered High</td>
<td>UML 2013-013; UML 2013-024</td>
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<td>Xingwei Wang</td>
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<td>$40,000</td>
<td>CBU (Catheter Based Ultrasound) fiber optic temperature distribution</td>
<td>UML 2015-032</td>
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OTC Faculty Awards

Successful Exit for UML Technology, via sale of UML Start-up Company

Drug-delivery start-up "Anterios" acquired by Allergan plc in January 2016
- Robert Nicolosi, Clinical Laboratory & Nutrition Studies
- Stephen McCarthy, Plastic Engineering
- Thomas Shea, Biological Sciences
- Thomas Wilson, Clinical Laboratory & Nutrition Studies
- Carl Lawton, Chemical Engineering
Faculty Recipients of the UMPO Technology Development Fund Awards in FY16 *

- Carol Barry, Joey Mead; Plastics Engineering, Commercialization of Corrosion Resistance Coating with improved durability, $25,000
- Daniel Schmidt, Akshay Kokil; Plastics Engineering, Vinyl hydroxyl ether resins (VHER): A new family of resins, $25,000

Faculty Recipients of the MTTC Commercialization Seed Fund Phase 2 Awards in FY16 *

- Daniel Schmidt; Plastics Engineering, Bisphenol A (BPA) Free Epoxy Resins for Food Can Liners, $40,000
- Pradeep U. Kurup, Civil Engineering, Versatile Electronic Tongue for Environmental Monitoring and Food Safety Applications, $40,000
- Erno Sajo, Physics, Radiation detection and monitoring for radiation safety and medical applications employing self-powered High Energy Current nanofilms, $40,000
- Xingwei Wang, Electrical & Computer Engineering, Catheter Based Ultrasound fiber optic temperature distribution measurement system for controlling the radiofrequency ablation, $40,000

Faculty Finalists for the MassCEC Awards in FY16

- Jayant Kumar, Perovskite-based flexible Solar Cells

Faculty selected to present their Technology at the First MATTO Food Forum

- Dan Schmidt
- Pradeep Kurup

Faculty Receiving Innovation Awards for their Technology

- Pradeep Kurup, at TechConnect 2016

Faculty Submitting the Most Invention Disclosures in FY16

- Alkim Akyurtlu
- Christopher Hansen

Faculty interested in applying for these grants should contact OTC.
INNOVATION HUB
http://www.uml.edu/ihub

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Email</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tom O’Donnell</td>
<td>Director</td>
<td><a href="mailto:Tom_ODonnell@uml.edu">Tom_ODonnell@uml.edu</a></td>
<td>978--934--2641</td>
</tr>
<tr>
<td>Lisa Armstrong</td>
<td>Asst. Director</td>
<td><a href="mailto:Lisa_armstrong@uml.edu">Lisa_armstrong@uml.edu</a></td>
<td>978--934--6343</td>
</tr>
<tr>
<td>Harrison Frye</td>
<td>Lab Manager</td>
<td><a href="mailto:Harrison_frye@uml.edu">Harrison_frye@uml.edu</a></td>
<td></td>
</tr>
</tbody>
</table>

Mission
The UMass Lowell Innovation Hub is a new, 11,000 square-foot incubator, co-working and prototyping facility in downtown Lowell supporting early-stage, technology-based ventures from idea to impact. Owned and operated by UMass Lowell, the iHub provides flexible, affordable workspace, program, event, community, equipment and support offerings to member companies. In addition to the fabrication and prototyping lab on-site, member companies have access to broader university resources including testing and characterization equipment, labs, prototyping gear, libraries and collaborations with faculty researchers and student interns. Technology and industry clusters supported include information technology, embedded systems, robotics, instrumentation, sensors / controls / IoT, advanced materials, cleantech and advanced manufacturing. The iHub is open to both university spinoffs as well as startups from the broader greater Boston/Merrimack Valley region.

Shared Conference Rooms
Secure, Private Offices

Open, Shared Coworking & Café Area
Open, Dedicated Desks
Access Controlled Prototyping Lab

Services & Programs
- Variety of workspace options including private offices, dedicated desks, open co-working and shared collaboration spaces.
- Support services including conferencing facilities, internet access, printing / copying / scanning, kitchen / café and mail / Fedex / UPS.
• Access to broader UML resources including core research facilities, labs and libraries as well as collaborations with faculty / researchers and student interns.
• Access to Workbar’s network of co-working facilities including core sites in Boston, Cambridge, Somerville and Arlington as well as Workbar’s network of partner sites throughout Mass.
• A comprehensive portfolio of programs, events, workshops and seminars covering industry, technology and entrepreneur-focused topics and an expanding community of Innovation Hub stakeholders and supporters.

