THE 6TH NATIONAL CIRTL FORUM

October 13th-15th, 2019 | Drexel University | Philadelphia, PA

Preparing Future Faculty as Change Leaders Toward Inclusive STEM Higher Education

Welcome to the

6th National CIRTL FORUM

CONTENTS

WELCOME TO THE 6TH CIRTL FORUM

Dear Colleague,

On behalf of the Center for the Integration of Research, Teaching, and Learning (CIRTL) and the CIRTL Forum Committee, welcome to Drexel University and the 6th CIRTL Forum. More than 200 people from across North America are joining together at this Forum to collectively consider how to Prepare Future Faculty as Change Leaders Toward Inclusive STEM Higher Education.

The CIRTL Network of 37 universities endeavors to improve STEM undergraduate education by preparing future STEM faculty for careers of both research excellence and evidence-based teaching. We are enthusiastic about engaging an even broader community over the next two days around the goals of this Forum, which include:

- Bringing forward the roles of faculty in inclusive STEM higher education by researchers, higher education leaders and STEM future and current faculty;
- Exploring best practices for preparing future faculty to become change leaders who advance inclusive teaching;
- Discussing the roles and preparation in teaching and leadership of future faculty currently underrepresented in STEM;
- Connecting a diverse group of stakeholders devoted to preparing future faculty throughout conference activities and events;
- Learning about new scholarly teaching incorporating inclusive teaching practices through a poster session presenting Teaching-as-Research (TAR) and Scholarship of Teaching and Learning (SoTL) projects of future faculty.

We are very excited that you are joining us in Philadelphia over the next few days to participate in idea generation and exciting discussions. The speakers, panelists, poster presenters, and breakout sessions with colleagues provide a valuable opportunity to consider your own role and the role of your institution in the future of STEM higher education. As you listen, discuss, and interact throughout the Forum we hope you will offer your own ideas and perspectives to truly make the process inclusive and thoughtful.

In addition to participating in the Forum program, we hope you will join us Monday night in Dinosaur Hall at the Academy of Natural Sciences, where we will enjoy dinner among the treasures of the Academy while we celebrate the significant contributions of Dr. Myles Boylan, a pioneer in supporting STEM education and long-time friend of CIRTL.

Finally, please join me in thanking our sponsors: the National Science Foundation, the Howard Hughes Medical

Institute, and the Drexel University Office of Research. This Forum wouldn't be possible without their generous support.

If there is anything the committee or CIRTL staff members can do to help during your visit, please don't hesitate to ask. Enjoy!

Sincerely,

Adam Fontecchio
Chair, 2019 Forum Program Committee
Director, CASTLE
Professor of Electrical & Computing Engineering
Drexel University

Robert Mathieu
Director, CIRTL
Albert E. Whitford Professor of Astronomy
Director, Wisconsin Center for Education Research
University of Wisconsin-Madison

The CIRTL Forum Committee

DREXEL | CIRTL

THE CIRTL NETWORK

The Center for the Integration of Research, Teaching, and Learning (CIRTL) was founded in 2003 as an NSF Center for Learning and Teaching in higher education. CIRTL uses graduate and postdoctoral preparation in evidence-based teaching and learning as a leverage point to increase undergraduate success in STEM, diversity in STEM fields and the STEM literacy of the nation. Currently the CIRTL Network comprises 37 graduate universities. Each university develops its own CIRTL learning community, and also contributes opportunities for all future faculty through the cross-Network learning community.

THE MISSION

The CIRTL mission is to enhance excellence in undergraduate education through the development of a national faculty committed to implementing and advancing effective teaching practices for diverse learners as part of successful and varied professional careers.

THE CIRTL FORUM

Since its inception, CIRTL has held a national Forum every 2-3 years, attracting deans, faculty, staff and graduate students from a diverse set of higher education institutions, as well as leaders from national organizations devoted to improving STEM education. Each CIRTL Forum offers attendees opportunities to interact with visionary thought-leaders in higher education, gain perspectives from current and future faculty, and enjoy rich discussions and innovative programming.

This work is supported by the National Science Foundation under grant #1829609, the Howard Hughes Medical Institute under grant # 52008094 and the Drexel University Office of Research.

What do the different colored ribbons mean? *

SPEAKER	FACULTY
CONFERENCE STAFF	PLANNING COMMITTEE
GRAD STUDENT	POSTDOC
ADMINISTRATOR	CIRTL MEMBER

* Pick up the appropriate ribbon(s) for your lanyard at the registration tables

INFORMATION FOR ATTENDEES

WI-FI

Attendees may connect to the free Drexel University Wifi anywhere on campus. The network is drexelguest.
Drexel is also an eduroam school

WELLNESS ACTIVITIES

CIRTL Morning Walks/Runs

6:00-6:45 AM Mon and Tues

Meet in the hotel lobby of The Study by 5:55 am

SHUTTLE SERVICE

There will be shuttle service in between Drexel University and The Academy of Natural Sciences for the Monday evening events.

To the Academy - Buses will be leaving 3220 Market Street beginning at 5:30pm with the last one departing at 6:15pm.

From the Academy - Buses will be leaving from the 19th Street entrance beginning at 7:30pm with the last one departing at 9:00pm.

If you prefer to take Uber, Lyft, or other transportation the address is: 1900 Benjamin Franklin Pkwy, Philadelphia, PA 19103

*please note that the museum will be closed to the public so you must use the entrance on 19th Street for the event.

SOCIAL MEDIA

Tweet about the 2019 CIRTL Forum using #CIRTLFORUM

MEET-IN-HERE APP

The CIRTL Forum is digitalized! Download the Meet-in-Here app to view conference's sessions, presentations and their respective presenters, and important conference information online. Users can personalize their experience by syncing presentations of interest to their personal calendars.

