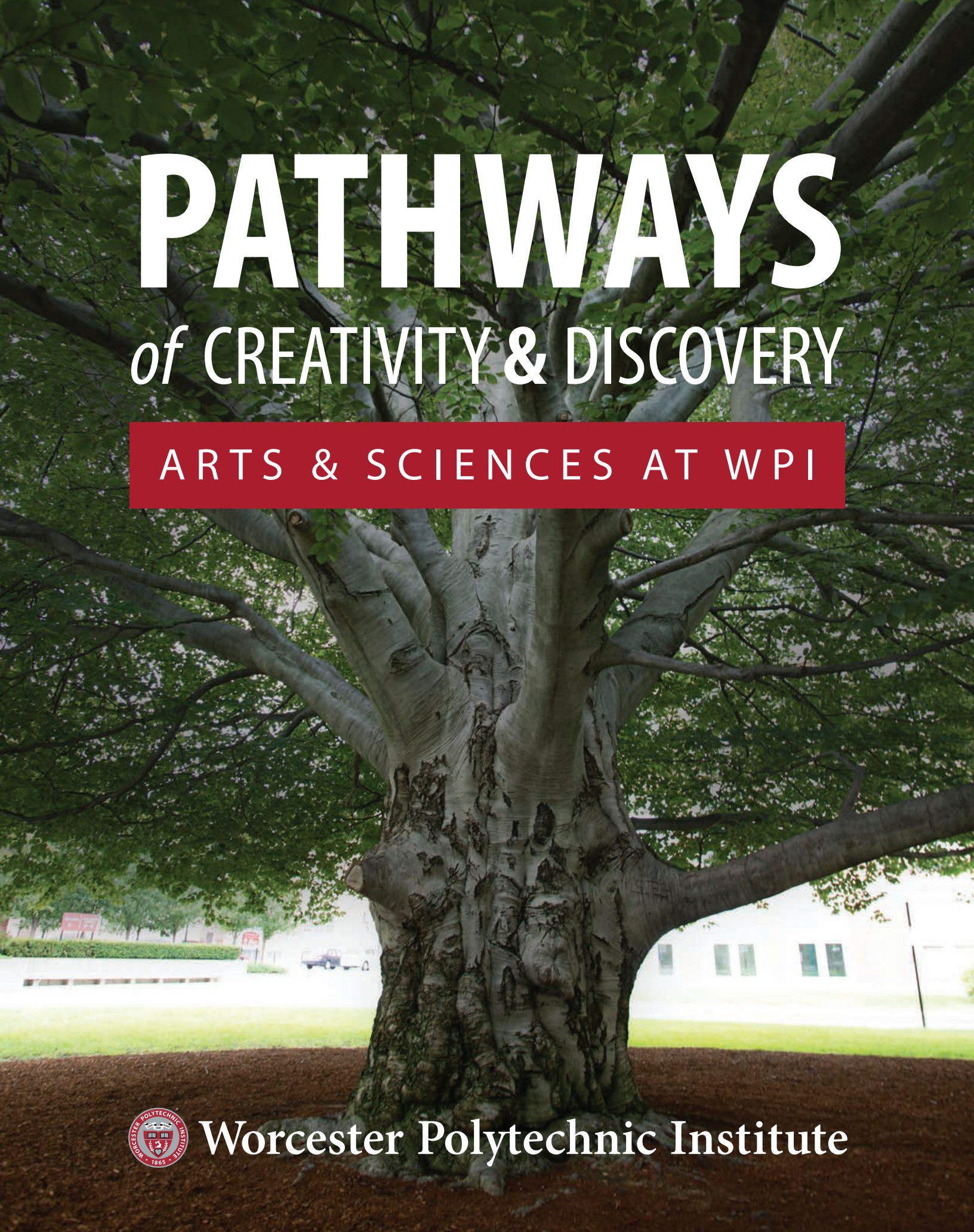


PATHWAYS *of* CREATIVITY & DISCOVERY

ARTS & SCIENCES AT WPI

Worcester Polytechnic Institute

VISION

To inspire members of the Arts and Sciences community to be creators, scholars, inventors, and responsible global citizens

MISSION

To bring together cross-disciplinary and diverse perspectives to promote discovery and communication, advance knowledge, and improve the human condition

FROM THE DEAN

The notion of an integrative model of higher education is one that has been fully embraced by WPI's Division of Arts & Sciences (A&S). This model bridges the arts, sciences, and humanities, and was highlighted by the National Academies of Sciences, Engineering, and Medicine in its hallmark report "The Integration of the Humanities and Arts with Sciences, Engineering, and Medicine in Higher Education." As with the branches of a tree, the division's seven departments and eleven interdisciplinary programs are critical to WPI's mission to "create, discover, and convey knowledge at the frontiers of technological academic inquiry for the betterment of society." We bring critical value to the university, and what we do here is strategically aligned with the vision of WPI as a global polytechnic.

