

WORCESTER POLYTECHNIC INSTITUTE

September 1, 2022

To: The WPI Faculty
From: Mark Richman
Secretary of the Faculty

The first Faculty meeting of the 2022-2023 academic year will be held on **Thursday, September 1, 2022 at 3:15pm in OH 107** with refreshments available at 3:00pm.

1. Call to Order M. Richman
 - Approval of the Agenda
 - Consideration of the Minutes from May 10, 2022

2. Welcome M. Richman

3. Opening Announcements

4. Committee Business:
 - Committee on Academic Operations (CAO) L. Elgert
 - August 2022 Undergraduate Student Graduation List
 - Committee on Graduate Studies and Research (CGSR) D. Medich
 - August 2022 Graduate Student Graduation List

5. Introduction of New Faculty Members (*brief and understandable!*) A. Heinricher
M. Richman
 - New Administrative Appointees/New Faculty Members (in their own words)

6. President's Report W. Soboyejo

7. Provost's Report A. Heinricher

8. Closing Announcements

9. Adjournment

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WORCESTER POLYTECHNIC INSTITUTE

Faculty Meeting Minutes

May 10, 2022

Summary:

1. Call to Order; Approval of the Consent Agenda and the Minutes of April 14, 2022
2. Secretary of the Faculty's Report and Opening Announcements
3. Committee Business: CAO; CGSR; COAP/COG; FAP/FBC/COG; CITP; CGSR
4. Provost's Report
5. New Business
6. Closing Announcements
7. Adjournment

Detail:

1. Call to Order

The ninth Faculty Meeting of the 2021-2022 academic year was called to order at 11:15am via ZOOM by **Prof. Richman** (AE). Prof. Richman reminded all those in attendance that the meeting was being recorded (for the purpose of taking accurate minutes, only). The meeting agenda, the minutes from the April 14 meeting, and the consent agenda were approved as distributed.

2. Secretary of the Faculty's Report and Opening Announcements

Prof. Richman reflected on the remarkable year that Faculty Governance has had under difficult circumstances. In addition to our regular business, which proceeded unabated and included 40 motions from CAO and 15 motions from CGSR, we had a special faculty meeting in September in response to the student mental health crisis, and gave special reports on student well-being, admissions, financial aid policies, faculty satisfaction, and the challenges of academic life/homelife balance. We also had reports from FAP on resource allocation and from CITP on privacy issues, and COG gave the first annual report on faculty populations. We expanded our governance election and procedures and participation to include the teaching faculty for the first time, which required significant governance changes and logistical adjustments. Finally, today COAP and COG will bring motions that will conclude the first round of adjustments brought about by expanding our faculty ranks and tracks. As for continued broad involvement in faculty governance, our most recent faculty elections involved 78 faculty members who agreed to have their names placed on the range of ballots, from which we elected 27 new committee members. We currently have 11 faculty elected committees and 5 appointed committees with a total of 95 faculty members, 16 administrators, 10 students, and five staff members. Prof. Richman expressed his gratitude for the broad participation and the strength it shows in our faculty governance system.

Prof. Strauss (IGSD) encouraged everyone to sign the students' open letter in favor of divesting the WPI endowment from fossil fuels. She also explained that a group is in the process of creating a similar faculty resolution, which is included as a draft in today's meeting materials. She asked that anyone with questions or comments concerning the draft contact her so that appropriate modifications could be made during the summer.

3. Committee Business

Committee on Academic Operations (CAO):

Prof. Titova (PH) reported that the undergraduate student candidates listed in the meeting materials have either completed all the requirements for the degree designated in the department or program indicated or are expected to complete their degree requirements before May 14, 2022. They therefore are or will be eligible to receive that degree, and on behalf of CAO she moved that - pending final verification by the registrar - they be approved for May 14, 2022, graduation. **The motion passed.**

Prof. Richman added that the graduation list contains the names of six students who will receive posthumous degrees. They are Ronan Banavige (MA), Lorenzo DeSimone (CS), Liam Jyn Godin (CS/RBE), Tyler Larson (ECE),

Nathan Morin (MME), and Jiyang Jeffrey Wu (RBE). By conferring these degrees, we express our confidence in the success they would have had, and we observe a moment of silence for them.

Committee on Graduate Studies and Research (CGSR):

Prof. Korkin (CS) reported that the graduate student candidates listed in the meeting materials have either completed all the requirements for the degree designated in the department or program indicated or are expected to complete their degree requirements before May 12, 2022. They therefore are or will be eligible to receive that degree, and on behalf of CGSR he moved that - pending final verification by the registrar - they be approved for May 12, 2022, graduation. **The motion passed.**

Prof. Richman thanked the faculty for their devotion to our student graduates, and he especially thanked Registrar Miles and the entire staff in the registrar's office for their hard work in compiling the lists.