AGENDA

Sunday October 13

Time	Activity	Location
4:30 PM - 5:30 PM	Welcome Reception	Main Building, Great Court
5:30 PM - 6:30 PM	Introduction: President John Fry, Drexel University Keynote Speaker: Freeman Hrabowski III, PhD "Empowering Future Faculty as Change Leaders for Inclusion in STEM"	Main Building, Auditorium
6:30 PM - 7:30 PM	Pedagogical Happy Hour (see handout for details)	Randell Hall

Monday October 14

Time	Activity	Location
8:00 AM - 9:15 AM	Breakfast Welcoming Remarks: Robert Mathieu, PhD and Adam Fontecchio, PhD Introduction: Adam Fontecchio, PhD Keynote Speaker: Karen Marrongelle, PhD "Leading Educational Change as Inclusive Practice"	Behrakis Grand Hall
9:15 AM - 9:30 PM	BREAK	
9:30 AM - 11:00 AM	Session 1: What are the change opportunities towards inclusive STEM higher education? Moderators: Rique Campa, PhD and Cora MacBeth, PhD Plenary Speaker: Julie Posselt, PhD "Quantum Insights for Institutional Change in Science: The Case of Graduate Education" Panel Members: Ansley Abraham, PhD Mark Lee, PhD Catrina May, Doctoral Student	Mandell Theater
11:00 AM - 11:15 AM	BREAK	
11:15 AM - 12:15 PM	Breakout Sessions: Bringing change opportunities back to your campus	(see page 19)
12:15 PM - 12:45 PM	Lunch	Behrakis Grand Hall
12:45 PM - 2:15 PM	Session 2: How to prepare for and implement change leadership Moderators: Jeffrey Franke, PhD and Tracy Irish, PhD	Behrakis Grand Hall

	Plenary Speaker: Susan Singer, PhD "Preparing Tomorrow's Change Leaders" Panel Members: Alma Clayton-Pederson, PhD Michael Ginsberg, Doctoral Candidate Menah Pratt-Clarke, PhD	
2:15 PM - 2:30 PM	BREAK	
2:30 PM - 3:30 PM	Breakout Sessions: Tackling challenges in promoting inclusive teaching and other changes	(see page 19)
3:30 PM - 3:45 PM	BREAK	
3:45 PM - 5:15 PM	Poster Sessions	GHall 220
5:30 PM - 6:30 PM	Buses to the Academy	3220 Market Street
5:45 PM - 9:00 PM	Reception, Dinner & Celebration of Myles Boylan, PhD	Academy of Natural Sciences

Tuesday October 15

Time	Activity	Location
8:30 AM - 9:45 AM	Breakfast Reflections and Insights: Chris Chen, PhD, Jim Grover, PhD, Alyson Douglas and Steven Koether	Behrakis Grand Hall
9:45 AM - 10:00 AM	BREAK	
10:00 AM - 11:30 AM	Session 3: How do we prepare future faculty to enhance the success of all students? Moderators: David Daleke, PhD and Jennifer Stanford, PhD Plenary Speaker: David Asai, PhD "Neither Left Nor Right" Panel Members: Kateri Salk-Gundersen, PhD Orlando Taylor, PhD Antoinette Torres	Mandell Theater
11:30 AM - 12:00 PM	BREAK	
12:00 PM - 1:15 PM	Lunch Table Breakout Sessions: Discussing how to better prepare future faculty on your campus	Behrakis Grand Hall
1:15 PM - 1:30 PM	Closing Remarks: Robert Mathieu, PhD and Adam Fontecchio, PhD "Lessons from our history and directions for an inclusive future"	Behrakis Grand Hall

KEYNOTE SPEAKER

Freeman A. Hrabowski III, PhD

President of The University of Maryland, Baltimore County

Dr. Freeman A. Hrabowski, President of UMBC (University of Maryland, Baltimore County) since 1992, is a consultant on science and math education to national agencies, universities, and school systems. He was named by President Obama to chair the President's Advisory Commission on Educational Excellence for African Americans. He also chaired the National Academies' committee that produced the report, Expanding Underrepresented Minority Participation: America's Science and Technology Talent at the Crossroads (2011). His 2013 TED talk highlights the "Four Pillars of College Success in Science."

Named one of the 100 Most Influential People in the World by TIME (2012) and one of America's Best Leaders by U.S. News & World Report (2008), he also received TIAA- CREF's Theodore M. Hesburgh Award for Leadership Excellence (2011), the Carnegie Corporation's Academic Leadership Award (2011), and the Heinz Award (2012) for contributions to improving the "Human Condition." UMBC has been recognized as a model for inclusive excellence by such publications as U.S. News, which the past eight years has recognized UMBC as a national leader in academic innovation and undergraduate teaching. Dr. Hrabowski's most recent book, *Holding Fast to Dreams: Empowering Youth from the Civil Rights Crusade to STEM Achievement,* describes the events and experiences that played a central role in his development as an educator and leader.

"Empowering Future Faculty as Change Leaders for Inclusion in STEM"

Rapid and dramatic demographic and technological changes present our nation's colleges and universities with significant challenges for preparing students – particularly those from diverse backgrounds – for faculty careers in science, technology, engineering, and math (STEM). Freeman A. Hrabowski III, president of the University of Maryland, Baltimore County, discusses the way senior leaders, administrators, staff, faculty, and students facilitate academic success by cultivating an empowering institutional culture and broad leadership for innovation. Emphasizing themes from his TED talk on student success, he focuses our attention on the importance of high expectations and hard work, building community among students, faculty engagement with students, and rigorous assessment of what works. He assesses the way innovative approaches -- including course re-design, active and experiential learning, research experiences, and partnerships with companies and agencies -- promote student success at each level – undergraduate, graduate, and postdoc – as we prepare students for their future faculty roles, and their work in supporting inclusion in STEM.

KEYNOTE SPEAKER

Karen Marrongelle, PhD

Assistant Director for Education and Human Resources (EHR), National Science Foundation (NSF)

Dr. Karen Marrongelle is the Assistant Director of the National Science Foundation (NSF) for Education and Human Resources (EHR). She leads the EHR directorate in supporting research that enhances learning and teaching to achieve excellence in U.S. science, technology, engineering and mathematics (STEM) education.

Prior to joining NSF, Marrongelle was dean of the College of Liberal Arts and Sciences at Portland State University and Professor of Mathematics and Statistics, where she oversaw 24 departments and programs across the humanities, social sciences and natural sciences.