The reach of A&S at WPI—and beyond—is extensive. These disciplines are interwoven with the very fabric of the student experience at WPI. All WPI students—both A&S majors and non-majors—are exposed to the arts and sciences as part of their WPI education and are immersed in these disciplines due to the university's interdisciplinary and project-based approach. WPI's A&S faculty engage in the teaching, research, and service activities at the core of our university and are leaders within our institution and externally in their respective disciplines and research communities. Slightly more than half of all WPI faculty are in the arts and sciences, and these faculty deliver more undergraduate credits than all other WPI faculty combined. The division's faculty advise hundreds of student projects each year, many at the more than 50 WPI project centers around the globe. WPI's arts and sciences students and faculty are also supported by a global network of alumni, industry professionals, and academics—including WPI's Arts & Sciences Advisory Board—who work with WPI on various projects and initiatives.

The impact of the arts and sciences at WPI is defined by the central role the disciplines play at WPI, shown through data, and told in the stories of our students and faculty. We proudly share our impact in this publication.

Jean King, PhD
Peterson Family Dean of Arts and Sciences

> *"All religions, arts, and sciences are branches of the same tree."*
> Albert Einstein

A BREADTH OF EXPERTISE

Department Heads

Kristin Boudreau
Humanities & Arts

Luca Capogna
Mathematical Sciences

Emily Douglas
Social Science & Policy Studies

Joseph Duffy
Biology & Biotechnology

Arne Gericke
Chemistry & Biochemistry

Douglas Petkie
Physics

Craig Wills
Computer Science

Dean's Office

Jean King
Dean of Arts & Sciences

Rebecca Ouellette
Director of Operations

Debra Ofcarcik
Senior Administrative Assistant

Program Directors

Jennifer deWinter
Interactive Media & Game Development

Peter Hansen
International & Global Studies

Neil Heffernan
Learning Sciences & Technologies

Dmitry Korkin
Bioinformatics & Computational Biology

Robert Krueger
Environmental & Sustainability Studies

Ryan Madan
Writing Center

Michael Radzicki
System Dynamics

Elke Rundensteiner
Data Science

Jeanine Skorinko
Psychological Science

Alexander Smith
Economics

Patricia Stapleton
Society, Technology & Policy

Jing Xiao
Robotics Engineering

7
departments

11
interdisciplinary programs

19
majors

27
minors

54%
of WPI faculty are in A&S

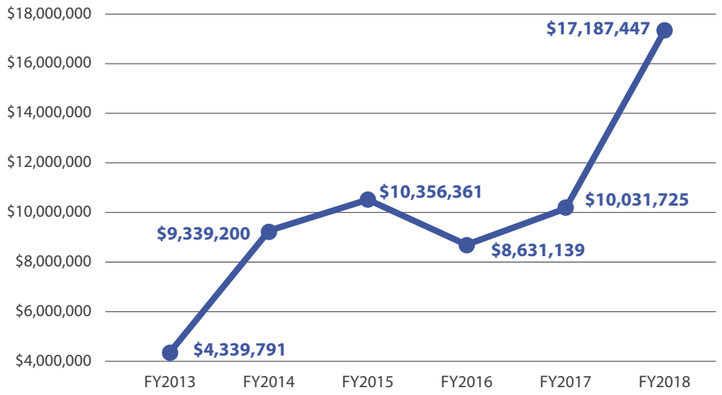
59%
of undergraduate credits are delivered by A&S faculty

ARTS & SCIENCES
LATEST NEWS

Launching a Neuroscience Master's Degree

The brain, with its billions of neurons, is perhaps the most complex biological system and holds the key to who we are and how we perceive and interact with the world. Understanding the human brain is one of the most significant and urgent scientific challenges of our time. To meet that challenge, WPI has undertaken a multi-pronged initiative to develop a robust, externally funded academic program in neuroscience. As part of this initiative, WPI will launch a Master of Science degree program for neuroscience that will admit its first students in 2019, and which will complement externally funded neuroscience research by WPI faculty that is already under way. For more information: **wpi.edu/+neuroscience**.

Advances in Research Funding



$17 million
2018 A&S research funding

262%
Increase in A&S research funding

52%
of all WPI research funding is for A&S

Approaching Complex Challenges with Collaboration

The A&S division engages in numerous research collaborations across WPI departments and programs, as well as with other institutions, including these examples:

Joint PhD Program with the University of Massachusetts Medical School (UMMS): WPI and UMMS PhD students in the life sciences can enroll in a joint doctoral degree program that allows students to leverage the resources and research opportunities at both institutions and earn a joint degree.

Healthcare Delivery Institute (HDI): The Healthcare Delivery Institute (HDI) is a university-wide multidisciplinary research and innovation institute that drives research, innovation, and education to impact healthcare delivery and patient health with a focus on digital technologies, process design and systems engineering, data intelligence and machine learning, cybersecurity, and enhanced user experience design. Along with strategic relationships with UMMS and the Visiting Nurse Association of New England (VNANE), HDI has collaborated with more than 10 healthcare provider organizations across the continuum of care.

