# Table of Contents

- About the Center ........................................................................................................... 3
- Flagship Programs ....................................................................................................... 4
- Research Initiatives ...................................................................................................... 7
- Members ....................................................................................................................... 9
- Affiliated Personnel .................................................................................................... 10
- Funding ....................................................................................................................... 11
- Events .......................................................................................................................... 13
- Publications ................................................................................................................ 15
- Presentations ............................................................................................................... 17
- Students Mentored ..................................................................................................... 21
- Other Notable Achievements ...................................................................................... 22
- Web and Social Media Presence ............................................................................... 23
About the Center

The Center for Advancing STEM Teaching, Learning & Evaluation is a network of faculty, projects and programs engaged in scholarship surrounding STEM education. Key Focus Areas are:

1) Discipline-based Education Research (DBER) - The Science & Math Education Research Collaborative (SMERC) conducts rigorous discipline-based education research on issues involving postsecondary student learning, and members have a track record of peer-reviewed publications and external funding.

2) Scholarship of Pedagogy - CASTLE supports faculty efforts on pedagogical scholarship, evaluation and assessment, and foster innovation in the classroom.

3) Educational Transformation - The Center promotes and fosters innovative curricula for national dissemination. The College hosts several externally funded model curricula, including: LivePhoto, Interactive VideoVignettes, and a Learning Assistant Program which transforms traditional lecture format to small group active learning.

4) Summer Math Applications in Science with Hands-on (SMASH) Experience – This week-long summer program for rising eighth-grade girls concentrates on building girls’ confidence in science and math through an on-campus experience in and out of the lab. SMASH’s curriculum focuses on improving the two attitudinal values, perceived usefulness of mathematics and mathematical self-efficacy, impacting math-related achievement. Scholarship support makes it possible for Rochester City School students to participate when they otherwise would not be able to attend.

5) Education and Careers of Groups Historically Excluded from the STEM Disciplines – In June of 2017, RIT was awarded a $1 million Inclusive Excellence grant from the Howard Hughes Medical Institute to increase diversity and inclusivity among undergraduate science majors. CASTLE members and affiliates will develop, implement and evaluate the success during this 5-year initiative. Additionally, collaborations with Women in Science (WISe), a CASTLE-affiliated program, continue to seek to engage women in the sciences and mathematics by offering information, equity and collaboration opportunities. The Center helps coordinate WISe activities, and supports efforts to secure external funding through foundations and local and national industries.

The Center’s Mission is to:

- improve science and math education and outreach initiatives at RIT and foster collaboration between science and math educators and education researchers.

The Center’s Vision is to:

- Nurture a community of faculty, administrators, and staff interested in STEM education and pedagogy. CASTLE facilitates dialog about evidence-based practices, discipline-based education research, and methods of assessment and evaluation.
- Establish a robust and sustainable infrastructure that transforms STEM educational practices, supports discipline-based education research, preparation, professional development, and outreach.
- Foster innovations in education by integrating an interdisciplinary community of scholars; promoting, sustaining, and evaluating reform efforts; advocating for diversity and access; and influencing policy, fundraising, and public outreach.
RIT HHMI Inclusive Excellence 5-Year Project

In June of 2017, the Howard Hughes Medical Institute awarded RIT $1 million to conduct the 5-year project. Rochester Institute of Technology is one of 24 institutions nation-wide to conduct a 5-year project to increase diversity and inclusivity among undergraduate science majors, which includes developing a strategy for supporting their success. These initiatives will serve as national models for other institutions.

The project will increase infrastructure, resources and expertise to strengthen inclusion in STEM education—embracing perspectives, strengths and insight from a multicultural base of faculty, staff and students in the natural sciences. Included in this population are transfer students and first-generation students.

Over the 5-year project timeframe, the goal is to engage 70 percent of College of Science faculty (including new hires), and a majority of students in project activities. The intent is to then expand participation campus-wide.