In addition to her work as dean, Marrongelle, has served as a faculty member in the Department of Mathematics and Statistics at Portland State University since 2001. Prior to her appointment as dean, she held positions as the Vice Chancellor for Academic Strategies and Assistant Vice Chancellor for Academic Standards and Collaboration with the Oregon University System.

From 2007-2009, Marrongelle served on a rotation as a program officer at NSF and led numerous grants, collaborating with researchers nationally and internationally to improve undergraduate mathematics education and K-12 mathematics professional development.

Marrongelle has a bachelor's degree in mathematics and philosophy from Albright College, a master's degree in mathematics from Lehigh University and a doctorate in mathematics education from the University of New Hampshire.

"Leading Educational Change as Inclusive Practice"

What are the leading advances in undergraduate STEM pedagogy that support inclusion and equity? How do we effectively provide professional development to current and future faculty? What are the gaps in our collective knowledge about effective undergraduate pedagogy? During this talk, I will address these, and other relevant questions, to engage in a collective examination of the state-of-the art knowledge about undergraduate pedagogy, teaching for inclusion, and pedagogical professional development.

PLENARY SPEAKER

Julie Posselt, PhD

USC Rossier School of Education, Associate Professor, Higher Education

Julie Posselt is Associate Professor of Education at the University of Southern California and a 2015- 2017 National Academy of Education/ Spencer Foundation postdoctoral fellow. Her research examines organizational behavior affecting access to and equity in selective sectors of higher education, especially graduate education, research universities, STEM fields, and the professoriate. Her work has been funded by the US Department of Education, Spencer Foundation, Mellon Foundation, and National Science Foundation. She is presently a Principal Investigator on 4 NSF-funded projects working to advance equity and inclusion in STEM doctoral programs and research settings. She directs the California Consortium for Inclusive Doctoral Education as well as the Inclusive Graduate Education Network's Research Hub. In 2017 Posselt was honored with the Association for the Study of Higher Education's Early Career/ Promising Scholar award, and in 2018 received the American Educational Research Association's Early Career Award.

Posselt is the author of *Inside Graduate Admissions: Merit, Diversity, and Faculty Gatekeeping* (Harvard University Press, 2015), an award-winning ethnographic comparative study of faculty decision making in doctoral admissions. Her second book is under contract with Stanford University Press, and additional research is published in the American Educational Research Journal, Annual Review of Sociology, Journal of Higher Education, Research in Higher Education, and Chronicle of Higher Education, among others. She is a member of the editorial review board for the Journal of Higher Education and Journal of Diversity in Higher Education.

"Quantum Insights for Institutional Change in Science: The Case of Graduate Education"

It is no revelation that cultural change is needed to address pervasive inequalities in science, and so widespread is this awareness that more and more people want to be associated with contributing to positive changes. The trouble is, science disciplines rarely provide training in even the basics of mentoring, leadership, or teaching, so few are socialized to understand what culture is, much less what changing it in their organizations entails.

Drawing from her forthcoming book, *Equity in Science: Representation, Culture, and the Dynamics of Change in Graduate Education* (Stanford University Press, 2020), Posselt will weave concepts from quantum theory and cultural sociology into established theories of organizational change to illuminate lessons from case studies of graduate courses, PhD programs, and disciplinary societies that are working toward equity, diversity, and inclusion. She argues that creating and sustaining institutional change is multi-level, systemic, and cultural work that necessitates collaboration across differences that typically separate us. It is captured as well by concepts from quantum dynamics as conventional organizational change metaphors that imply the tidy predictability of classical dynamics. Institutional change can seem messy because we are working within—and are therefore affected by— the very structures and systems of power we are also trying to change. Efforts are by necessity partial, and people within the same space may read progress quite differently. It's not easy, making it all the more important to learn from the mistakes and successes of outliers in the academic community who are working on this daily.

PLENARY SPEAKER

Susan Rundell Singer, PhD

Rollins College, Professor, Biology, Provost & VP for Academic Affairs

Susan Rundell Singer is Vice President for Academic Affairs and Provost at Rollins College. Previously, she was Division Director for Undergraduate Education at NSF and Laurence McKinley Gould Professor, in the Biology and Cognitive Science at Carleton College. She pursues a career that integrates science and education focused on improving undergraduate education at scale. Her current, NSF-funded research is focused on networks of organizations working to advance undergraduate STEM education. In addition to a PhD in biology from Rensselaer, she completed a teacher certification program in New York State. Susan is a AAAS fellow and received both the American Society of Plant Biology teaching award and Botanical Society of America Charles Bessey award. She directed Carleton's Perlman Center for Learning and Teaching, was an NSF program officer in Biology, and is a co-author of the *Vision and Change in Undergraduate Biology* report and two introductory biology texts. Susan has served on numerous boards, including the NSF EHR Advisory Committee, Biological Sciences Curriculum Study Board, the American Society of Plant Biologists Education Foundation Board, the Botanical Society Board of Directors, and was a member of the National Academies of Science, Engineering, and Medicine's (NASEM) Board on Science Education. She is past chair of the AAAS Education Section and serves on both the NASEM Board on Life Sciences and Roundtable on Systematic Change in Undergraduate STEM Education. She has participated in six NASEM studies, including chairing the committees that authored *America's Lab Report, Promising Practices in STEM Undergraduate Education*, and *Discipline-based Education Research*.

"Preparing Tomorrow's Change Leaders"

Preparing future faculty to advance the learning and understanding of all their students is a strategic, scalable approach to improve quality and inclusion in higher education. It's a future-oriented, systemic approach, embedded in the larger context of higher education where effective leadership at all levels is the gateway to sustained improvement. A well prepared assistant professor creates excellent and inclusive learning experiences for her students; however, within the hierarchical culture of the academy, it's unrealistic to assume that her passion for and expertise with effective teaching practice alone will shift the culture of a department, let alone an institution. Developing change leaders is an imperative, across the arc of academic careers, informed by the body of research on change leadership. Changing the hearts and minds of senior leaders and empowering their leadership is key. They can facilitate inclusion of new faculty with fresh perspectives on teaching and research. Equally imperative is developing future and earlier career faculty to lead from within through influence, building upon research on leading from the middle. We will not achieve our collective vision of excellent, inclusive teaching unless we also attend to developing change leaders.