Milestone Accomplishments FY2016 (July 2015 – June 2016)
• Successfully launched the Innovation Hub in July 2015 and completed physical build out of required furniture, furnishings, supplies and equipment (including prototyping lab).
• Developed marketing & outreach collateral (including brochures and web site) and built out all required processes, procedures and legal infrastructure (e.g., agreements).
• Established a successful collaboration and operational partnership with Workbar, an owner / operator of co-working facilities in Boston, Cambridge, Somerville and Arlington.
• Grew the Innovation Hub member base to seventeen (17) total companies covering a variety of industry / technology sectors including robotics, sensors, enterprise software and embedded systems / Internet of Things (IoT).
• Expanded the community of Innovation Hub sponsors to include Choate, Arrow, SolidWorks and Enterprise Bank and increased outreach to additional target sponsors.
• Established partnerships and collaborations with quasi-government agencies, industry organizations and community groups including MassDevelopment, MassMEP, MassTLC, MassCEC, Mass Tech Collaborative, ACTION, SBANE, EForAll and Greater Lowell Chamber of Commerce.
• Successfully deployed a variety of programs, seminars and workshops including the Choate Legal Series, IoT Maker to Marketplace Workshop, MassTLC Robotics Advanced Manufacturing seminar, IoT Autonomous Vehicle & Robotics MeetUp and Perfect Pitch presentation workshop.
• Successfully hosted high profile meetings and events including the UMass Board of Trustees quarterly meeting, the Mass Legislative Innovation Board Meeting and the Deshpande Symposium Welcome Reception.

Unit Goals/Initiatives for FY 2017
• Grow iHub membership base to 35 – 40 companies by attracting and retaining leading edge, technology-based start-up ventures in the Merrimack Valley region.
• Expand portfolio of programs and events offered at the iHub and collaborations with university, corporate, government and industry partners.
• Strengthen financial sustainability of the iHub through increased membership fees, sponsorships and program / event fees.
• Expand Innovation Hub operations and programs to new Haverhill site.
M2D2 is a university based incubator program to advance early stage medical device and biotech innovations. It is a joint project between UMass Lowell and the UMass Medical School in Worcester. M2D2 maintains two facilities in Lowell, one that is approximately 20,000 square feet on two levels of the Wannalancit Mills complex and the second is approximately 11,000 square feet and is located in the Hamilton Canal Innovation District.

M2D2 provides flexible, affordable wet and dry lab spaces, private and co-working offices, educational and support programs, events, ecosystem, and equipment to emerging resident companies. In addition to the resources and equipment on site, resident companies have access to broader university resources at both UMass Lowell and the UMass Medical School, including testing and characterization equipment, assistance with clinical trials, labs, prototyping equipment, libraries and collaborations with clinicians, faculty researchers and student interns. M2D2 is open to both university spinoffs as well as startups from the greater Boston area. M2D2 is also able to provide soft landing space for startups based internationally and in other parts of the United States who want to take advantage of all the Boston start-up community has to offer.
Services & Programs

- Wet labs (private & shared), office space (private & shared), prototyping lab
- General support services include admin assistance, conference room and facilities, event space, internet access, print / copy / scan, shared kitchen area and mail /FedEx/UPS, lab vendor pick-up and drop-off.
- Lab support services include lab training, lab coats/cleaning, use of equipment, waste removal, EHS compliance.
- Access to broader UMass Lowell and UMass Medical School resources including core research facilities, labs and libraries as well as collaborations with faculty / researchers, clinicians and student interns.
- A comprehensive portfolio of programs, events, workshops and seminars covering industry, technology and entrepreneur-focused topics and an expanding community of M2D2 stakeholders and corporate supporters.

Milestone Accomplishments FY2016 (July 2015 – June 2016)

- Successfully launched the expansion of M2D2 in the fall of 2015 and completed the physical build-out to include furniture, furnishings, supplies and lab equipment.
- Updated marketing & outreach collateral (including brochures and web site) to include new shared lab facility.
- Established corporate in-kind sponsorships with equipment manufacturers / suppliers to include American Instrument Exchange, Waters Corp., Beckman Coulter and Corning Glass.
- Expanded M2D2’s base of corporate sponsors and, most notably, became a designated Johnson & Johnson Innovation J Labs location, one of only six in the world.
- Successfully ran several programs and seminars, including the Venture Well ASPIRE series, grant writing, financing and pitch coaching sessions.
- Successfully hosted the 5th Annual $100K Challenge which attracted more than 80 applicants from around the world.
- Successfully co-produced the first ever Diabetes Innovation Challenge which attracted more than 85 applicant start-up companies and awarded more than $100,000 in cash and in-kind service awards.

Unit Goals/Initiatives for FY 2017

- Strengthen M2D2’s financial picture by expanding the number of resident companies to 20-25 at M2D2’s Canal Street lab facility and by maintaining a full roster at the Wannalancit Mills building.
- Expand corporate partnerships by successfully engaging with biotech industry companies such as Amgen, Lilly and Pfizer.
- Expand upon current educational programming according to a set calendar format throughout the year.
NEW VENTURE DEVELOPMENT

http://www.uml.edu/NVI

Mission
New Venture Development cultivates and supports startup skills development and related activity of UMass Lowell’s faculty and research-oriented student and staff. Additionally, NVD provides a pathway and resources for university-owned innovation to become startups.

Services & Programs
New Venture Development is a mix of university resources and equity investment as well as an 8 step process to guide internal research projects with high commercial potential through various activities to increase the likelihood of start-up success.