Committee on Appointments and Promotions (COAP) and Committee on Governance (COG):

Prof. Iannacchione (PH), on behalf of the Committee on Appointments and Promotions and the Committee on Governance, moved that the Faculty Handbook, (PART TWO, Policies and Operating Procedures; Section 1, Policies Regarding the Status of Faculty; Subsection D, Promotion) be modified to add language describing the criteria for promotions in the Professor of Teaching track, as described in the meeting materials distributed. The primary goal is to establish criteria that aligns the criteria for tenure of teaching faculty with the language for promotion in this new track. This is done to be as inclusive as possible, while trying to give a sense of the breadth and elements that are required for promotion. The key elements of the motion are as follows: the criteria for promotion from Assistant to Associate Professor of Teaching are exactly the same as the tenure criteria for Professors of Teaching; and the criteria for promotion from Associate to full Professor of Teaching are also aligned with the general areas identified in the tenure criteria. These areas include continued growth in teaching practice, in professional growth and currency, as well as in service. For promotion to full Professor of Teaching, there is an expectation that these contributions demonstrate positive external impact beyond WPI and that there be a significant record of service and citizenship contributions. (See **Addendum #1** on file with these minutes.)

Prof. Richman asked everyone to limit comments to no longer than one minute to allow us to move through the lengthy agenda, and he pointed out that questions posed in the chat on Zoom are informal and will not be recorded in the minutes and will not necessarily get a response from the speaker.

Prof. Demetry (MME) clarified that for promotion to full Professor of Teaching, the policy makes clear that a candidate for promotion may demonstrate a positive external impact beyond WPI through internal activities that are externally disseminated. **Prof. Iannacchione** agreed and added, as an example, the external emulation of a candidate's internal work.

The motion passed.

Prof. Iannacchione, on behalf of the Committee on Appointments and Promotions and the Committee on Governance, moved that the Faculty Handbook, (PART TWO, Policies and Operating Procedures; Section 1, Policies Regarding the Status of Faculty; Section D, Promotion) be modified to add language describing the procedure for promotion to (full) Professor of Teaching, as included in the meeting materials distributed. Prof. Iannacchione explained that the priority here is to establish procedures that identify aspects specific to promotion to full Professor of Teaching while also establishing a uniform approach to all promotion cases. He added that we are trying to treat all promotion cases as equally as possible. In summary, the promotion dossier for full Professor of Teaching is very similar to all other promotion dossiers in its emphasis on the inclusive nature of evidence that can be included. The basic standards of review are also the same as other promotion criteria and focus on quality, demonstration of commitment, impact, and peer review. (See **Addendum #2** on file with these minutes.)

This motion passed.

Prof. Iannacchione, on behalf of the Committee on Appointments and Promotions and the Committee on Governance, moved that the language regarding eligibility and time-in-rank for the tenured and tenure-track faculty members in the Faculty Handbook, (PART TWO: Policies and Operating Procedures; Section 1. Policies Regarding the Status of Faculty; Subsection D. Promotion) be modified, as described in the meeting materials distributed. This is not new text, but rather a modification of the existing text that applies to the promotions of both our traditional dual-mission faculty and the recently adopted professor of teaching tenure track. The primary goal is to align the standards for eligibility and time-in-rank requirement of three-years before promotion for both of those tracks except in exceptional circumstances that must be explicitly documented in the nomination letter. (See **Addendum #3** on file with these minutes.)

Prof. Roberts (BBT) moved that part of the text in the proposal be amended as follows (with ~~strickthrough~~ text to be deleted and **bold** text to be added):

“Faculty members switching from the Teaching Professor track to the Professor of Teaching track take on the same rank in their new track. ~~starting their time in rank clock on the new track unless their~~ . **Time-in-rank will be detailed in each candidate’s** appointment letter at the time of the switch in tracks ~~to specify~~ **esy** years credited toward time in rank on the new track. **In the event time-in-rank is not detailed in the appointment letter, time-in-rank from the previous track will be credited towards time-in-rank on the new track.**

Prof. Roberts explained that the amendment would set as a default the time-in-rank from the previous track if not otherwise specified in the appointment letter. There are concerns for teaching faculty who would otherwise be eligible to go up for promotion from Assistant to Associate shortly after switching to the tenure track. If the time-in-rank were reset to zero at the time of the switch, then these faculty members, including some of those in the first cohort of teaching faculty placed on the tenure track, could be hurt financially.