PLENARY SPEAKER

David Asai, PhD

Senior Director for Science Education, Howard Hughes Medical Institute

David Asai is Senior Director for Science Education at the Howard Hughes Medical Institute. David's team creates and leads grants and fellowships programs aimed at the development of students in science. Key initiatives: (i) Inclusive Excellence challenges colleges and universities to significantly and sustainably increase their capacity for inclusion of all students, especially students who belong to groups underrepresented among persons who are successful in science; (ii) Gilliam graduate program provides awards to adviser-student pairs who are committed to advancing diversity and inclusion in science, and which requires the dissertation adviser to engage in a year-long mentor training program; (iii) HHMI Professors provides grants to highly accomplished scientists at research universities who apply the rigorous curiosity that makes them successful in research to important challenges in science education; and (iv) Science Education Alliance assists faculty to develop effective course-based research experiences for beginning undergraduates.

David's bachelor's degree is in chemistry from Stanford University, and his PhD is in biology from Caltech. He was: a postdoc at Caltech and the University of California, Santa Barbara; a faculty member at Purdue University for 18.5 years where he was Head of Biological Sciences; and Stuart Mudd Professor and Chair of Biology at Harvey Mudd College for 5 years. His research focused on the structural and functional diversity of dyneins. David came to HHMI in 2008.

"Neither Left nor Right"

The history of our nation is strewn with examples of people being left behind. So, too, does science and higher education leave behind the very persons we should be working hard to include. We leave behind persons who begin at community colleges, first-generation students, and students of color. Persons entering college intending to study STEM who are from racial and ethnic groups underrepresented in the sciences (LatinX, African Americans, Native Americans) leave STEM at twice the rate of whites and Asian Americans. It is not for lack of interest; indeed, persons from underrepresented racial and ethnic groups are OVER-represented among beginning students intending to study STEM. Nor is the disparity due only to poor preparation; when students with similar backgrounds and levels of preparation are compared, non-whites leave STEM at much higher rates than whites. I believe that a major reason for the disproportionate leaving from STEM is in the content and delivery of introductory STEM courses. Too often, we emphasize getting the right answer instead of exploring the process of discovery....knowing instead of thinking.... memorizing facts instead of understanding context. Let's blow it up and start afresh. The time is now, and the responsibility is ours.

PANEL MEMBERS

Panel 1: What are the change opportunities towards inclusive STEM higher education?

Ansley A. Abraham, Jr, PhD

Director, SREB-State Doctoral Scholars Program

Dr. Abraham is founding director of the Southern Regional Education Board State Doctoral Scholars Program where he brings more than 30 years of experience working on issues of policy and practice as it relates to higher education. Dr. Abraham has developed one of the nation's best-documented, nationally recognized, and successful programs for producing minority PhDs who seek faculty careers in academe.

Mark Lee, PhD

Associate Professor of Biology and Chair at Spelman College

In addition to serving as a full-time faculty member for 13 years, Dr. Lee is the Co-Principal Investigator on the National Science Foundation funded projects to 1) infuse Informatics in the Science Curriculum at Spelman and make course-based undergraduate research experiences a meaningful part of Science Education. On campus, he currently serves as faculty advisor for conversion of science teaching spaces from traditional to more active and collaborative learning spaces.

Catrina May

Doctoral Candidate, Georgia State University

Catrina is currently pursuing a PhD in Mathematics and her Doctoral Certificate in Women's Studies at Georgia State University. Her dissertation will be focused on pedagogical practices in the undergraduate mathematics classroom and inclusive strategies in higher education which promote recruitment and retention of underrepresented students in STEM. Her other research interests include Combinatorics, LGBTQ+ inclusion in higher education, and intersectional feminist theory.

Panel 2: How to prepare for and implement change leadership

Alma R. Clayton-Pedersen, PhD

CEO of Emeritus Consulting Group

Dr. Clayton-Pedersen is CEO of Emeritus Consulting Group, a firm that uses organizational development principles to assist nonprofit, public and education entities in enhancing their effectiveness for the public good. Previously, Dr. Clayton-Pedersen was an AAC&U Senior Scholar serving as co-PI and director of the Preparing Critical Faculty for the Future project funded by the National Science Foundation, and an AAC&U Vice President.

Michael Ginsberg

Doctoral Candidate, Columbia University

Michael Ginsberg is pursuing a PhD in Engineering Science at Columbia University where he specializes in solar energy grid integration. He also serves as a Teaching as Research fellow at Columbia's Center for Teaching and Learning. In his work with the US Department of State, Michael has trained nearly 1,000 engineers and technicians in renewable energy and building systems at U.S. Embassies worldwide, and worked as an environmental science teacher at the American International School in Niger, West Africa.

Menah Pratt-Clarke, PhD

VP for Strategic Affairs and Diversity, Professor of Education at Virginia Tech

Dr. Pratt-Clarke has almost 25 years of leadership experience in higher education, with a focus on large-scale institutional transformation. She recently released A Black Woman's Journey from Cotton Picking to College Professor: Lessons about race, gender, and class in America. (Peter Lang, 2018), which was awarded the American Education Studies Association Critics' Choice Award for scholarship deemed to be outstanding in its field.

Panel 3: How do we prepare future faculty to enhance the success of all students?

Kateri Salk-Gundersen, PhD

Visiting Assistant Professor of Water Resources at Duke University

Dr. Salk is a Visiting Assistant Professor of Water Resources at Duke University, where her research and teaching activities center on aquatic science and data analytics. Dr. Salk is an alumna of the Michigan State University Future Academic Scholars in Teaching program, where she participated as both a fellow and a steering committee member. She is actively involved in student mentoring, pedagogy, and SoTL scholarship, most recently through participation in the faculty Active Learning Fellows program at Duke.