Staff
<table>
<thead>
<tr>
<th>Staff</th>
<th>Staff Title</th>
<th>Email</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nancy Saucier</td>
<td>Director</td>
<td><a href="mailto:Nancy_saucier@uml.edu">Nancy_saucier@uml.edu</a></td>
<td>X4-3212</td>
</tr>
<tr>
<td>Anshuman Chadda</td>
<td>GEIR</td>
<td><a href="mailto:Anshuman_Chadda@uml.edu">Anshuman_Chadda@uml.edu</a></td>
<td>202-630-3201</td>
</tr>
<tr>
<td>Ruth Dubey</td>
<td>Admin. Assistant</td>
<td><a href="mailto:Ruth_Dubey2@uml.edu">Ruth_Dubey2@uml.edu</a></td>
<td>X4-3499</td>
</tr>
</tbody>
</table>

Tech Venture Program
Tech Venture Program is an educational opportunity that facilitates entrepreneurial thinking and skills among faculty members. The program offers a series of interactive sessions, and access to industry leading mentors during the Spring semester that culminates with a start-up style pitch before a panel of judges and investors where teams compete for course releases and small seed grants to pursue their business concepts. In 2016, 11 teams from across disciplines and schools participated, resulting in two awards --- Aquaterrene by Dr. Pradeep Kurup and BuzSaw by Dr. Joel Therrien.

Commercialization Funding
NVD has established an I-Corps Site in collaboration with The UMass Medical School, UMass Boston, and Middlesex Community College. This $500,000 grant was recently awarded to UMass Lowell from the National Science Foundation. Small micro-grants of up to $3,000 will be available later this year to support faculty commercialization projects with travel, event registration fees, materials, outsourced design, fabrication and testing, and consulting services.
NVD has also supported faculty teams in successfully securing both federal, state and UMass commercialization grants to further their start-up efforts.

**River Hawk Fund**
The River Hawk New Venture Fund is an equity investment fund established with licensing revenue and alumni contributions to make pre-seed and seed stage investments into technologies that have been developed in whole or in part at the university. The fund completed three investments in 2016, two of which were UMass technologies, and will make three more investments during the first half of 2017—one of which is a UMass Lowell spin-out, Invitrometrix, which will develop a whole-cell biosensor with applications in drug discovery based on innovative research that resulted from the collaboration of Drs. Susan Braunhut, Ken Marx and Joel Therrien.

**Milestone Accomplishments**
New Venture Development has worked with faculty to assess and support 34 projects since its establishment in 2012. This effort has resulted in nearly 25% of all NVD projects receiving commercialization funding averaging $35k in 2016.

<table>
<thead>
<tr>
<th>Number of Projects Supported by the New Venture Initiative in 2016</th>
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</thead>
<tbody>
<tr>
<td><strong>WIN RATE</strong></td>
</tr>
<tr>
<td><strong>FUNDING RATIO</strong></td>
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<tr>
<td><strong>AVERAGE RAISE PER SUCCESS</strong></td>
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</table>

**FY2016 (July 2015 – June 2016)**
- Successful launch of the Tech Venture program
- Funding of three University-affiliated startups through the River Hawk Venture Fund including one UMass Lowell spin-out—Weave Visual Analytics (n.k.a., Open Access Technologies) launched from the lab of Dr. Georges Grinstein.
Unit Goals/Initiatives for FY 2017

- Launch the UMass Lowell I-Corps Site Program and award up to $50k to at least 10 UMass Lowell project teams.
- Grow the River Hawk New Venture Fund to $1M during the next two years to better support UMass Lowell affiliated start-up activity.
- Increase Global Entrepreneur-In-Residence participation at UMass Lowell to include up to 10 new GEIRs to support faculty commercialization efforts.

NVD Awards

Faculty Supporting Startup Formation in FY16

Susan Braunhut  Biology  Start-up: Invitrometrix  Whole-cell biosensor
Kenneth Marx  Biology  Start-up: Invitrometrix  Whole-cell biosensor
Joel Therrien  ECE  Start-up: Invitrometrix  Whole-cell biosensor

Faculty Winning Tech Venture Program

Joel Therrien  ECE  BUZSAW
Pradeep Kurup  Civil &Environmental Eng.  Aquaterrene: heavy metal sensor

NSF I-Corps Grant Teams

Viktor Podolskiy  Physics  Photonics Composite Software

NSF PFI AIR-TT Award

Zhiyong Gu  Chemical Engineering  Lead-free nano-solder scale up

SBIR Phase I Award

Erno Sajo  Physics  Low cost, high sensitivity radiation detector
Research Administration and Institutional Compliance

ORA & OIC Organizational Chart

Office of Research Administration (ORA)
Susan Puryear
Director

** Linda GladuEnnis
  Asst. Director
  G&C Administration

** Patricia O’Neill
  Sr. G&C Administrator

** Dianne Cazeca
  Sr. G&C Administrator

Mary Sloan
Holly Norton
Proposal Development Specialists

Sonia Ouirgue
Research Data Analyst

** Mary Sloan
  Funding & Subcontract Coordinator

** Samantha Anthony
  G&C Assistant

Office of Institutional Compliance (OIC)
Elaine Major
Director

Annie Maglia
Associate Vice Chancellor
RA & IC

** Nancy Desjardins
  Asst. Director
  Grant Accounting

** Marci Miller
  Grant Accountant

** Kathy Zeneri
  Grant Accounting Supervisor

Kevin Mascoll
Financial Administrator

Danielle DeLuca
Financial Administrator

** Suzanne Mahoney
  Financial Administrator

** Heather Spyarakis
  Billing Specialist

** Loretta (Lori) Maguire
  Accounting Administrator

Tom Porro
Manager
Export Control Compliance

Amy Finnernal
Manager
Animal Research Compliance

Emily Sousa
IRB Administrator

COS - College of Sciences
FAHSS - Fine Arts, Humanities, and Social Sciences
COHS - College of Health Sciences
GSE - Graduate School of Education
MSB - Manning School of Business
COE - College of Engineering