Multiple aspects are key to a successful student experience. They include a strong support network, inclusive environment that encourages open and safe conversation and good listening, and tools to understand themselves and others. Focus is placed on impacting students across three areas with distinct objectives:

- **Research/Labs**—Objective: Engage faculty in discussion about identifying, recruiting, and mentoring a diverse student population in the research lab. Faculty workshops will discuss both general mentoring strategies (e.g. setting goals) as well as topics specific to the target populations (e.g. DHH communication strategies or mentoring across gender and racial divides). Close collaboration with existing institute programs that serve underrepresented students will increase recruitment and participation of targeted students.

- **Teaching/Classrooms**—Objective: Create new classroom materials that promote student metacognition (understanding how they individually learn best) and sense of identity, as these have been shown to address many negative cultural messages students receive about their place in science. Examples include short reflections on individual strengths (affirmation exercises) or how different disciplines connected (e.g. how math concepts arise in physics). Activities will be short, so faculty can incorporate 1-2/week without significantly impacting content and keeping continuity across campus.

- **Community/Theater**—Objective: Foster a welcoming and inclusive community through a series of community building events and “Playback Theater” workshops in which actors recreate participant narratives around issues of identity and inclusivity to create stronger bonds between faculty and students. The Community/Theater strand will work with existing (and create new) student and faculty/student groups across the college to identify common challenges in the culture.
Learning Assistant (LA) Program
Dedicated to the transformation of STEM courses – the LA Program creates environments in which students can interact with one another, engage in collaborative problem solving and articulate and defend their ideas. Undergraduate LAs facilitate small-group or other interactions in the classroom. RIT’s model is designed to: a) provide resources to help faculty implement pedagogical change in their classrooms, b) recruit and prepare talented STEM majors for teaching careers, c) engage faculty and departments in recruitment and preparation of future teachers and d) improve the quality of STEM education for all undergraduates.

During the Fall 2016 semester the program had 32 Learning Assistants working with 21 Faculty Mentors in four College of Science departments (Biological Sciences, Chemistry, Mathematics/Statistics and Physics) two College of Applied Science & Technology departments (Manufacturing & Mechanical Engineering Technology, Electrical Engineering Technology). For the Spring semester there were 33 Learning Assistants working with 20 Faculty mentors within the same departments. A new relationship was formed with the American Sign Language and Interpreting Education department within NTID (National Institute for the Deaf) and three Learning Assistants were placed in Interpreting courses, mentored by 3 NTID faculty. Recruitment Fairs were held the previous semester to educate students on the Learning Assistant Program and provide them an opportunity to speak with past and current LAs about their experiences. The LA Program also hosted two teacher roundtables, bringing teachers from local schools on campus to speak with students interested in the teaching career path.

Incorporating Metacognitive Research and Practice to Ensure Student Success (IMPRESS)
This program seeks to improve learning through direct instruction in metacognition, including accurate self-assessment and sense-making. It is an intensive educational experience for first-generation and deaf/hard-of-hearing students that incorporates metacognition scientific inquiry. IMPRESS consists of (1) a Summer Experience, (2) First Year Courses and (3) the LA Program. During the summer, IMPRESS students spend two weeks together investigating complex, real-world problems. During the first-year IMPRESS students take select metacognition courses, while second year students are eligible for Learning Assistant positions. Throughout the 2016-2017 academic year there were 65 IMPRESS students. ADMIRE which stands for Academic Discourse on Metacognitive In Real Environments. They hosted their first social event “Connecting RIT: Surviving on Transfer Island” in April and they started the process of getting recognized by RIT as an official Student Government club. This project is funded through National Science Foundation contract # DUE 1317450.

Summer Math Applications in Science with Hands-On (SMASH) Experience for Girls
The SMASH Experience for Girls is a summer program is designed to increase middle-school girls’ engagement and interest in STEM. This unique program brings forty rising eighth grade girls to RIT’s campus, to spend a week working on mathematical modeling projects, designed to show the usefulness of mathematics in everyday
life; self-affirmation activities created to build confidence in math; and daily recreational activities, such as ice skating or a campus-wide STEM scavenger hunt. SMASH engages participants in mathematical modeling through a curriculum based on solving a crime scene involving activities in the College of Science’s laboratories. The experience concludes with a hands-on event with representatives from local companies demonstrating to the girls the role of STEM in their industries, and a parent symposium where participants present a problem plaguing their local community and how mathematics could be used to solve this problem. In preparation for the summer experience, RIT undergraduate and graduate students, with interests in K-12 STEM education, under the mentorship of a local teacher create, test, and then facilitate all SMASH activities.