Orlando L. Taylor, PhD

VP for Strategic Initiatives and Research at Fielding Graduate University

Dr. Taylor is Distinguished Senior Advisor to the President at Fielding Graduate University in Santa Barbara California and Director of the University's Marie Fielder Center for Democracy, Leadership, and Education. Dr. Taylor has been a national leader for many years on issues pertaining to diversity and inclusion in higher education. He has been a particularly vigorous advocate and spokesperson on topics and issues relating to access and equity in higher education and on preparing the next generation of researchers and faculty members for the nation's colleges and universities.

Antoinette Torres

Director of Strategic Initiatives and Institutional Effectiveness, The Cooper Union for the Advancement of Science and Art

"Toni" Torres is responsible for institutional research and assessment; policy and compliance; the development of pipeline and community-based programs and funded initiatives; continuing education and certificate programs; diversity and inclusion at The Cooper Union. Prior to joining The Cooper Union, Toni was Associate Vice Provost at Drexel University for 15 years.

CONFERENCE CHAIRS

Adam Fontecchio, PhD

Director, Center for the Advancement of STEM Teaching & Learning Excellence,

Dr. Fontecchio is the inaugural Director of the Center for the Advancement of STEM Teaching and Learning Excellence (CASTLE) and Professor of Electrical & Computer Engineering at Drexel University. He has held leadership positions including Vice-Dean of the Graduate College at Drexel University, and Associate Dean for Academic Affairs in the College of Engineering at Drexel University. His STEM education research focuses on discovery and development of best practices for experiential and inquiry-based education, and how these approaches can promote diversity, equity, and inclusion in STEM fields. His research portfolio includes over 60 funded projects with over $33M in sponsored research and foundation funding from federal agencies including NSF, NIH, Dept. of Energy, US Army, NASA, DARPA, and NIST, and he was selected as the 2015 Delaware Valley Engineer of the Year.

Robert Mathieu, PhD

Director, The Center for the Integration of Research, Teaching and Learning (CIRTL)

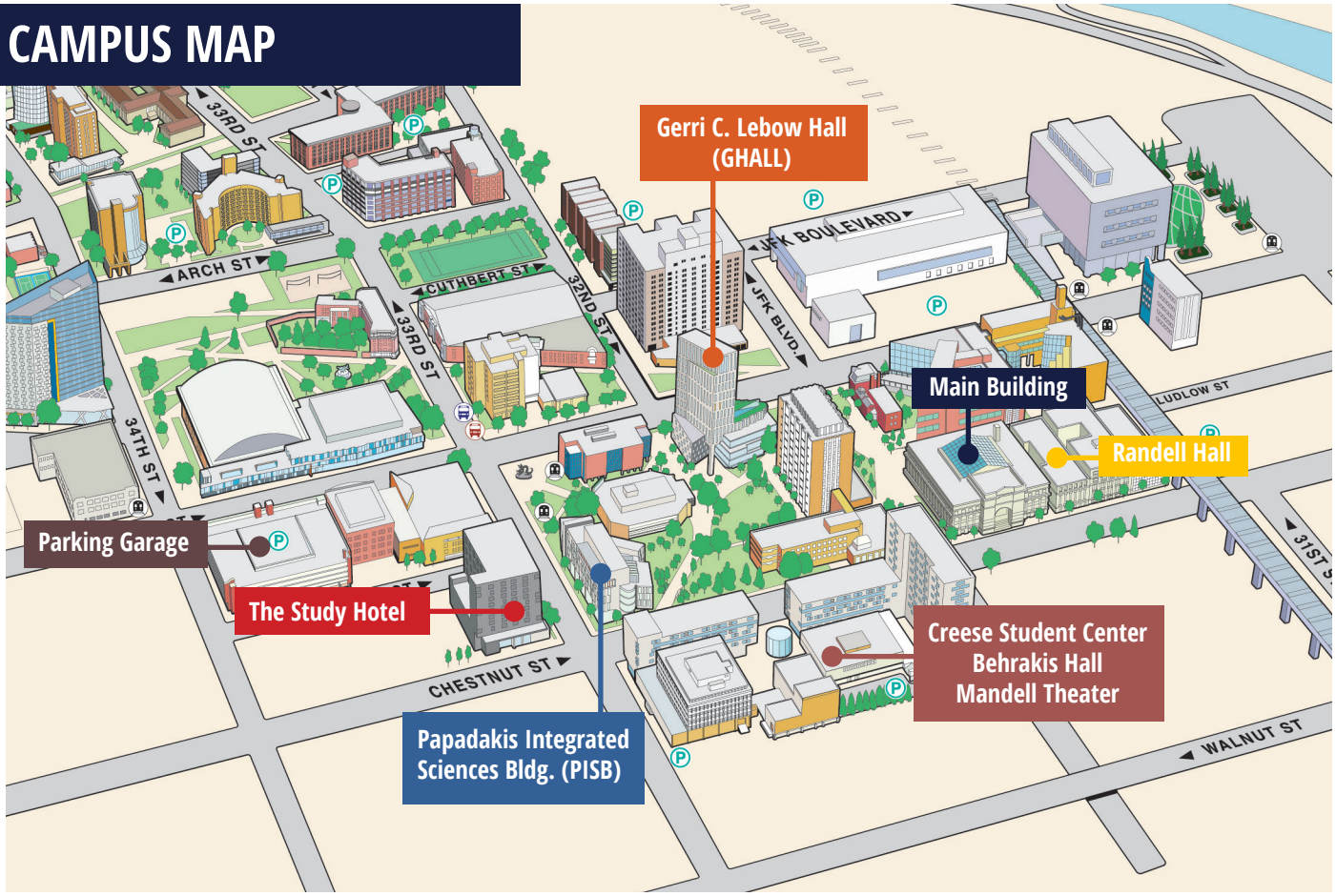
Robert D. Mathieu is the Albert. E. Whitford Professor of Astronomy, director of the Wisconsin Center for Education Research, and Associate Dean for Research within School of Education at the University of Wisconsin-Madison. Bob has led a number of national initiatives focused on improving STEM undergraduate education. He is the Director of CIRTL and co-Director of Aspire, The National Alliance for Inclusive and Diverse STEM Faculty. Bob has been recognized as a fellow of the American Physical Society, a AAAS Fellow, and a Fellow of the Wisconsin Academy of Sciences, Arts and Letters for his combined commitment and impact in astronomy research and STEM education.