* Pre-Award  ** Post-Award
UML Research Administration and Institutional Compliance Contacts

**AVC – Research Administration and Institutional Compliance**  Anne Maglia – x4-4254, Anne_Maglia@uml.edu

**Office of Research Administration (ORA)**
Susan Puryear, Director – x4-4170, Susan_Puryear@uml.edu

Funding Opportunity Identification
Mary Sloan – x4-4783, Mary_Sloan@uml.edu

Pre-award Services
Proposal preparation, review and submission; Grant award acceptance and award set-up; Contracts for sponsored research and research services; Subcontracting:
- Sciences, Plastics Engineering: Linda Gladu Ennis – x4-4718, Linda_GladuEnnis@uml.edu
- Engineering (minus Plastics): Dianne Cazeca – x4-4192, Dianne_Cazeca@uml.edu
- Health Sciences, Education, Business, FAHSS (see Andrew Dewing), Radiation Lab: Patricia (Patti) O’Neill – x4-3230, Patricia_ONeill@uml.edu

Post-award (Financial) Services
Purchase order/expenditure approvals; Account balances; Subcontractor invoices; Financial reporting; Award closeout; Effort certification:
- FAHSS, Sciences, Radiation Lab: Suzanne Mahoney, x4-4726, Suzanne_Mahoney@uml.edu
- Engineering: Kevin Mascoll, x4-3646, Kevin_Mascoll@uml.edu
- Health Sciences, Education, Business: Danielle DeLuca, x4-3462, Danielle_DeLuca@uml.edu

Post-award (Non-Financial) Services
Modifications to existing awards - No Cost Extensions, Carry-forward requests, Re-budgeting requests, Subcontract modifications or extensions, Technical reporting, Items requiring prior approval:
- Sciences, Plastics Engineering: Linda Gladu Ennis – x4-4718, Linda_GladuEnnis@uml.edu
- Engineering (minus Plastics): Dianne Cazeca – x4-4192, Dianne_Cazeca@uml.edu
- Health Sciences, Education, Business, FAHSS (see Andrew Dewing), Radiation Lab: Patricia (Patti) O’Neill – x4-3230, Patricia_ONeill@uml.edu

External reporting (technical); Contracts for Services (Vendors):
Samantha Anthony – x4-4987, Samantha_Anthony@uml.edu

**Office of Institutional Compliance (OIC)**
Reporting Non-compliance and Misconduct; Outside Activity Disclosures; Conflicts; Responsible Conduct in Research
Elaine Major, Director – x4-3452, Elaine_Major@uml.edu

Export Compliance
Thomas Porro, – x4-3207, Thomas_Porro@uml.edu

Use of Vertebrate Animals in Research (IACUC)
Amy Finneral, – x4-4698, Amy_Finneral@uml.edu

Use of Human Subjects in Research (IRB), Institutional Biosafety Committee (IBC) Administration
Emily Sousa, – x4-4134, Emily_Sousa@uml.edu
Office of Research Administration
Susan Puryear, Director

The Office of Research Administration works with faculty on proposal submissions, funding opportunities, interactions with program managers, and negotiations of grants and contract agreements. ORA also works closely with Research Accounting (under Finance and Operations) to assist with no-cost extensions, budget modifications, and other project management.

### Annual Awards Received - By College

<table>
<thead>
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<th>College</th>
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<th>2015</th>
<th>2016</th>
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<td>College of Sciences</td>
<td>$13,675,673</td>
<td>$21,210,720</td>
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<td>College of Fine Arts, Humanities &amp; Social Sciences</td>
<td>$4,040,831</td>
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<td>$1,410,391</td>
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<td>College of Engineering</td>
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<td>College of Health Sciences</td>
<td>$8,208,717</td>
<td>$9,862,088</td>
<td>$7,872,452</td>
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<tr>
<td>Manning School of Business</td>
<td>$301,232</td>
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<td>University Level</td>
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### Annual Proposals Submitted - By College

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<th>2016</th>
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<td>QTY</td>
<td>QTY</td>
<td>QTY</td>
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<td>----------------------------------------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td>Kennedy College of Sciences</td>
<td>143 $55,456,204</td>
<td>144 $66,011,907</td>
<td>166 $63,822,798</td>
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<tr>
<td>College of Fine Arts, Humanities &amp; Social Sciences</td>
<td>44 $11,717,165</td>
<td>53 $11,807,180</td>
<td>63 $5,901,413</td>
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<td><strong>491</strong> $223,772,620</td>
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### Success of Proposals Submitted in FY15*

*Since awards are generally made 6-9 months after proposals are submitted, data provided shows awards received to date on proposals submitted in FY15.*

#### Federal Sponsor Detail

<table>
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<tr>
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<th>Awards</th>
<th>Success Rate</th>
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#### NIH Detail

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#### Other Federal

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#### ALL SPONSORS

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# FY16 Total Expenditures
## Top 3 Faculty by College