**PEER Program**

**Professional-development for Emerging Education Researchers (PEER)**

This discipline-based education research program holds the promise of satisfying expectations of both scholarship, which is increasing at teaching-centric institutions, and teaching effectiveness, a concern at all institutions. Additionally, junior education researchers seek more diverse training in research methods and theories. Emerging education researchers need support as they develop their research programs and expand their theoretical and methodological expertise, and they benefit from the guidance of knowledgeable peers and near-peers.

PEER-Rochester available projects include looking at the following questions:

- How do students collaborate within and among lab groups, and how does the nature of that collaboration change over the course of the summer experience? Network analysis is used to track collaboration within and among lab groups of 3-4 students.
- How do gender and ethnicity affect conversational equity in lab groups? Work is done in developing both quantitative and qualitative measures of equity, and comparing the measures among multiple groups.
- When former IMPRESS students return as learning assistants, how do their experiences in the program shape their interactions with students later on? The focus is on how learning assistant interactions with IMPRESS students change (or remain the same) as they move from participants to instructors.
- How does participation in the program affect student views of the nature of science and the role of experimentation? When students conduct experiments, researchers learn about ideas around what makes an experiment “good,” and how table-top experiments are related to scientific practices.

**World Location**

<table>
<thead>
<tr>
<th>Location</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rochester, NY:</td>
<td>RIT IMPRESS Education Research Squad</td>
</tr>
<tr>
<td>Cologne, Germany:</td>
<td>Conducting Research in Active and Inclusive Pedagogies</td>
</tr>
<tr>
<td>Kibungo, Rwanda:</td>
<td>Big data analytics and Internet of things (IoT) in Education</td>
</tr>
<tr>
<td>Monterrey, Mexico:</td>
<td>Working groups for action research</td>
</tr>
</tbody>
</table>
Research Initiatives:

Science & Mathematics Education Research Collaborative (SMERC)
SMERC is the research arm of CASTLE. SMERC consists of a multidisciplinary group of Discipline Based Education Researchers (DBER), who study how students learn the STEM disciplines, apply science to problem solving, and become enculturated as scientists. This research advances fundamental knowledge of how people learn, and develops general theory that can be applied in practice. Individual projects include biology education, physics education, chemistry education, engineering education, and science/math communication. SMERC is the overarching team of researchers leading the following areas of research:

Photonics and Optics Workforce Education Research (POWER)
POWER unites higher education, discipline-based education research, and workforce development in order to investigate core aspects of typical undergraduate STEM programs: scientific content, mathematics, and communication. This project is funded through a National Science Foundation Education & Human Resources Core Research (ECR) grant DGE-1432578. This project is funded through a National Science Foundation Education & Human Resources Core Research (ECR) grant DGE-1432578.

Molecular Biology Education Group (MBER) is a collaborative research lab co-led by Dr. Dina Newman and Dr. Kate Wright, faculty in the Gosnell School of Life Sciences at RIT. The team studies how students think about molecular biology concepts and develops tools for improving biology education.

Areas of Interest
1. **Student mental models of molecular processes that involve DNA, and how novices differ from experts.** Much of our work has focused on student understanding of meiosis, which led to the development of a new framework, The DNA Triangle.

2. **How visual representations of molecular processes impact student understanding.** Work thus far has focused on the use of arrow symbols by experts and the interpretation of these symbols by learners. We are currently developing a framework that combines elements of visual communication with evidence-based pedagogy.

3. **How physical models can be used to improve student learning about molecular processes.** This work is done in collaboration with the Center for Biomolecular Modeling at the Milwaukee School of Engineering (http://cbm.msoe.edu/), where many 3-D models have been developed. These models provide the basis for activities that promote deep conceptual learning of processes that are not easy to observe directly.
4. **Development of assessments and activities for undergraduate instructors teaching molecular biology concepts.** Based on our investigations of student thinking about biology, we have developed numerous activities that demonstrably improve learning for undergraduates at all levels. We have also created the Central Dogma Concept Inventory (CDCI), which can be used to assess student understanding of Central Dogma processes.