GUEST OF HONOR

Myles Boylan, PhD

We are delighted to honor Dr. Myles Boylan, who has been instrumental in guiding national advancement of STEM higher education over his career. Dr. Boylan is serving as an Expert at the National Science Foundation, where he previously served as a Program Director in the Division of Undergraduate Education (DUE) since 1984. In DUE, he co-led the National Dissemination component of the Course, Curriculum, and Laboratory Improvement program and led the Distinguished Teaching Scholars program. He also led the Improving Undergraduate STEM Education program (IUSE). In addition, Dr. Boylan participated significantly in the operation and management of 6 other NSF grants programs. Before joining NSF, he held academic appointments in economics at The Ohio State University, Case Western Reserve University, and Colby College. While at Colby College he served as department chair. His academic research focused on the process and diffusion of technological innovation in private industry, particularly manufacturing. His instructional innovations included early advocacy and practice of small group learning.

CAMPUS MAP



Main Building

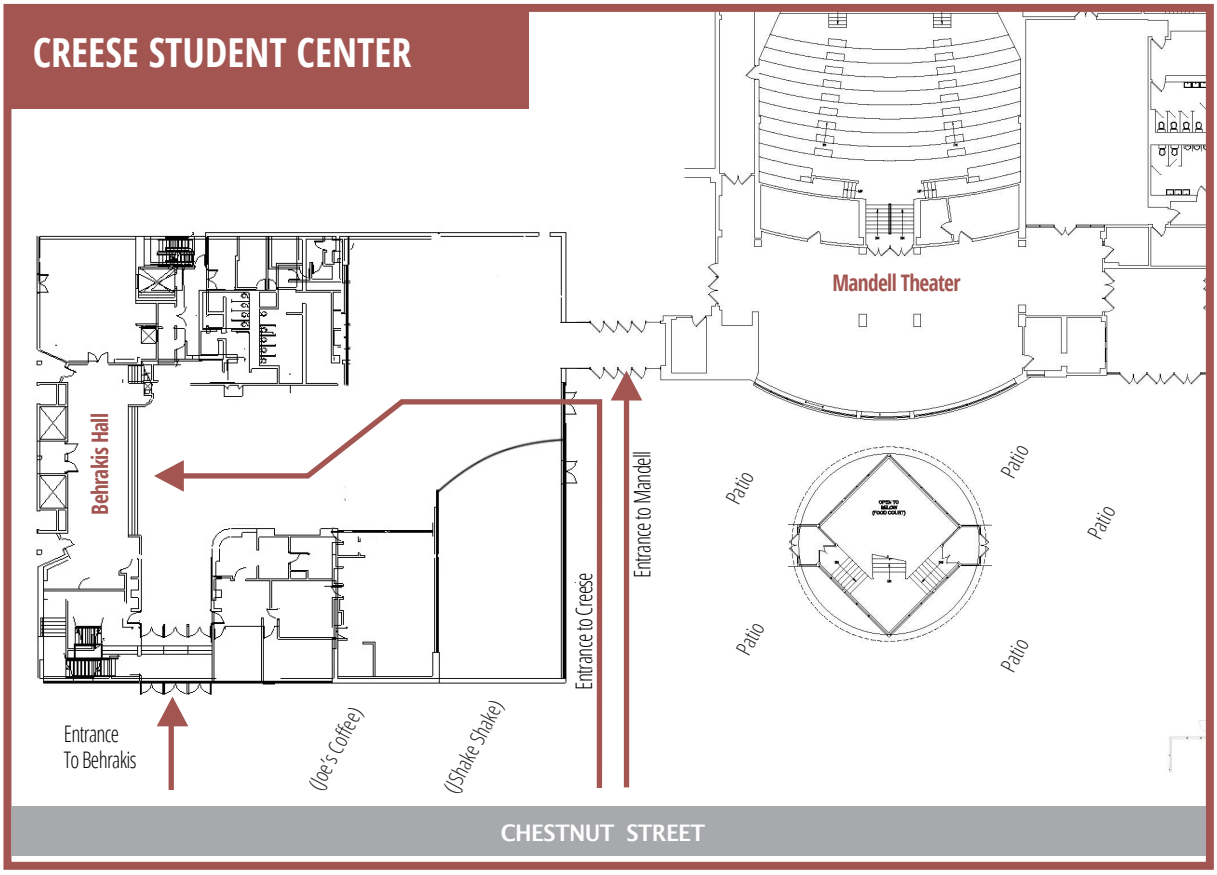
Gerri C. Lebow Hall (GHALL)