Prof. deWinter (HUA) observed that the default time-in-rank setting did not count the years already in rank, and therefore required that the faculty member make a case for credit deserved, which in turn can add a level of capriciousness into the process.

Prof. El-Korchi (CEAE) spoke against the amendment. COAP and COG have worked tirelessly and deliberately to develop this proposal. To make a change such as this without time and thoughtful deliberation may have unintended consequences. Meanwhile, in response to the concerns that have been raised, we have had discussions with the Provost and the future Provost who both have made commitments to address these issues. In this manner, we can make modifications in the future after we have had time to address them thoughtfully.

Prof. Boudreau (HUA) agreed with Prof. El-Korchi. The omission of needed specificity in an appointment letter already issued should be fixed by correcting the letter rather than by generalizing a policy that automatically gives people with prior years teaching one-to-one credit for their time-in-service. As an example, if someone comes from a university where the teaching is more conventional, it would be a huge mistake, due to a correctable oversight, to give that person automatic credit toward a promotion without thinking it through.

Prof. Madan (HUA) spoke in favor of the motion. He pointed out that in his own personal case, the current wording would erase any credit for the four years he served as an associate teaching professor before switching to the tenure track. He thought that as we work to improve our policies, we should default to be generous with the faculty who have already been switched to the tenure track so that they not suffer any unintended consequences in the meantime.

Prof. Danielski (HUA) spoke in support of this amendment. She preferred the default described in the amendment, and she pointed out that credit for time-in-rank for people coming to the university will need to be detailed in their letters of appointments.

Prof. Sullivan (MME) was in favor of the amendment. He observed that frequently negotiations with teaching candidates shifting to the tenure track do not clarify credit for time-in-rank. In his view, when that happens, we should give the benefit of the doubt to the faculty member. If the administration fails to negotiate this credit, we should not fail our faculty.

Prof. Chery (IMGD) did not think that good faith would prevail over strict language adopted in the Faculty Handbook. As for the financial impacts of the motion as originally written, for a faculty member who works at WPI for 20 or 30 years and participates in a 403b retirement plan, Prof. Chery has calculated that the loss could be between \$80K and \$290K. He felt that as we revisit the issue next year, we should do the right thing now for our faculty who have acted in good faith.

Prof. Smith (IMGD) spoke in favor of this motion. However, she fundamentally questioned the value of any time-in-rank requirement. In her view, the amount of time is less relevant than the work done by the candidate and its impact. Consequently, Prof. Smith did not think that time-in-rank should be heavily emphasized in promotion eligibility.

Prof. Strauss (IGS) was in support of this amendment even though it is not perfect. We need to make sure we have a policy in place, and the amended language at least gives the benefit of the doubt to the faculty member. Although we have only had WPI faculty transferred onto the teaching track to tenure, we do want the policy to be appropriate for people who come from other institutions. In her estimation, the majority of COAP and the TRT faculty are in support of this amendment, so we should adopt it and we can tweak it next year.

Prof. Iannacchione (PH) clarified that the intent of the original motion was not to be punitive at all. Because there is no time-in-rank specified in our current appointment letters, the language indicating that you can gain credit for past years was added to make it more inclusive. Prof. Iannacchione's concern is that, even though we are strictly following Robert's rules of order, with this amendment we are editing the motion on the fly and not following the spirit achieved by our two-week notice requirement and allowance for full faculty engagement. This proposed language change has not been circulated widely in advance, and in effect, would put the Provost in the position of limiting the number of years to count toward time-in-rank rather than granting the number of years in each case. Prof. Iannacchione was very uncomfortable because neither he nor the vast majority of the faculty, including COAP and COG, have had sufficient time or opportunity to think carefully about the implications.

Prof. LePage (CEAE) supported the first part of the amendment, which requires that the appointment letter will address the issue of previous time served. But she had concerns about the second part, which just defaults to automatically getting credit. So she supported the first part of the amendment but not the second part. She also pointed out that time-in-rank is not defined in the Faculty Handbook and it is not clear whether it includes time at other universities.

Prof. Spanagel (HUA), in the interest of getting to other items on the agenda that affect all faculty members, moved to call the question on this amendment.

The motion (requiring 2/3 majority) **did not pass**.