5. **Interactive video vignettes for teaching key ideas that are difficult for students.** Together with Dr. Robert Teese (School of Physics and Astronomy at RIT) and Dr. Jean Cardinale (Alfred University), we have developed a suite of interactive, web-based activities that can be used to introduce or clarify key concepts and big ideas in biology (https://www.rit.edu/cos/interactive/). This project is funded by NSF (DUE-1432286, DUE-1432303).

6. **Undergraduate research.** In addition to mentoring RIT undergraduates on research projects during the academic year in the MBER lab, Drs. Wright and Newman lead an NSF-funded summer REU program (DUE-1359262) that brings students from all over the U.S. to learn about Discipline-Based Undergraduate Research and undertake cutting edge projects in the field (https://www.rit.edu/science/smerc/reu).

## REU Experience

**Research Experience for Undergraduates (REU)**

A hands-on research experience for undergraduates in the emerging area of Discipline-Based Education Research (DBER). One subfield of DBER relates to the use of models and representations in STEM. This NSF-funded Research Experience for Undergraduates (REU) program accepted its second cohort in early January. Research mentors and ten REU students from across the country spent the January intersession in a virtual “January Jump-Start” designed to give research mentors and students a chance to meet and start project work before the onsite experience at RIT this summer. The 2017 REU student cohort were from the following colleges: University of Alabama at Birmingham, California State University Monterey Bay, University of West Alabama, University of Seattle, Kansas State University, Chicago State University, University of Colorado Denver, Western Illinois University, and Elizabeth City State University. Undergraduate students spent time reading and discussing DBER literature with the entire group using an online reading/annotation tool. Mentors and students also engaged in Skype and email communication to discuss research interests, individual projects and research ethics. This “Jump Start” gave students the chance to become involved in the design of summer research projects and to get acquainted with each other. The program continued on June 4th when the students arrived at RIT for the nine week on-campus summer experience portion. They continued their mentored research projects but also participated in two weekly workshops, one focused on Professional Development and the other focused on DBER research methods, in addition to a number of social activities. All ten REU students presented at RIT’s Undergraduate Research Symposium on August 4th, the conclusion of the summer experience. This project is funded through National Science Foundation contract # DUE 1359262.
CASTLE Center Core Members—Managing CASTLE Programs & Projects

**Jennifer Bailey**  
Senior Lecturer, Kate Gleason  
College of Engineering

**Lindsay Owens**  
Postdoctoral Researcher,  
School of Chemistry and  
Material Sciences

**Adwoa Boateng**  
COS Library Liaison, Research and Instruction Services

**Corey Ptak**  
Program Coordinator, LA Program and Lecturer, Thomas H. Gosnell  
School of Life Sciences

**Scott Franklin**  
Director, CASTLE and Professor, School of Physics and Astronomy

**Susan Rothwell**  
Postdoctoral Researcher, School of Physics and Astronomy

**Thomas Kim**  
Associate School Head and Associate Professor, School of Chemistry & Materials Science On Leave

**Robert Teese**  
Assistant Professor, School of Physics and Astronomy

**Anne Leak**  
Postdoctoral Researcher, School of Physics and Astronomy

**Leslie Kate Wright**  
Associate Professor, Thomas H. Gosnell School of Life Sciences

**Dina Newman**  
Director, SMERC and Associate Professor, Thomas H. Gosnell School of Life Sciences

**Benjamin Zwickl**  
Assistant Professor, School of Physics and Astronomy

**Kelly Norris Martin**  
Assistant Professor, School of Communication
Affiliated Personnel—Contributing to CASTLE Programs & Projects

Linda Barton
Associate Professor, School of Physics and Astronomy

Christina Goudreau Collison
Associate Professor, School of Chemistry & Materials Science

Elizabeth Cherry
Associate Professor, School of Mathematical Sciences

Kara Maki
Assistant Professor, School of Mathematical Sciences

Jeremy Cody
Associate School Head and Associate Professor, School of Chemistry & Materials Science

Lea Vacca Michel
Associate Professor, School of Chemistry & Materials Science

Paul Craig
School Head and Professor, School of Chemistry & Materials Science

Casey Miller
Associate Dean for Industrial Partnerships and Associate Professor, School of Chemistry & Material Sciences
During the 2016 – 2017 academic year CASTLE has led or collaborated on seventeen different grants that total over $5.9 million. Center funding has risen dramatically over the past five years.