Faculty Research Collaboratives: A&S has created transdisciplinary faculty research collaboratives in several research areas that align with WPI's strategic priorities, including computational biology, imaging and visualization, and cancer biology.

Jocelyn Petitto, MAT, MPH, PhD Student in Bioinformatics & Computational Biology

Jocelyn Petitto is in the first cohort of students in WPI's joint PhD program with UMass Medical School (UMMS). This program allows her to earn a doctorate degree from both institutions. While earning her MPH at Tufts University, she interned at the Massachusetts Department of Public Health and continues that relationship as a data scientist developing recommendations for analyzing Lyme surveillance data. Prior to enrolling in the joint program, Jocelyn worked with Ben Nephew, WPI research assistant professor, to develop a rodent model to study the adverse effects of air pollution on neurodevelopment and behavior while he was at Tufts. She intends to employ broad expertise, ranging from mammalian physiology to software development and biostatistics, while taking advantage of the potential for collaborative research between WPI and UMMS.

RESEARCH
THAT CHANGES THE GAME

Elke Rundensteiner and Emmanuel Agu (in center) are building apps that can detect critical medical issues in soldiers.

Smartphone App to Assess the Health of Soldiers

WPI researchers are developing machine learning algorithms that will sort through a host of data collected by the sensors in smartphones to detect telltale signs of medical conditions that can affect a soldier's readiness, such as traumatic brain injuries (TBI) and infectious diseases.

Probing the Molecular Basis of Complex Diseases

A team of WPI computer scientists will develop tools for sifting through vast amounts of gene sequencing data on genetic mutations linked to various diseases. This will develop a deeper understanding of the genetic and molecular interactions that underpin complex diseases.

Dmitry Korkin and his team use data to better understand disease.

Carissa Olsen's work in the lab focuses on links between lipids and age-related disease.

How Lipids Affect Aging and Long-term Health

Research under way at WPI will explore aging on the molecular level, examining how the lipids found in our bodies, particularly those in our cell membranes, change as we age, and how those changes may affect our propensity for age-related diseases, including Alzheimer's disease.

$4M Grant to Fund WPI and Quinsigamond Community College (QCC) Partnership

The Commonwealth of Massachusetts awarded a $4 million grant to WPI and QCC to create a joint laboratory supporting the integrated photonics industry's burgeoning workforce growth. Douglas Petkie, physics department head, will lead the new AIM Photonics Academy Lab for Education & Application Prototypes (LEAP).

Douglas Petkie, head of WPI's Department of Physics, will be the university's lead for AIM Photonics.

The GAANN program supports deep learning, natural language processing, machine learning, healthcare analytics, data science, and learning sciences fields.

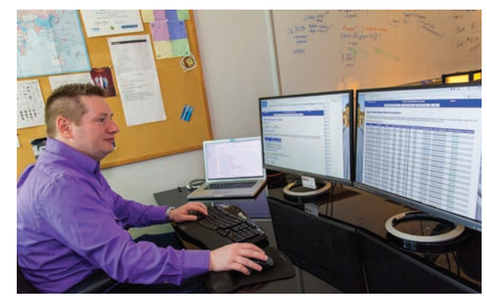
Addressing an Anticipated Shortage in Artificial Intelligence Professionals

The U.S. Department of Education awarded WPI $895,500 through its Graduate Assistance in Areas of National Need (GAANN) program. The grant provides six PhD-level needs-based fellowships in artificial intelligence fields. Elke Rundensteiner, professor of computer science and director of data science, is program director, and Neil Heffernan, professor of computer science and director of learning sciences & technologies is chair of the GAANN Program Committee.

Struggling with Algebra? There's an app—and game—for that

WPI researchers are developing new ways to help primary and secondary school students understand algebra and develop mathematical problem-solving skills, and to help teachers use technology to more effectively teach algebra and other mathematical concepts.

Erin Ottmar uses technology to help teachers and students.



Craig Shue's research protects home networks and computers.

Making Home Computer Networks—and the Internet—Safer

Research under way at WPI will develop a groundbreaking approach to security that uses cloud-based security providers and deployable security solutions to outsource the management of home computer networks, an approach that could protect millions of Americans from fraud and other online dangers.

Building a More Equitable Faculty Promotion Process

A team of researchers at WPI will examine the university's faculty promotion processes, identify areas of bias that may be impacting female faculty, and implement an innovative promotion policy to more equitably support midcareer female faculty and recognize a broader range of faculty work.

Chrysanthe Demetry, Elizabeth Long Lingo, Jeanine Skorinko (Principal Investigator), Susan Roberts, and Natalie Farny investigate equal representation in higher ed.