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<td>2. Yanco, Holly</td>
<td>2. Wyman-Colombo, Michaela</td>
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<tr>
<td>3. Montesalvo, Mary A</td>
<td>3. Greenwood, Anita</td>
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<table>
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<th>College of Health Sciences</th>
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<td>1. Armiento, Craig</td>
<td>1. Slatin, Craig</td>
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<td>2. Yoon, Seongkyu</td>
<td>2. Tucker, Katherine Louise</td>
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<table>
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<td>2. Tello, Steven F.</td>
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<td>3. Moloney, Jacqueline</td>
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## FY16 Total Expenditures by PI

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Office of Institutional Compliance (OIC)
Elaine Major, Director

Key personnel are:
Thomas Porro, Export Control Compliance Manager
Amy Finneral, Animal Research Compliance Manager
Emily Sousa, IBC and IRB Administrator

Office of Institutional Compliance (OIC) is responsible for UMass Lowell’s compliance with Federal, State, and Local regulations related to export controls, research activities with human subject and animals, radiation safety, use of biohazardous materials, and conflicts of interest. Regulations are becoming increasingly more complex and difficult to understand and navigate. Contact OIC staff with any questions and to understand how to accomplish your research goals while complying with increasingly complex regulations.

2016 Summary of Activities

Faculty/Staff Serving on Committees: 50 (4 persons serving on 2 or more committees)

Highlights by Activity:

**Institutional Animal Care and Use Committee (IACUC)**
- 5 new protocols by 5 faculty
- 9 active by 5 faculty/staff
- 6 amendments
- Two new satellite facilities approved

**Institutional Biosafety Committee (IBC)**
- 26 new registrations with 61 active by 23 faculty/staff
  (Includes 4 new registrations from M2D2 companies)
- 29 amendments

**Institutional Review Board (IRB)**
- 169 new protocols (81 Exemptions, 85 Expedited, 3 Full Review)
- 380 active (not including exempt approvals) by 135 faculty
- 211 Amendments
- 91 Continuing Reviews
- 86 sponsored by 48 federal agencies, 60 internally funded, 234 unsponsored
Export Compliance
- 328 International Travel Authorizations to 59 countries
- 95 certification letters for travel with electronic devices
- 31 physical exports by 21 faculty/staff to 19 countries
- 272 faculty/students/staff provided awareness training at 20 events
- 97 sponsored research / research service agreements reviewed

Outside Activity Reports and Conflicts Committee Reviews
- 79 new or updated disclosures by faculty
- 6 new disclosures by staff
- Conflicts Committee Activity - 4 cases submitted to UMP for management plan
- 0 Disclosures with federally funded awards

Radiation Safety Committee (RSC) (3 additional subcommittees with 18 members)
- 12 Authorized/active radiation users
- 10 Authorized/active x-ray users
- 10 Authorized/active laser users

UMass Lowell Compliance Committee Members through 2016
(Additional Community Volunteer Members Not Listed)

Institutional Animal Care & Use Committee (IACUC)
Thomas Wilson, Chair, Faculty, Biomedical & Nutritional Science
Peter Gaines, Faculty, Biological Sciences
Susan Woskie, Faculty, Public Health
Glenn MacDonald, Director, EHS
Jennifer Fish, Faculty, Biological Sciences
Mahdi Garelnabi, Faculty Biomedical & Nutritional Sciences
Elaine Major, Director, OIC
Amy Finneral, Staff, OIC

Institutional Biosafety Committee (IBC)
Nancy Goodyear, Chair, Faculty, Biomedical & Nutritional Sciences
Matthew Gage, Faculty, Chemistry
Susan Woskie, Faculty, Public Health
Ruth Medina, Biosafety Specialist, EHS
Peter Gaines, Faculty, Biological Sciences
Donato Vespa, Staff, Biomanufacturing Center
Guixin (Susan) He, Faculty, Biomedical & Nutritional Science
Dhimiter Bello, Faculty, Public Health
Elaine Major, Director, OIC
Emily Sousa, Staff, OIC
Institutional Review Board (IRB)

Jill Lohmeier, Chair, Faculty, Graduate School of Education
Melissa Morabito, Faculty, Criminal Justice & Criminology
Doreen Arcus, Faculty, Psychology
Joyce White, Faculty, Physical Therapy
Sabrina Noel, Faculty, Biomedical & Nutritional Science
Margaret Knight, Faculty, Nursing
Robin Toof, Center Co-Director, Center for Community Research & Engagement
Leland Ackerson, Faculty, Community Health & Sustainability
Jason Rydberg, Faculty, Criminal Justice & Criminology
Paulette Renault-Caragianes, Assistant Dean, Student Affairs for Health and Wellness
Elaine Major, Director, OIC
Emily Sousa, Staff, OIC

Radiation Safety Committee (RSC)

Sukesh Aghara, Chair, Faculty, Chemical Engineering-Nuclear
Nelson Eby, Vice-Chair, Faculty, Environment, Earth & Atmospheric Sciences
Noureddine Melikechi, Dean, Kennedy College of Sciences
Mark Hines, Faculty, Biological Sciences
Susan Braunhut, Faculty, Biological Sciences
Leo Bobek, Supervisor, Nuclear Reactor
Joel Therrien, Faculty, Electrical & Computer Engineering
Steven Sny, Director, EEM
Richard Lemoine, Exec. Director, EEM
Andrew Rogers, Faculty, Physics & Applied Physics
Elaine Major, Director, OIC