Current CASTLE Funding

<table>
<thead>
<tr>
<th>Dates</th>
<th>Total Funding</th>
<th>Funding Details</th>
<th>Personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/2013-6/2017</td>
<td>$199,980</td>
<td>Collaborative Research: Transforming the Organic Chemistry Experience: Development, Implementation and Evaluation of Studio-Based Modules; NSF-National Science Foundation</td>
<td>PI Christina Goudreau, Co-PI Thomas Kim</td>
</tr>
<tr>
<td>9/2014-8/2018</td>
<td>$399,309</td>
<td>Transfer of Math, Physics, and Communication Skills Into the Entry-level Photonics Workforce; NSF-National Science Foundation</td>
<td>PI Benjamin Zwickl, Co-PI Kelly Norris Martin</td>
</tr>
<tr>
<td>9/2014-8/2018</td>
<td>$372,580</td>
<td>Collaborative Research: Development and Assessment of Interactive Video Vignette Modules for Biology Teaching; NSF-National Science Foundation</td>
<td>PI Robert Teese, Co-PIs Leslie Kate Wright and Dina Newman</td>
</tr>
<tr>
<td>9/2014-8/2018</td>
<td>$133,868</td>
<td>Collaborative Research: Undergraduate Students' Epistemology and Expectations of Experimental Physics; NSF-National Science Foundation</td>
<td>PI Benjamin Zwickl</td>
</tr>
<tr>
<td>Start Date</td>
<td>End Date</td>
<td>Amount</td>
<td>Title</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
<td>----------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>10/2014-9/2018</td>
<td>$339,825</td>
<td>REU Site: Model-Based Reasoning and Representations in STEM Learning at the Rochester Institute of Technology; NSF-National Science Foundation</td>
<td>PI Leslie Kate Wright, Co-PI Dina Newman</td>
</tr>
<tr>
<td>6/2015-5/2018</td>
<td>$111,002</td>
<td>Collaborative Research: Role of Undergraduate Biochemistry Education in Protein Function Assignment; NSF-National Science Foundation</td>
<td>PI Paul Craig, Co-PI Herbert Bernstein</td>
</tr>
<tr>
<td>9/2015-8/2018</td>
<td>$270,225</td>
<td>The Access Network: Supporting Retention and Representation in Physics through an Alliance of Campus-Based Diversity Programs; NSF-National Science Foundation</td>
<td>PI Scott Franklin, Co-PI Corey Ptak</td>
</tr>
<tr>
<td>9/2016-8/2019</td>
<td>$299,982</td>
<td>Collaborative Transformation through Faculty Triads; NSF-National Science Foundation</td>
<td>PI Scott Franklin, Co-PI Sophia Maggelakis</td>
</tr>
<tr>
<td>9/2016-8/2019</td>
<td>$73,740</td>
<td>Collaborative Research: The PIPELINE Network; NSF-National Science Foundation</td>
<td>PI Linda Barton, Co-PI Ben Zwickl</td>
</tr>
<tr>
<td>1/2017-12/2017</td>
<td>$99,680</td>
<td>Integrated Photonics Workforce Needs Assessment for New York State; DOD – Department of Defense</td>
<td>PI Ben Zwickl, Co-PIs Anne Leak, Kelly Martin</td>
</tr>
<tr>
<td>7/2017-6/2020</td>
<td>$253,051</td>
<td>Collaborative Research: Data Integration in Undergraduate Mathematics Education; NSF-National Science Foundation</td>
<td>PI Paul Wenger, Co-PIs Matthew Hoffman, Carl Lutzer</td>
</tr>
<tr>
<td>7/2017-6/2022</td>
<td>$1,000,000</td>
<td>HHMI USE Inclusive Excellence 2017; HHMI-Howard Hughes Medical Institute</td>
<td>PI Scott Franklin, Co-PIs Jennifer Connelly, Elizabeth Hane, Lea Michel, Dina Newman</td>
</tr>
</tbody>
</table>
Pending CASTLE Funding