AWARD-WINNING RESEARCH
FUELS INNOVATIVE DISCOVERIES

Selected Research Awards (listed by Principal Investigator)

★

Emmanuel Agu
professor of computer science

"SCH: INT: Smartphone Wound Image Parameter Analysis and Decision Support in Mobile Environments"

National Institutes of Health (NIH)

$425,994

★

Emmanuel Agu
professor of computer science

"DH-Warfighter: Improving Warfighter Health by Early Detection of Digital Biomarkers"

Defense Advanced Research Projects Agency (DARPA)

$243,000

★

Andrea Arnold
assistant professor of mathematical sciences

"Computational Filtering Methods for Time-Varying Parameter Estimation in Nonlinear Systems"

National Science Foundation (NSF)

$220,458

★

Tian Guo
assistant professor of computer science

"CSR: Small: Towards Efficient Deep Inference for Mobile Applications"

National Science Foundation (NSF)

$499,723

★

Neil Heffernan
professor of computer science

"Efficacy of ASSISTments Online Homework Support for Middle Mathematics Learning: A Replication Study"

U.S. Department of Education

$1,269,094

★

Neil Heffernan
professor of computer science

"Personalizing Mathematics to Maximize Relevance and Skill for Tomorrow's STEM Workforce"

National Science Foundation (NSF)

$362,278

★

Xiangnan Kong
associate professor of computer science

"III: Small: Collaborative Research: Towards End-to-End Knowledge Discovery in Complex Brain Networks"

National Science Foundation (NSF)

$266,819

★

Amity Manning
assistant professor of biology & biotechnology

"pRB Regulation of Genome Integrity"

Smith Family Foundation

$300,000

★

Anita Mattson
associate professor of chemistry & biochemistry

"Silanediol-enabled Drug Discover"

National Institutes for Health (NIH)

$1,676,000

★

Carissa Perez Olson
associate professor of chemistry & biochemistry

"Defining the Impact of Membrane Composition on Aging"

National Institutes for Health (NIH)

$229,605

★

Erin Ottmar
assistant professor of social science & policy studies

"The Efficacy of From Here to There: A Dynamic Technology for Improving Algebraic Understanding"

Department of Education

$1,010,165

★

Douglas Petkie
professor of physics

"Integrated Photonics Manufacturing Education Factory/Practice Facility"

Executive Office of Housing and Economic Development, Massachusetts

$4,050,000

★

Reeta Rao
associate professor of biology & biotechnology

"*B. subtilis* as a probiotic and its role in intestinal colonization by pathogenic fungus *c. albicans*—implications for inflammatory bowel disease"

National Institutes of Health (NIH)

$361,258

★

Elizabeth Ryder
associate professor of biology & biotechnology

"Building Educational Bridges Between Computer Science and Biology Through Transdisciplinary Teamwork and Modular Curriculum"

National Science Foundation (NSF)

$1,228,848

★

Izabela Stroe
associate teaching professor

"Renewable Energy Materials Scholars STEM (REMS-STEM)"

National Science Foundation (NSF)

$649,905

★

Burt Tilley
associate professor of mathematical sciences

"REU Site: Research Experiences for Undergraduates in Industrial Mathematics and Statistics"

National Science Foundation (NSF)

$299,606

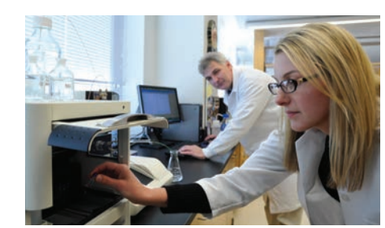
★

Pamela Weathers
professor of biology & biotechnology

"Study how the liver alters bioavailability of artemisinin when delivered from the dried leaves of the plant *Artemisia annua* vs. as pure drug"

National Institutes of Health (NIH)

$436,097



WPI WELCOMES NEW
ARTS & SCIENCES FACULTY

24

new full-time educators and researchers in the fall of 2018

Department of Computer Science

Berk Calli
visiting assistant professor

Lorenzo De Carli
assistant professor

Charles Roberts
assistant professor

Thérèse Smith
assistant teaching professor

Erin Solovey
assistant professor

Haichong (Kai) Zhang
assistant professor

Department of Social Science & Policy Studies

Angela Incollingo Rodriguez
assistant professor of psychology

Department of Humanities & Arts

Joseph Aguilar
assistant teaching professor of English/writing

Lindsay Davis
assistant teaching professor of U.S. history

Daniel DiMassa
assistant professor of German

Mohammed El Hamzaoui
instructor/lecturer of Arabic and writing

Despoina Giapoudzi
visiting instructor of drama/theatre

Adryen Gonzalez
visiting instructor of humanities (IMGD)

Edward Gutierrez
assistant professor of interactive media & game development

Katharine McIntyre
assistant professor of writing

Rebecca Moody
assistant teaching professor of philosophy/religion

William San Martín
assistant teaching professor of global history

Yunus Telliel
assistant teaching professor of philosophy/religion

Department of Mathematical Sciences

Tatiana Doytchinova
senior instructor/lecturer

Vladimir Druskin
research professor

Carolyn Mayer
postdoctoral scholar

Hussein Nasralah
postdoctoral scholar

Yevgeniy Ptukhin
postdoctoral scholar

Qingshuo Song
associate professor

PROMOTIONS AND TENURE

10

faculty in the arts & sciences were promoted in academic rank and/or received tenure during 2018