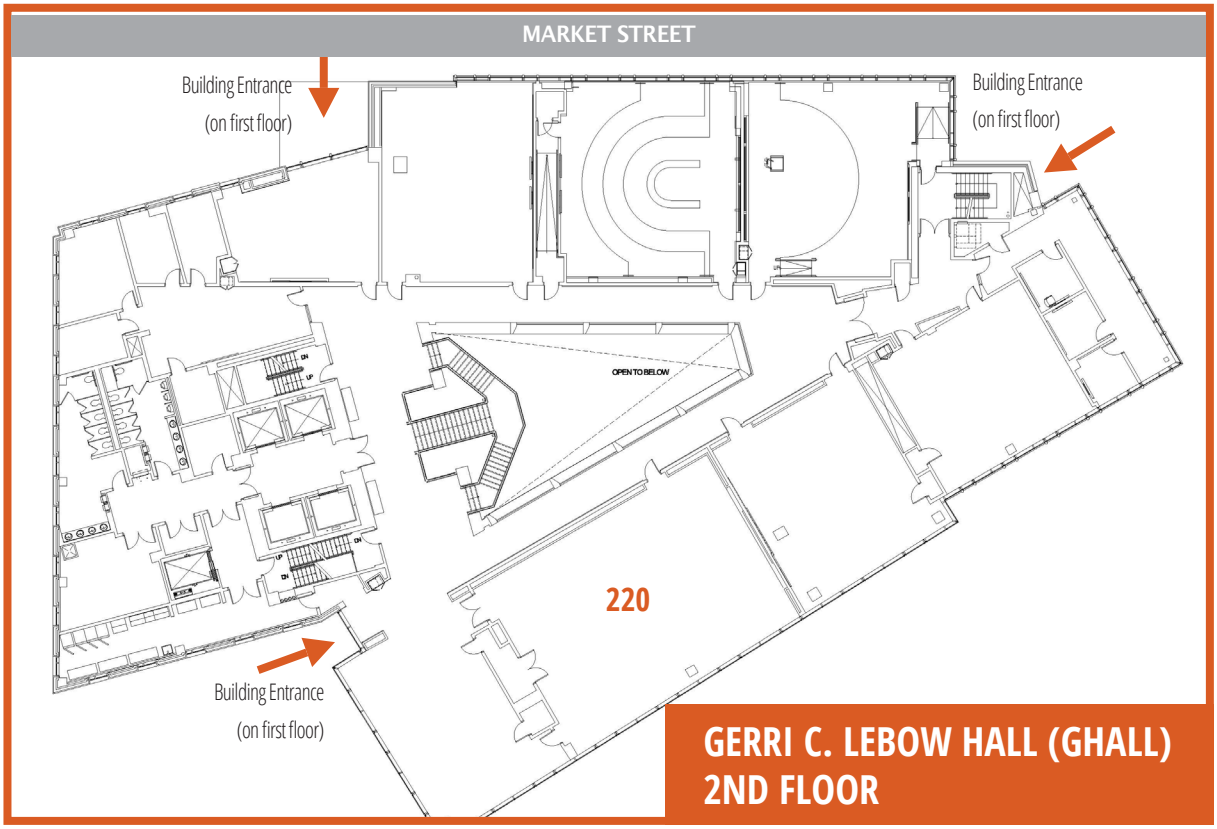
Creese Student Center

Papadakis Integrated Sciences Bldg. (PISB)