UMass Lowell, Conflicts Committee

Julie Chen, Campus Oversight and Representative to UMass System, Vice Chancellor for Research & Innovation
Sanjeev Manohar, Chair, Chemical Engineering
Anne Maglia, Associate Vice Chancellor Research Administration & Institutional Compliance
Carl Lawton, Faculty, Chemical Engineering
Tom Gordon, Faculty, Psychology
Natalie Houston, Faculty, English
Lorraine Dagostino, Faculty, Graduate School of Education
Judith Davidson, Faculty, Graduate School of Education
Bob Li, Faculty, Operations Information Systems
Ying Huang, Faculty, Marketing Entrepreneurship & Innovation
Shellie Simons, Faculty, Nursing
Margaret Knight, Faculty, Nursing
Partha Chowdhury, Faculty, Physics & Applied Physics
Jeffrey Moore, Faculty, Biological Sciences
Elaine Major, Director, OIC
Strategic Alliances and Industry Partnerships  
Arlene Parquette, Director of Business Development

Key personnel are:  
Teri Hamelin, Core Research Facilities Director  
Tom Ferraguto, Nanofabrication Laboratory Director

With a focus on research partnerships, the Office of Strategic Alliances and Industry Partnerships includes the Core Research Facilities and Business Development. The mission of this group is to establish more collaborations and partnerships with industry with the following goals:

- Expand opportunities for research collaborations with industry
- Increase industry funding for research
- Enhance increase visibility of the UML research enterprise

Business Development serves as a resource to assist research faculty and research centers:

- Development of strategy for seeking industry support
- Establishing initial contact with prospective industry partners
- Negotiation of business/legal terms in sponsored research agreements (e.g. IP rights, confidentiality)
- Function as point of contact for follow up activities

Manufacturing USA Institutes (UMass Lowell contact, TPM = Technical Program Manager):

- AmericaMakes (Additive Manufacturing) – Craig Armiento, Alkim Akyurtlu, and Ed Kingsley (TPM)
- NextFlex (Flexible Electronics) – Joey Mead, Claire Lepont (TPM)
- AFFOA (Fibers & Textiles) – Ram Nagarajan, Cheryl Gomes (TPM)
- NIIMBL (Biomanufacturing) – Seongkyu Yoon
- AIM (Photonics) – Wei Guo
- REMADE (Clean Energy Manufacturing Recycling) – Meg Sobkowicz-Kline
- ARM (Robotics) – Holly Yanco
- IACMI (Composites) – Jim Sherwood
Core Research Facilities
Theresa (Teri) Hamelin, Director

NanoFabrication Laboratory (NFL)
Director: Thomas Ferraguto
Staff: Jay Goodman, Miguel Matos (P/T), Rebecca Powers

Thermal and Mechanical Properties (TMP)
Staff: Patrick Casey (P/T)

Biomolecular Characterization Lab (BCL)
Manager: Wendy Gavin
Staff: Jack Lepine

Material Characterization Lab (MCL)
Manager: Dr. Earl Ada
Staff: Miguel Matos (P/T)

Nuclear Magnetic Resonance (NMR)
Manager: Wendy Gavin (P/T)

Nerve Center CRF
Faculty Director: Holly Yanco
Manager: Adam Norton (P/T)
Staff: Brendan Haugland (P/T)

Revenue Increase since FY 2015
up 72%!
Industry revenue up 58.3%
Internal revenue up by 6.3%

CRF reaches 668
Registered users!
34% increase
- 72 new accounts
- 11 Faculty, 61 External
  Including faculty and students from our sister campuses.

UMass System Collaboration with Core Directors to promote resources at each campus and support infrastructure development.

The total revenue was $761,366, an increase of 72% from FY2015.

FY 2016 9001 Total Orders
51% increase from FY 2015

Educational and Community Outreach (Partial listing)
- Workshops & Seminars
  - Basics & Physical Vapor Deposition
  - Next Gen Sequencing
  - Molecular spectroscopy in materials science
  - ddPCR and PrimePCR
  - Flow Cytometry
  - Spectroscopy
  - Microscopy
- Events & Demos
  - NERVE Center Open Houses
  - CRF Showcase with Clean Tech Incubators
  - Co-hosted ISPE meeting
  - Ed. Demos to Lowell High, Waldorf School and
  - Lowell’s Girls and Boys Club

Trained 170 new users
Partnership with Co-op Center
Undergraduate co-op’s trained in CRF
Conferences:
- Tom Ferraguto: Presentation at UGIM
- Earl Ada: Taught “short course” at AVS
The CRF would like to recognize and thank the following faculty for their significant contributions and service in promoting the CRF on campus and externally in FY 2016:

Alireza Amirkhizi    James Sherwood
Christopher Hansen    Meg Sobkowicz-Kline
Stephen Johnston    Holly Yanco
Matthew Nugent
Faculty Intellectual Contributions
January 1, 2016 – December 31, 2016

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The scholarly work reflected in these data reflect the information in Digital Measures as of 12/31/2016. We thank the faculty who worked with us in making their corrections, which have been included in the electronic booklet; however were not included in the summary analysis. If additional corrections are needed in the electronic booklet, please contact Sharon_Freeman@uml.edu. Special thanks to the library staff who diligently searched faculty publications: Tony Sampas, Ellen Keane, George Hart, Kim Martin, Debby Friedman, Donna Mullin, and Sara Marks; and to Aisling McElaney, Francis College of Engineering Class of 2020 (Biomedical Engineering) for assistance compiling the booklet.
FACULTY BOOKS