Emmanuel Agu
Promoted to professor of computer science

Ivon Arroyo
Awarded tenure and promoted to associate professor of social science & policy studies

Scott Barton
Awarded tenure and promoted to associate professor of humanities & arts

Natalie Farny
Promoted to associate teaching professor of biology & biotechnology

V.J. Manzo
Awarded tenure and promoted to associate professor of humanities & arts

Gabor Sarkozy
Awarded tenure as professor of computer science

Jagan Srinivasan
Awarded tenure and promoted to associate professor of biology & biotechnology

Izabela Stroe
Promoted to associate teaching professor of physics

Stephan Sturm
Awarded tenure and promoted to associate professor of mathematical sciences

Jian Zou
Awarded tenure and promoted to associate professor of mathematical sciences

Faculty Honors

Kristin Boudreau
professor and head of the Department of Humanities & Arts

Board of Trustees' Award for Outstanding Research and Creative Scholarship

Natalie Farny
associate teaching professor of biology & biotechnology

Board of Trustees' Award for Outstanding Teaching

Reeta Rao
associate professor of biology & biotechnology

2018 SIMB Waksman Outstanding Teaching Award by the Society for Industrial Microbiology and Biotechnology

Susan Vick (retired)
director of drama & theatre programs

2018 Leonidas A. Nickole Award, New England Theatre Conference

Suzanne Weekes
professor of mathematical sciences

Gweneth Humphreys Award for Mentorship of Undergraduate Women in Mathematics

"On behalf of the WPI Board of Trustees, I offer my sincere congratulations to this remarkable group of women and men. These are talented and accomplished educators, scholars, and researchers who are changing the world in positive ways and preparing our students to be tomorrow's leaders."

WPI President Laurie Leshin

RECOGNIZING
CAREER EXCELLENCE

Of the 20 WPI faculty to receive Fulbright Scholar Awards since 1983, 10 were A&S faculty who received funding to study in places as diverse as Japan, Germany, Iceland, Denmark, Nepal, Thailand, Spain, France, and Hungary.

Jennifer McWeeny
associate professor of humanities & arts

Fulbright Faculty Scholar Award – 2019

Sarah Olson
associate professor of mathematical sciences

Fulbright Faculty Scholar Award – 2018

Reeta Rao
associate professor of biology & biotechnology

Fellow of the American Academy of Microbiology

Vadim Yakovlev
associate research professor of mathematical sciences

Fellow of the International Microwave Power Institute (IMPI)

Homer Walker
professor of mathematical sciences

Fellow of the Society for Industrial and Applied Mathematics (SIAM)

Tanja Dominko
associate professor of biology and biotechnology

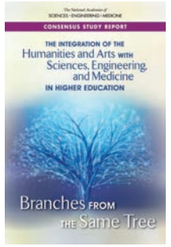
Elected Secretary of the Faculty (2018–2021), Faculty Governance

Allison Darling
department of computer science, interactive media & game development program

2018 Board of Trustees' Award for Outstanding Staff Member for outstanding work and dedication in support of the mission of WPI

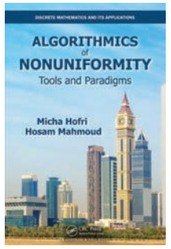
Recent Publications by A&S Faculty (2017 to present)

7
faculty published books



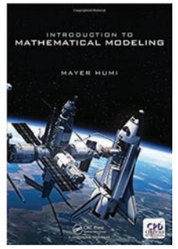
Kristin Boudreau

National Academies of Sciences, Engineering, and Medicine. *The integration of the Humanities and Arts with Sciences, Engineering, and Medicine in Higher Education: Branches from the Same Tree.* National Academies Press, 2018



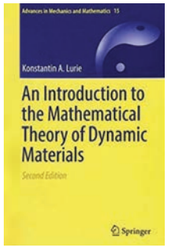
Micha Hofri and Hosam Mahmoud

Algorithmics of Nonuniformity: Tools and Paradigms, 2018



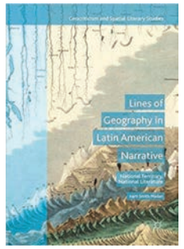
Mayer Humi

Introduction to Mathematical Modeling. Chapman and Hall/CRC, 2017



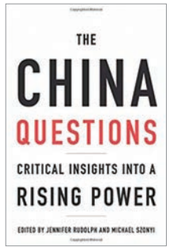
Konstantin Lurie

An introduction to the Mathematical Theory of Dynamic Materials. 2nd ed., Springer, 2017