Prof. Billiar (BME) asked if the proposed wording would be retroactive so we would go back and renegotiate the first 15 appointment letters issued last year without this clarity. **Prof. Iannacchione** explained that with this new language in the Faculty Handbook, a faculty member could certainly use this rationale to renegotiate these details with the Provost, who has indicated a strong willingness to do so.

Provost Soboyejo explained that we can, through administrative processes, extend the changes we are considering today to the first cohort of 15 Professors of Teaching. In addition, the financial concerns mentioned earlier will be handled through an equity pool that considers the salaries of our faculty on an annual basis and makes adequate compensation for such inequities. The most important point is that although he sympathized with the desires expressed by our TRT faculty, he saw a danger in giving credit for time-in-rank without careful considerations of accomplishment towards tenure or promotion. This would produce an undesirable situation in which simple length of time served would be considered equivalent to progress towards promotion and tenure. Unfortunately, this will not improve or enhance opportunities for our faculty to be successful. The Provost recommended exploring this language more carefully at a future date in the context of the best ways to help our faculty be successful in their tenure and promotion applications. In the meantime, he recommended that we carry on with the language initially

proposed by COAP and COG, and that we use our administrative processes to make adjustments to previous TTT teaching faculty appointments with the goal of making those faculty most successful.

Prof. Heilman (CBC) observed that the TRT council had summarized their concerns about these issues in a letter on April 14. He suggested, based on the objections raised so far, that we strike the last sentence in Prof. Roberts' amendment.

Prof. Richman ruled that, despite irregularities pointed out to him by the Parliamentarian, the suggested change would, in the interest of time, be accepted as a friendly amendment. **Prof. Roberts** accepted the friendly amendment so that the revised language read now as follows (with ~~struck through~~ text to be deleted and **bold** text to be added):

"Faculty members switching from the Teaching Professor track to the Professor of Teaching track take on the same rank in their new track, ~~starting their time in rank clock on the new track unless their~~ . **Time-in-rank will be detailed in each candidate's** appointment letter at the time of the switch in tracks **to specify** years credited toward time in rank on the new track. ~~In the event time in rank is not detailed in the appointment letter, time in rank from the previous track will be credited towards time in rank on the new track.~~

The (revised) amendment passed.

Prof. Richman directed the discussion back to the main motion as amended.

Prof. Martin (MA) asked if COAP could share any of their concerns that may not be addressed in the current wording. **Prof. Iannacchione** clarified that they were concerned that last minute changes might have unintended consequences, and that the April 14 letter referred to earlier was not sent to COAP, although as Chair of COAP he had requested at our last faculty meeting that all concerns be addressed to COAP. On much shorter notice, only four out of seven COAP members were able to participate in a very short email exchange discussion on the matter. On the substance, **Prof. Iannacchione** did not think there were any issues raised that have not already been discussed.

The motion passed as amended (with 103 votes in favor and 21 votes opposed).

FAP/FBC/COG

Prof. Fehribach (MA) moved, on behalf of the Committee on Finance and Administrative Policy (FAP), the Fringe Benefits Committee (FBC), and the Committee on Governance (COG), that the following resolution be adopted by the faculty:

Be it resolved that WPI should take steps to restore lost faculty and staff retirement contributions as well as needed spending and staffing to match pre-COVID levels (the levels that were effective in academic year 2019/2020). Be it also resolved that WPI should consider making retroactive retirement contributions that were lost during 2020/2021 (3%) and 2021/2022 (1.5%) fiscal years.

The resolution originated from discussions in the FBC, and has the endorsement of FBC, FAP and COG. Although the resolution is not binding, it is a communication to the administration and to the Board of Trustees expressing the sense of the faculty on the matter of recent cuts made to our retirement benefits. (See **Addendum #4** on file with these minutes.)

The motion passed (with 125 in favor and 4 opposed).

Prof. Smith (IMGD) moved to extend the meeting for 15 minutes. **The motion was seconded and passed.**

CITP

Prof. Smith (IMGD) moved, on behalf of the Committee on Information Technology Policy (CITP), that the Learning Management System and Video Lecture Support Policy be established as described in the meeting materials

distributed. She explained that WPI has a current Learning Management Systems (LMS) policy that was approved by the faculty in 2018. Our LMS is Canvas, and a revised policy is needed in part because we now rely heavily on ECHO 360 and Zoom video software. The proposed policy outlines various uses of these tools, logistical procedures, data retention standards, the rights and responsibilities of users, and other guidelines.