FLOOR PLANS

CREESE STUDENT CENTER

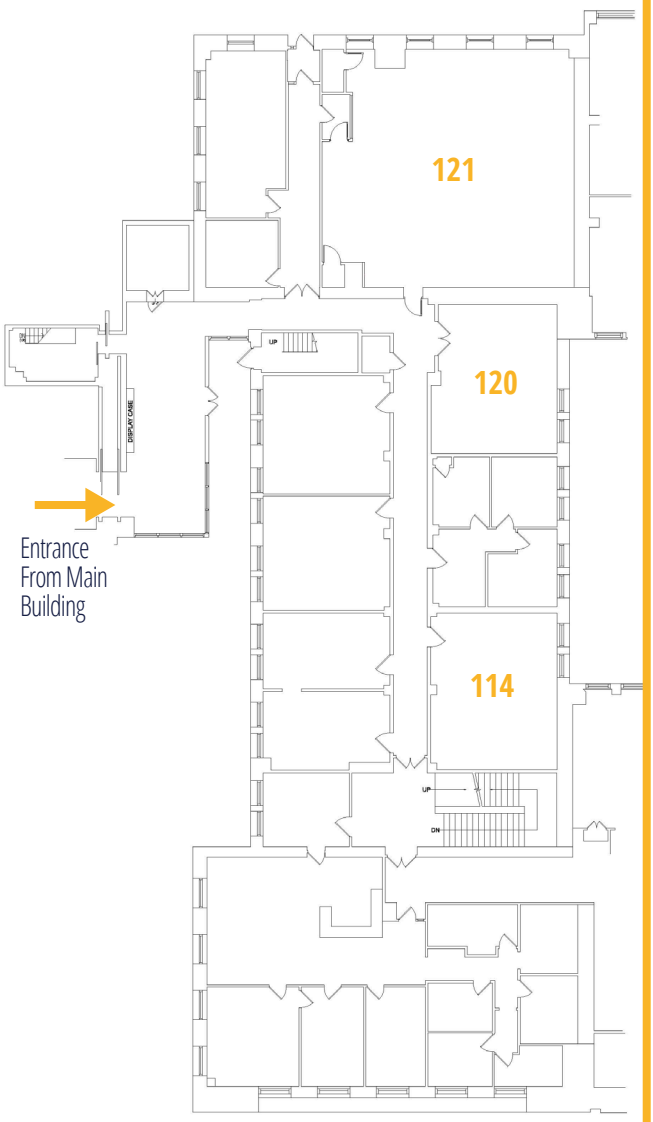




GERRI C. LEBOW HALL (GHALL) 2ND FLOOR

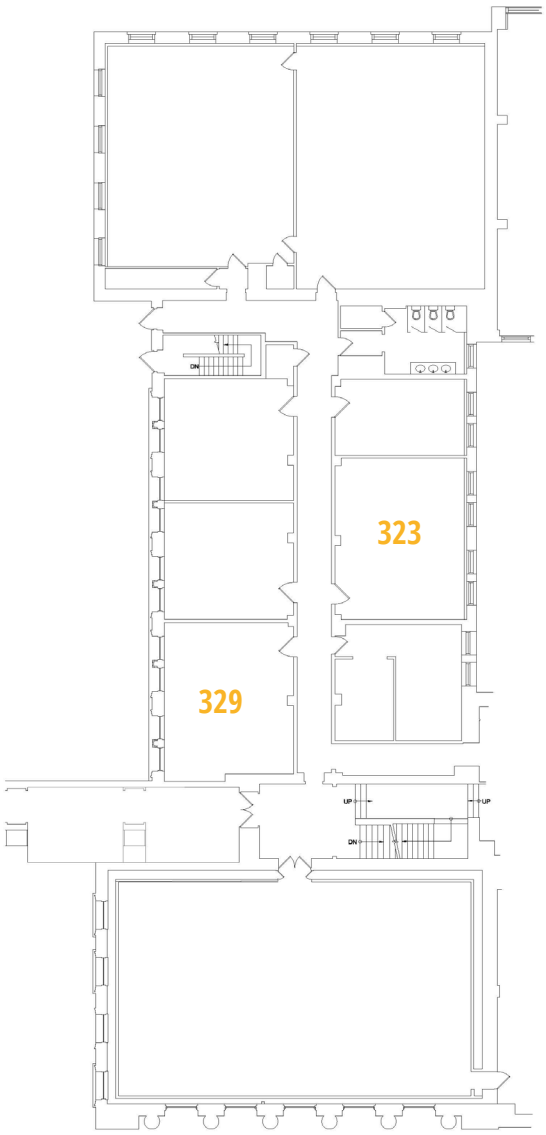
FLOOR PLANS

RANDELL HALL 1ST FLOOR



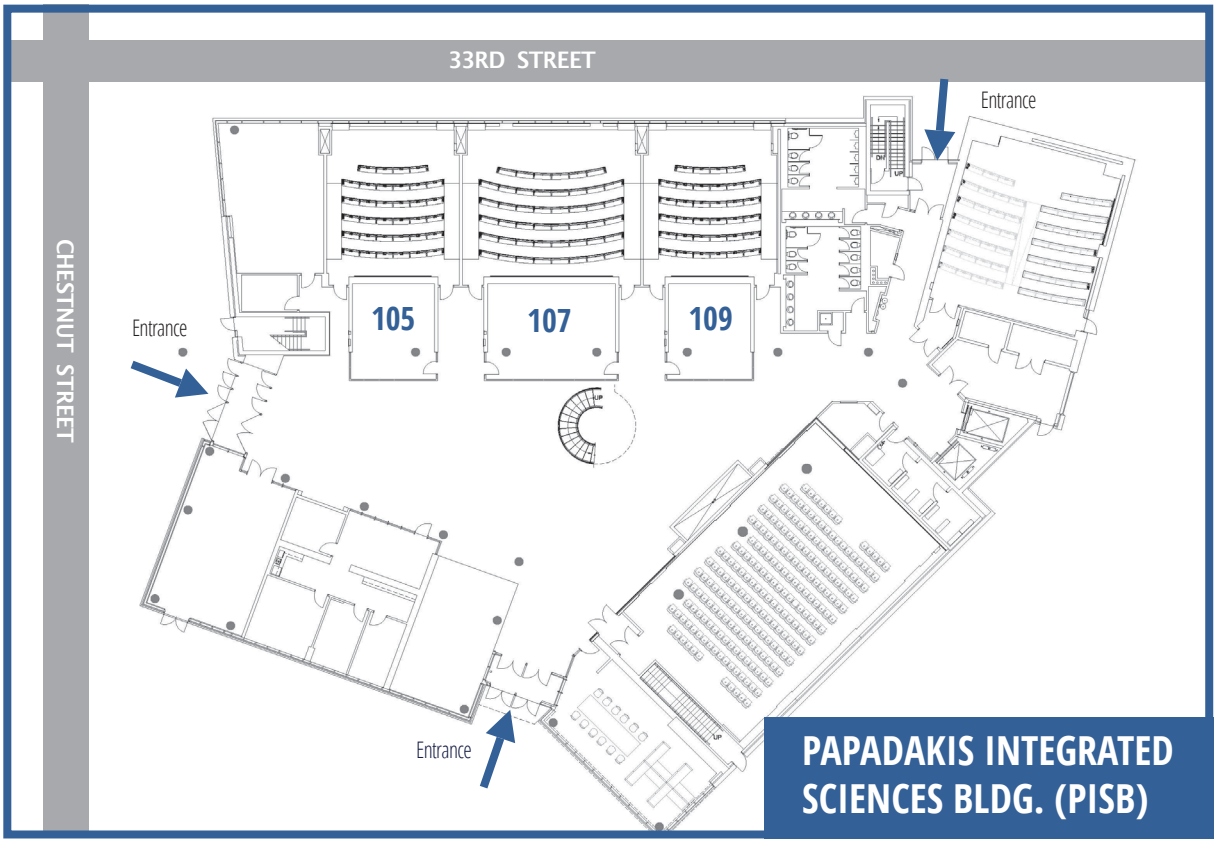
CHESTNUT STREET

RANDELL HALL 3RD FLOOR



CHESTNUT STREET

FLOOR PLANS



Breakout Session Rooms

Please go to the breakout session and room number associated with your group. Your group number can be found at the bottom of your nametag.

Group	Bldg/Room
1	PISB 105
2	PISB 107
3	PISB 109
4	Randell 114

Group	Bldg/Room
5	Randell 120
6	Randell 121
7	Randell 323
8	Randell 329

THE 2019 CIRTL FORUM PLANNING COMMITTEE

Kitch Barnicle, PhD,
CIRTL Network

Rique Campa, PhD
Michigan State University

Chris Chen, PhD
Columbia University

David Daleke, PhD
Indiana University of Bloomington

Kamla Deonauth, PhD
Howard University

Alyson Douglas, Doctoral Candidate
University of Wisconsin, Madison

Adam Fontecchio, PhD
Drexel University, Planning Committee Chair

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Jim Grover, PhD
University of Texas at Arlington

Tracy Irish, PhD
University of Maryland, Baltimore County

Steven Koether, Doctoral Candidate
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University of Wisconsin, Madison

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CIRTL Network

Jennifer Stanford, PhD
Drexel University

Rachael Switalski, M Ed
Drexel University

Former Member: Marisa Dietrich

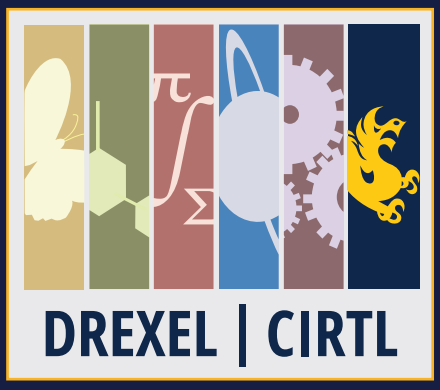
With thanks to additional support provided by the staff of CIRTL and CASTLE.

THANK YOU FOR ATTENDING!

For more information contact:

Rachael Switalski, Director, Operations
Center for the Advancement of STEM Teaching
and Learning Excellence (CASTLE)
rrs44@drexel.edu

NOTES



Drexel University
3401 Market Street
The Science Center, Suite 110
Philadelphia, PA 19104