College of Fine Arts, Humanities and Social Sciences

Art & Design

Ingrid Hess


School of Criminology & Justice Studies

Kareem Jordan


Economics

William Lazonick


Carol McDonough


David Turcotte

**English**

**Margaret Dietz**


**Michael Milner**


**Jonathan Silverman**


**Todd Tietchen**


**Music Department**

**William Moylan**


**Philosophy**

**John Kaag**


**Whitley Kaufman**

Political Science

Deina Abdelkader


Noel Twagiramungu


Sociology

Adrian Cruz


Daniel Egan


World Languages and Cultures Department

Sheryl Postman


Mamadou Samb (New Faculty Member)

**College of Health Sciences**

**Physical Therapy**

**Joyce White**


**Francis College of Engineering**

**Plastics Engineering**

**David Kazmer**


**Graduate School of Education**

**Curriculum & Instruction**

**Judith Davidson**

Davidson, J., Thompson, S., Harris, A. (2016). *Negotiating Digital Tools on Complex Research Teams: Dilemmas for Qualitative Research and QDA Software*.

**Kennedy College of Sciences**

**Environmental, Earth & Atmospheric Sciences**

**Nelson Eby**

Wilfred Ngwa


Manning School of Business

Khondkar Karim

Falcón, Luis

Journal Articles


**Art & Design**

**Afshar, Pouya**

**Solo Exhibitions**


**Group Exhibitions and Screenings**

[http://www.lacma.org/sites/default/files/reading_room/Islamic_Art_Now_PartTwo_LACMA.pdf](http://www.lacma.org/sites/default/files/reading_room/Islamic_Art_Now_PartTwo_LACMA.pdf)

**Research and Creative Activities: Visual Works Cited, Reviewed, Image Publication, Catalog Listing**


2016  *Boston Globe* – “UMass Lowell Faculty Members Invest in Community Projects” Brenda J. Buote | September 16th, Boston, Massachusetts.  


2016  Un-framed – Q&A with Pouya Afshar, on *Rostam In Wonderland* by Stephanie Sykes | April, Los Angeles, California.  
2016  Aaran Gallery’s *Shahnameh, The Perpetual Narrative* – by Akram Ahmadi Tavana | March, Tehran, Iran.
Mention and visual citation of *Installation for Seven Conquests of Story* in Aaran Gallery's booklet and catalogue.
Mention and visual citation of *Rostam in Wonderland* in Aaran Gallery’s booklet and catalogue.

2016  Pembroke College, Cambridge University / *Shahnameh In Iranian Contemporary Art* – by Firouza Melville | March, United Kingdom.
Mention and visual citation of *Installation for Seven Conquests of Story* in the author’s research paper for *Shahnameh Center for Persian Studies*, Pembroke College, Cambridge University.

**Hess, Ingrid**

Creative Works
Art Exhibition, Group


Hess Ingrid, “We need PEACE for our homes,” The Brush Gallery, Juried Exhibition, (December 2015 - January 2016).

**Misha Rabinovich**

Journal Articles


Creative Works

Art on the Marquee, Boston Convention Center Boston, MA

Yes Men TRD-3000 Performance, Trump SoHo Hotel, New York, NY

Artspace Game On! Commission, Goffe Street Armory, New Haven, CT
Michael Roundy

Creator and Race Director of the 2016 Lowell Kinetic Sculpture Race. Human powered, all-terrain sculptures made their way through the streets of Lowell, overcame a mud pit and navigated the Merrimack River. The event took place on September 23, 2016. Over 3500 people attended the event. Plans for the 2017 race are already under way. lowellkinetic.com

Imagine That: the Story of the First Kinetic Sculpture Race in Lowell

School of Criminology & Justice Studies

Fisher, William

Journal Articles


Harris, Andrew

Book Chapters


Journal Articles


Harris, A., Socia, K. (October (4th Quarter/Autumn) 2016). What’s in a Name? Evaluating the Effects of the “Sex Offender” Label on Public Opinions and Beliefs. Sexual Abuse, 28(7), 660-678.


**Jordan, Kareem**

**Journal Articles**


**Kras, Kimberly (New Faculty Member)**

**Journal Articles**


Morabito, Melissa

Journal Articles


Pattavina, April

Journal Articles


**Perliger, Arie (New Faculty Member)**

**Book Chapters**


**Journal Articles**


**Portnoy, Jill (New Faculty Member)**

**Journal Articles**


**Rydberg, Jason**

**Book Chapters**


Journal Articles


Shortland, Neil

Journal Articles


Socia, Kelly

Book Chapters


Journal Articles


Socia, K. (June 2016). Examining the Concentration of Registered Sex Offenders in Upstate New York Census Tracts. *Crime and Delinquency, 62*(6), 748.

Stone, Rebecca

Journal Articles


**Williams, Linda**

Journal Articles


**Economics**

**Galizzi, Monica**

Journal Articles


Other Intellectual Contributions

Kingsley, David

Journal Articles


Lahiri, Supriya

Journal Articles


Lazonick, William

Journal Articles

Lazonick, W. H. (2016). Department of Regional and Social Development, Lowell, MA, USA.