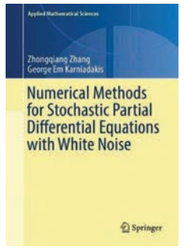
Aarti Smith Madan

Lines of Geography in Latin American Narrative: National Territory, National Literature. Springer, 2017



Jennifer Rudolph

The China Questions: Critical Insights Into a Rising Power. Harvard University Press, 2018



Zhongqiang Zhang and George Karniadakis

Numerical Methods for Stochastic Partial Differential Equations with White Noise. Springer International Publishing, 2017

CREATING IMPACT AND
BUILDING CONNECTIONS

A&S Week

WPI held its inaugural Arts & Sciences Week in September. This event showcased the wide array of A&S programs, highlighted research by faculty and students, and increased the sense of community among A&S students, faculty, and staff.

Women in Data Science (WiDS) Conference Sparks Collaboration

In March, WPI hosted a regional gathering of the Women in Data Science Conference (WiDS). Students from across the region, faculty, and industry sponsors took part in panel discussions on data science careers and participated remotely with the national WiDS conference at Stanford University.

Music and the Brain

Over 100 students, faculty, and staff attended the inaugural Neuroscience & Society seminar in April. The event featured Annirudh Patel of Tufts University, a neuroscientist whose talk explored music's impact on language and movement. WPI students and Sergio Salvatore '02 gave musical performances, and humanities professor Scott Barton exhibited musical robots.

Social Justice Summit

Faculty, staff, and students who work in areas related to social justice came together in October for WPI's first campus-wide summit on social justice. The event, with the tagline "Social Justice STEMs from You!," explored the meaning behind social justice, its relationship to university curricula, and how to shape the future of social justice at WPI.

Exploring "The Fuzzy and the Techie"

Scott Hartley, venture capitalist and start-up advisor, gave the 2018 WPI University Lecture in March. Sponsored by the Office of the President, the University Lecture Series provides a forum for speakers to enhance learning and to stimulate the intellectual climate of the entire community. Hartley, author of the best-seller *The Fuzzy and the Techie: Why the Liberal Arts Will Rule the Digital World*, discussed the vital role of the liberal arts in humanizing our technology.

STEM Faculty Launch

WPI hosted 33 graduate students and post-doctoral researchers for the 4th annual STEM Faculty Launch Workshop in October. This workshop provides guidance on pursuing and establishing faculty careers with an emphasis on increasing diversity among STEM faculty.

31st Annual WPI Invitational Math Meet

High school students from 90 schools across New England visited WPI in October to compete for $100,000 in scholarships to WPI. The event, sponsored by the Department of Mathematical Sciences, is one of New England's largest math meets.

Next-in-BIO

Undergraduates from nine institutions showcased their research at the 3rd annual Next-in-BIO undergraduate research symposium in November. Massachusetts Life Sciences Center president Travis McCready provided the keynote address and a panel of innovators and entrepreneurs discussed preparing for life science careers in academia and industry.

Critical Conversations

WPI's inaugural Critical Conversations forum explored the scientific and ethical considerations involving genetically altered humans. The forum featured social science professors (from left) Jean King, dean of arts & sciences; Patricia Stapleton, society, technology & policy; Natalie Farny, biology & biotechnology; Destin Heilman, chemistry & biochemistry; Reeta Rao, biology & biotechnology; and Bethel Eddy, humanities & arts.

Celebrating Our History

As part of Arts & Sciences Week, WPI commemorated the 50th anniversary of the Department of Computer Science (formal recognition of this golden anniversary will happen in 2019) and the 10th anniversary of the Robotics Engineering Program.

GLOBAL
INITIATIVES & PROJECTS

The A&S departments strive to expand the reach of the arts & sciences through strategic growth of global activities, as well as providing advising support to WPI project centers across the globe. Our faculty are actively engaged in projects in countries as diverse as Puerto Rico, Ghana, Switzerland, New Zealand, and Japan, among many others. They also advise student Major Qualifying Projects (MQPs) and Interactive Qualifying Projects (IQPs), many of which are undertaken at one of WPI's more than 50 project centers across six continents.

Interactive Qualifying Project (IQP)

The Interactive Qualifying Project (IQP) is a distinctive feature of WPI's project-based education and requires students to address a problem that lies at the intersection of science or technology with social issues and human needs.

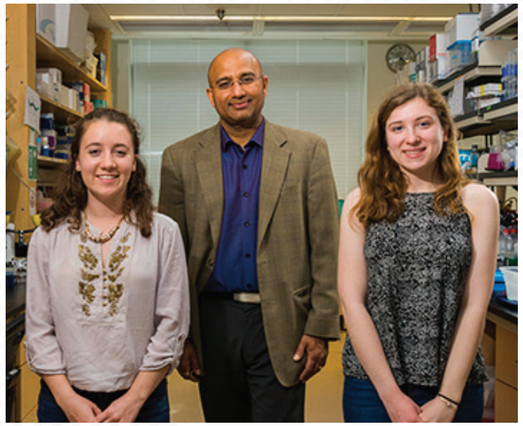
Major Qualifying Project (MQP)

The Major Qualifying Project (MQP) is a capstone experience completed by all WPI undergraduates and is integral to WPI's project-based education to demonstrate crucial, lifelong learning outcomes.