<table>
<thead>
<tr>
<th>Dates</th>
<th>Total Funding</th>
<th>Funding Details</th>
<th>PI/Co-PIs</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/2017-8/2020</td>
<td>$97,372</td>
<td>Collaborative Research: Using protein function prediction to promote hypothesis-driven thinking in undergraduate biochemistry education; NSF-National Science Foundation</td>
<td>Paul Craig, Herbert Bernstein, Jeffery Mills, Suzanne O’Handley</td>
</tr>
<tr>
<td>9/2017-8/2020</td>
<td>$285,193</td>
<td>Quiet Science: Working with Deaf and Hard of Hearing Students in a Bench Science/Wet-Lab Research Setting; NSF-National Science Foundation</td>
<td>Lea Michel, Austin Gehret, Jessica Trussell</td>
</tr>
<tr>
<td>10/2017-9/2022</td>
<td>$366,149</td>
<td>Integrative Experimental and Multiscale High Resolution Modeling of Cardiac Arrhythmias to Optimize Low Energy Anti-fibrillation Pacing (LEAP); DHHS – National Institutes of Health</td>
<td>Elizabeth Cherry</td>
</tr>
</tbody>
</table>

CASTLE Center Events

1. The 4th Annual CASTLE Symposium

The 4th annual CASTLE Symposium was held on Wednesday, May 17th 2017 in the Center for Integrated Manufacturing Studies (CIMS Conference Room). The symposium began with a poster session that showcased more than 40 student and faculty research projects focused on improving STEM education. Provost Jeremy Haefner and College of Science Dean Sophia Maggelakis provided opening remarks. An award ceremony followed to honor recipients of the third “Science and Math Education Research Special Honor Award” and recognize the 2016 – 2017 academic year Undergraduate Learning Assistants.

   a. 2016 Science and Math Education Research Special Honor Award Recipients
      i. Dr. Michelle Chabot, School of Physics & Astronomy
      ii. Elizabeth Bremer, Integrating Metacognitive Practices and Research to Ensure Student Success (IMPRESS)
      iii. Scott Bell, Learning Assistant, Mechanical Engineering Technologies

   b. 2016 – 2017 Undergraduate Learning Assistants:
2. **CASTLE/SMERC Seminar Speakers**
   a. Nicholas Palumbo, University of Rochester, January 25, 2017, 1pm-2pm—“Innovative Methodological Approaches to DBER: An Examination of Research Projects in Literacy and STEM.

   b. Gina M. Quan, University of Maryland, February 3, 2017, 3pm-4pm—“Attending to Scientific Practices within Undergraduate Research Experiences.”

   c. Angela Johnson, St. Mary’s College, February 28, 2017, 2pm-3pm, Workshop—“Building STEM Cultures Where Students Can Thrive.”

   d. Angela Johnson, St. Mary’s College, March 1, 2017, 12pm-1pm—“Intersectionality, Culture and Identity in Inclusive STEM Departments.”

   e. Stacey Lowery Bretz, Miami University, March 3, 2017, 2pm-3pm—“Measuring Meaningful Learning in the Undergraduate Chemistry Laboratory.”

   f. Sara Brownell, Arizona State University, March 7, 2017, 1pm-2pm—“Hidden Inequities in Active Learning Classrooms: How Groups of Students are Differentially Impacted by Active Learning.”

3. **Learning Assistant Program Fall/Spring Recruitment Fairs**
   The LA Program hosted two recruitment fairs, one in the Fall semester (October 14) and one in the Spring semester (March 31), and is a great opportunity for interested students. The recruitment fairs start with a presentation by the Program Director, Scott Franklin, and Program Manager, Corey Ptak, providing more details on the program including expectations and commitments. After the Q & A session during the presentation a student panel of current Learning Assistants speak about their experiences and the benefits of the program. Students are then encouraged to visit with a faculty mentor from the department they are interested in being an LA for.