Lyn, Gary

Journal Articles

McDonough, Carol

Journal Articles


Quayes, Muhammad Shakil

Journal Articles


Tempesti, Tommaso

Journal Articles


Turcotte, David

Journal Articles


Other Intellectual Contributions


**English**

**Archibald, Diana**

Journal Articles


**Barish, Shelley**

Creative Works

Scenic Designer, Lyric Stage Company of Boston, Boston, MA. Mr. Burns, directed by A. Nora Long, April 2016.

Scenic Designer, Cortland Repertory Theatre, Cortland, NY. West Side Story directed by Nathaniel Shaw, June 2016.

Scenic Designer, Cortland Repertory Theatre, Cortland, NY. Cards on the Table directed by Kerby Thompson, August 2016.


Scenic Designer, Lyric Stage Company of Boston, Boston, MA. Murder for Two, directed by A. Nora Long, November 2016.

**Black, Michael**

Journal Articles


Brown, Nicole M., Ruby Mendenhall, Michael L. Black, Mark Van Moer, Assata Zerai, and Karen Flynn. “Mechanized Margin to Digitized Center:

**Houston, Natalie**

Peer Reviewed Book Chapters


**Lim, Sandra**

Chapbook


Poems in Journals


Lim, S. Fall 2016. “I Do Not Wish to Lie With My Own Kith and Kin” *Southern Humanities Review*. Volume 49.3.

Poems in Anthologies


Essays in Anthologies


Performances

Poetry Readings

“Boston Originals,” Harvard University, Cambridge, MA (December 9)
Hong Kong Baptist University, Hong Kong (November 12)
George Mason University, Fairfax, VA (October 20)
Massachusetts Poetry Festival, Salem, MA (May 16)
St. Lawrence University Writers Series, Canton, NY (April 17)
WORLD Series, 2016 Carol Ann Donahue Poet at Russell Sage College, Troy, NY (April 13)
AWP, Danny’s Los Angeles, CA (April 2)
Belladonna* Reading Series, Queens College, NY (March 14)
Black Mountain Institute, University of Nevada, Las Vegas, NV (February 25)
University of Reno, Reno, NV (February 24)
UC Davis, Davis, CA (February 16)
Haverford College, Haverford, PA (February 4)
Warren Wilson College, Swannonoa, NC (January 3)

Marshall, Bridget

Journal Articles


Stanton, Maureen

Book Chapter

History

Carlsmith, Christopher

Journal Articles


Forrant, Robert

Journal Articles


Keen, Paul

Journal Articles


Music Department

Case, Alexander

Journal Articles


**Greher, Gena**

Journal Articles


**Lee, Christopher**

Journal Articles


**Walzer, Daniel**

Journal Articles


Conference Proceedings


Other Intellectual Contributions


Philosophy

Evans, Nicholas (New Faculty Member)

Book Chapters


Furey, Heidi

Journal Articles


Kaufman, Whitley

Journal Articles


Mendoza, José Jorge

Book Chapters


Journal Articles


Political Science

Abdelkader, Deina

Journal Articles


Duran-Martinez, Angelica

Journal Articles


Dyck, Joshua

Journal Articles


Gallagher, Susan

Journal Articles


Other Contributions


Kleinberg, Mona

Journal Articles


Marietta, Morgan

Journal Articles


Smith-Walter, Aaron (New Faculty Member)

Journal Articles

Thawngmung, Ardeth

Journal Articles


Whitten-Woodring, Jenifer

Journal Articles


Psychology

Allen, Christopher

Journal Articles

Block, Stephanie

Journal Articles


Bond, Meg

Book Chapters


Journal Articles


Dinh, Khanh

Journal Articles


Dutta, Urmitapa

Book Chapters

Journal Articles


Frye, Alice

Journal Articles


Gonzales, Joseph (New Faculty Member)

Journal Articles


Gordon, Thomas

Journal Articles


Haynes, Michelle

Journal Articles


Hillier, Ashleigh

Journal Articles


**Ho, Ivy**

Journal Articles


**Kuhn, Sarah**

Journal Articles


**McCabe, Allyssa**

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**Rosales, Rocio**

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**Serna, Richard**

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**Weinstein, Yana**

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Beddoes, Kacey

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Chorbajian, Levon

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Cruz, Adrian

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**Gautam, Ramraj**

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**Knight, Margaret**

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**Mawn, Barbara**

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**McDonough, Annette**

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Melillo, Karen Devereaux

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Quinn, Brenna

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Bello, Dhimiter

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**Brunette, Maria**

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**James, Eric**

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**Kim, SoJung**

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Lopes, Alexandre

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Wu, Yi-Ning

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Hartman, Joseph

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Camci-Unal, Gulden (New Faculty Member)

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Gu, Zhiyong

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Pounders, Justin

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Rai, Prakash

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Wong, Hsi-Wu

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Xie, Dongming (New Faculty Member)

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Putko, Michele

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Raptis, Ioannis

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Reynaud, Emmanuelle

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**Shina, Sammy**

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**Stapleton, Scott**

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**Fish, Jennifer**

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Lin, Karen (Jingrong)

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**Finch, Deborah**

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**Freund, Steven**

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**Jain, Ravi**

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**Steckler, Erica (New Faculty Member)**

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