MQP Project Examples

Using Data Science to Find Drug Interactions

Tackling a critical health issue with an MQP, students turned to data science to predict harmful drug interactions, which cause more than 100,000 deaths in the U.S. annually. Students used natural language processing and deep learning techniques to sort and compare reports of drug interactions, says advisor and computer science professor Elke Rundensteiner, and presented their findings visually to allow easier and more accurate safety evaluations by the FDA.



Researching Generational Gene Changes

Can generations pass down experiences as well as eye color? An MQP team set out to study epigenetics, the study of inherited gene changes, to understand how life experiences can impact DNA across generations. Under the direction of advisor and biology and biotechnology professor Jagan Srinivasan, the students' novel research established a foundation for future MQP teams to study connections between neurodegenerative diseases and epigenetics.

« This project is important to me because it has impactful real-world implications. »

Brian Zylich '19

244
IQPs advised by A&S Faculty

334
MQPs advised by A&S Faculty

ELEVATING RESEARCH
FOR FUTURE IMPACT

Supporting Undergraduate Women in Research

WPI awarded nine Clare Boothe Luce Research Scholars Awards for the 2018–19 academic year to women students in mathematical sciences, physics, computer science, and robotics. These awards, funded by the Henry Luce Foundation, support students as they conduct undergraduate research and receive mentorship from women faculty. Karen Kashmanian Oates, professor of biology and biotechnology and former Dean of Arts & Sciences, is the principal investigator for the Henry Luce Foundation grant.

2018 Clare Boothe Luce Research Scholars

Alexandra Auteri '20
mathematical sciences
Mentor & Research Advisor: Sarah Olson

Alexis Buzzell '20
physics
Mentor & Research Advisor: Lyubov Titova

Oliva Gulezian '20
mathematical sciences
Mentor & Research Advisor: Suzanne Weekes

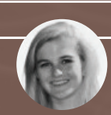
Fareya Ikram '20
computer science
Mentor: Suzanne Weekes
Research Advisor: Craig Shue

Leah Mitchell '20
mathematical sciences
Mentor: Suzanne Weekes
Research Advisor: Andrea Arnold

Erin Morissette '19
physics
Mentor: Lyubov Titova; **Research Advisors:** Ron Grimm & Lyubov Titova

MaryAnn VanValkenburg '19
computer science
Mentor: Suzanne Weekes
Research Advisor: Dan Dougherty

Bryannah Voydatch '19
physics
Mentor & Research Advisor: Lyubov Titova



Karitta Christina Grand Zellerbach '19
computer science
Mentor & Research Advisor: Carolina Ruiz

Supporting Summer Undergraduate Research

Eleven students received undergraduate research awards to conduct summer research in collaboration with an A&S faculty advisor. These awards were made possible in part due to contributions by the A&S Advisory Board.

★

Jacob Bouchard '19
physics
Advisor: Douglas Petkie

★

Alexis Buzzell '20
physics
Advisor: Lyubov Titova

★

Jessica Hatt '20
chemistry & biochemistry
Advisor: Anita Mattson

★

Petra Kumi '20
computer science & mathematical sciences
Advisor: Vadim Yakolev

★

Andrew Murdza '20
mathematical sciences
Advisor: Sarah Olson

★

Tien Nguyen '19
biology & biotechnology
Advisor: Scarlet Shell

★

Dung Pham '20
physics
Advisor: L. Ramdas Ram-Mohan

★

John Pugmire '19
computer science & mathematical sciences
Advisor: Padraig O Cathain

★

Samantha Randall '19
biology & biotechnology
Advisor: Scarlet Shell

★

Adonay Resom '19
computer science
Advisor: Emmanuel Agu

★

Emma Travassos '19
chemistry & biochemistry
Advisor: Ronald Grimm

Students work on projects as varied as music with robots to cancer research.

FOSTERING
A STRONG COMMUNITY

Initiated in 2018, the A&S student advisory councils advise the dean on initiatives that have a direct impact on students, including those that increase the visibility of these diverse disciplines on the WPI campus and promote the accomplishments of our talented students and faculty.