4. **RIT Graduate Research Symposium for REU Students**
   Over the summer RIT hosted 7 National Science Foundation Research Experiences for Undergraduates (REU). The PIs of each of the REU Programs, (including Kate Wright, PI of the DBER REU program) organized a half- day interdisciplinary research and graduate school symposium held on Friday, June 30th for all undergraduate students from the REU program. Graduate students were invited by each PI and were asked give a short presentation on their current graduate level research/studies.
**Publications**

The CASTLE Center had 13 publications between 5 faculty members during the 2016-2017 academic year.


Presentations


5. Laura Wood, Amanda Matheson, Scott Franklin (2017) “Fostering Student Introspection through Guided Reflection Forms” *APS April Meeting Abstracts*, 2017/1


8. Charles Bertram, Anne Leak, Eleanor C Sayre, Mary Bridget Kustusch, Scott V Franklin (2016)“Student Conceptions of Expertise” Singapore: International Society of the Learning Sciences


Presentations at RIT Undergraduate Research Symposium on August 4th, 2017


Students Mentored

The SMERC group plays a large role in mentoring Rochester Institute of Technology undergraduate students, as well as undergraduate students from other universities, to support experiential learning. SMERC members’ consistent involvement with student-centered research aligns with RIT’s strategic plan of becoming a student-centered research university.

Scott Franklin
- DBER REU: Ben Archibeque (Kansas State University), Nicole Aledo (University of West Alabama), Felicia Davenport (Chicago State University)
- COS Summer Undergraduate Research Fellows: Elizabeth Rennert, Daniel Gysbers
  Other Summer Undergraduate Researchers: Sean Peterson, Nelmy Robles-Serrano

Ben Zwickl
- DBER REU: Brianna Santangelo (The College of New Jersey), Nicholas Young (The Ohio State University), Abby Rocha (Western Illinois University), Jessica Hathaway (Elizabeth State University)
- Undergraduates: Erik Reiter (Rochester Institute of Technology), Zackary Santos (Rochester Institute of Technology), Kingston Chen (Rochester Institute of Technology)

Ben Zwickl and Kelly Norris-Martin (co mentored)
- Husein Lokhandwaia (RIT MS student in Communication)
- Anita Raghuraman (RIT MS student in Communication)

Dina Newman
Masters Student: Cal Palumbo

Dina Newman and Kate Wright (co mentored)
- DBER REU: Grace Dy (University of Washington), Kaitlyn Elliott (University of Colorado-Denver), Mohammed Jan (University of Alabama-Birmingham), Daniel Mendoza (University of Alabama-Birmingham)
- Undergraduates: Ashley Adair, Hanna Berga, Jordan Cardenas, Callie Donahue, Patrick Rynkiewicz

Dina Newman and Tina Goudreau (co mentored)
- DBER REU: Fidel Amecuza (Chicago State University)

Kelly Norris-Martín
- DBER REU: Alexandria Cervante (California State University, Monterey Bay)
- Katherine Gardener (RIT Advertising and Public Relations)
Other Notable Achievements

Scott Franklin

- 2017 Isaac L. Jordan Sr. Faculty Pluralism Award
  - A university-wide award program that recognizes faculty members for their significant contributions to enhance diversity at RIT.

Lea Vacca Michel

- 2017 Edwina Award
  - Honor given to a faculty or staff member for his/her significant contributions to enhance gender diversity and inclusiveness at Rochester Institute of Technology.
Web and Social Media Presence

In 2017 a new, responsive CASTLE website was designed and implemented. The site is located at rit.edu/castle. It serves as a home-base for all CASTLE-affiliated programs, research and initiatives.

Social media direct links to Facebook and Twitter pages for CASTLE, IMPRESS and DBER all reside on the CASTLE website.
A More Engaging Look for Your Page Profile

Starting in August, the shape of your page profile picture will change from square to circular if you have a photo on your Page Timeline. The larger profile picture on your Page cover area will remain square. We created a preview to help you see how this change will look and decide whether you want to make any updates.

See More