2018–19 A&S Undergraduate Student Advisory Council

Leo Bunyea '19
interactive media
& game development

Cameron Cantrell '20
society, technology
& policy

Joshua Driscoll '20
biology &
biotechnology

Emily Flavin '20
biology &
biotechnology

Abigail Ismail '19
international &
global studies

Leah Mitchell '20
mathematical
sciences

Erin Morissette '19
physics

Haylea Northcott '19
bioinformatics &
computational biology

Karin Plante '20
chemistry &
biochemistry

Frankie Schripsema '21
society, technology
& policy

MaryAnn VanValkenburg '19
computer
science

Robert Wondolowski '20
actuarial
mathematics

2018–19 A&S Graduate Student Advisory Council

Ramoza Ahsan
computer
science

Diego Vargos Blanco
biology &
biotechnology

Tom Hartvigsen
data
science

Taylyn Hulse
learning sciences
& technologies

Kateryna Kushnir
physics

Dayna Mercadante
bioinformatics &
computational biology

Elisa Negrini
mathematical
sciences

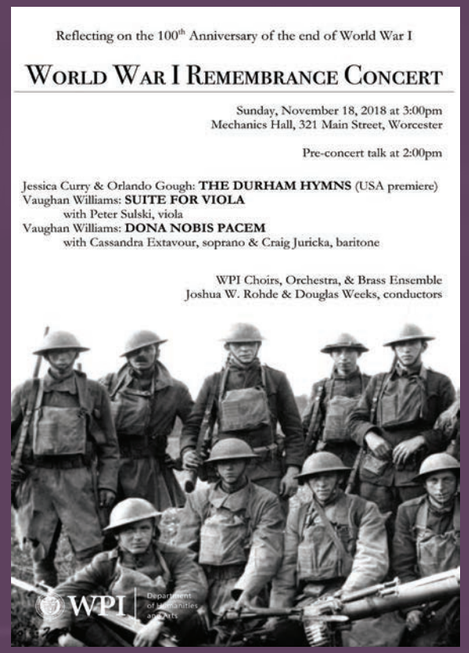
Androniqi Qifti
chemistry &
biochemistry

Karen Royer
interactive media &
game development

Alexandra Valiton
robotics
engineering

FOSTERING PERSONAL AND PROFESSIONAL CREATIVITY

Selected Student Productions - Music and Drama



Mechanics Hall World War I Concert, November 18, 2018 British music in honor of the 100th anniversary of the end of World War I

Masque's production of New Voices 35 from the play Tell Me in the Morning *by Olivia Lattanzi*

VOX Musical Theatre, A Gentleman's Guide to Love and Murder

Selected Art by A&S Faculty

Edward Gutierrez, assistant professor, Interactive Media & Game Development, animator, specializes in 2D traditionally hand drawn animation

Ralph Sutter, Instructor/Lecturer, Interactive Media & Game Development, character artist and animator, examples of 3D modeling

A&S Advisory Board

Richard Resnick '98, (Co-Chair), CEO, Cureatr

Sergio Salvatore '02, (Co-Chair), Senior Director, Core Infrastructure, Vimeo

Lauren Baker '82, President & CEO, Boston Biomedical Associates

Douglas Borden III '96, Lead Program Analyst, Office of Workers Compensation Programs, US Department of Labor

Ron Cortese '81, IT Program Director, Office of the Director of National Intelligence and Founder and President, Legends Sports Leagues, Inc.

Steven Davi '85, Senior Vice President, Synacor, Inc.

John Gabranski '75, Consultant

Arjan "Ari" Giaya, PhD '01, Founder and President, LaunchBay, LLC

Maryann Goebel '73, Member of the Board of Directors, Seacoast National Bank

Mary Ellen Lane, PhD, Dean of the Graduate School of Biomedical Sciences and Professor of Neurobiology, University of Massachusetts Medical School

Kenneth I. Maynard, PhD, Senior Director, Takeda Pharmaceuticals

Linda McGoldrick, President and CEO, Financial Health Associates International

Craig C. Mello, PhD, Blais Professor of Molecular Medicine, RNA Therapeutics Institute University of Massachusetts Medical School

Marilyn Pifer, PhD, former Director of Research and Innovation, CRDF Global

Chad Pytel '02, Co-founder and CEO, thoughtbot

Eliza Jane Reilly, PhD, Executive Director, National Center for Science and Civic Engagement

Joseph Rock '90, Clinical Innovation Scientist, Philips Healthcare

Sharon Savage, MD '91, Chief, Clinical Genetics Branch, Division of Cancer Epidemiology and Genetics, National Cancer Institute

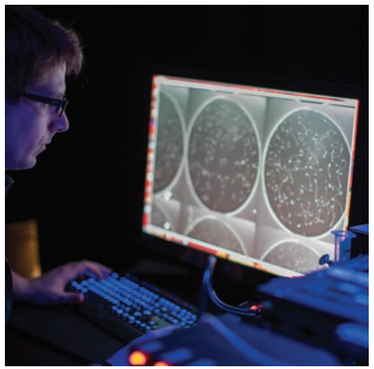
Naveen Selvadurai '02, Partner, Expa

Urvashi Tyagi, Vice President, Global Commercial Payments, American Express

Michael Wallent '91, Corporate Vice President, Enterprise Mobility Management Products, Microsoft Corporation

Kimberly Warren, Portfolio Director, MITRE

Kristin Deming Wheeler '93, Senior Patent Counsel, Acushnet Company



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