Prof. Smith emphasized that this proposed policy establishes that the use of these IT tools is entirely optional, including lecture recording, and it moves lecture recording from our current opt-out policy to an entirely opt-in policy. Under this policy, beginning in E-term 2022, if a faculty member wishes to have their lectures automatically recorded, then they will need to actively opt-in. Classroom sessions will not be recorded without the instructor's consent. In fact, none of these educational IT tools can be used unless the instructor explicitly chooses to do so. This policy also includes a provision to permit enabling the default usage of these tools only in exigent circumstances, but even under such circumstances, only with approval of CITP, CAP, CGSR, and by a vote of the faculty. And in all cases, instructors must always be allowed to opt out. Furthermore, data stored on LMS, Canvas Studio, Echo360, and Zoom Cloud would *not* be subject to the Access to User Electronic Information Policy.

Prof. Smith also explained that the policy includes a new procedure to maintain continuity of instruction in case of an emergency in which the instructor is unable to continue the course. The policy maintains existing language establishing that any content created by the faculty member is entirely their intellectual property, and it guarantees that all WPI-supported video software systems are capable of automatic captioning for those who request it.

Dean McNeill (ECE) asked if the policy addressed exigent circumstances that might arise over a summer. **Prof. Smith** was not sure if there were still a faculty provision in place for expedited actions when needed. **Prof. Richman** indicated, after looking into it a bit, that the policy by which a quorum of all elected members of the faculty governance committees could vote on critical issues on an interim basis had expired after B-term 2021. He pointed out that we had not once been asked to use it throughout and even at the height of COVID, but nevertheless we could consider reinstating such an emergency measure if there were reason to do so. **Prof. Smith** added that after considerable input from CAP and CGSR, it was uniformly decided that in all cases, based on significant privacy concerns, we want to move away from default opt-out lecture capture. While we do need to be prepared in the summer, no action we take should weaken this feature of the policy in any way. **Dean McNeill** understood the faculty reluctance concerning an opt-out policy, and he asked that the approval action through the committee structure and faculty take place at a pace that matches the exigency of the circumstances.

Prof. Gericke (CBC) asked whether an accommodation request for lecture recording with captioning might conflict with this policy. **Prof. Smith** pointed out faculty members may have their lectures recorded and not have them automatically shared with the whole class on Canvas. The practice in that case might be to share the automated lecture capture only with an individual student. This policy does not give faculty members the right to avoid reasonable accommodations requests.

Prof. Fehribach (MA) pointed out that many courses are still taught using the board in a way that would not be captured effectively by this video system. In those cases, failure to disable the video system would produce recordings of little or no content.

The motion passed (with 122 in favor and 3 opposed).

CGSR

Prof. Demetriou (AE) moved, on behalf of the Committee on Graduate Studies and Research, that the BS/MS program and application process be broadened by allowing WPI alumni to pursue the MS degree, with the double counting option, within five years of completing the BS degree. Prof. Demetriou explained that broadening the program in this way would provide additional revenues by allowing more students to return to WPI in the program. It would also open the BS/MS program to students who, for various reasons, must first enter the workforce for several years after graduation. There will be no impact on degree requirements, and no additional resources are required. The change would go into effect in the 2022-23 academic year.

The motion passed (with 108 in favor and 6 votes opposed).

Prof. Richman thanked all members of CGSR who gave careful thought to this motion and patiently waited until today's meeting to see it pass through the faculty.

4. Provost's Report

Provost Soboyejo expressed his great appreciation at faculty meetings for our deliberate parliamentary procedures and respectful discussions. He was especially gratified to see how the promotion issues at today's meeting were resolved. More generally, Provost Soboyejo thanked the faculty for how it met the challenges over the past year, and how doing so allowed us to become more of a community. He thanked Prof. Richman and Prof. Boudreau for their efforts to organize WPI's WeConnect community day on Feb. 24, and cited it as an example of our many community building activities. Provost Soboyejo encouraged all of us, including himself, to take some time to decompress over the summer in ways that would allow everyone to return in the fall with renewed energy.

Provost Soboyejo described the WPI faculty as his true partners while he has served as Provost - in a partnership that has enabled us to come so far. He thanked the faculty for its support and expressed his hope that the same level of support will be extended to Dean Heinricher, who as incoming Provost is prepared to serve our community well with the instincts and experiences he brings to the position. Provost Soboyejo also asked for the faculty's continued support as he moves into the role of interim President. He affirmed that he will continue to represent the best interest of WPI, and described his role to build community and support the aspirations of our faculty, staff, students, administration, and Board of Trustees.

Dean Heinricher (MA) thanked everyone for their kind notes of congratulations. He also reminded everyone of the following ceremonies this week: micro-commencement for still-competing student-athletes on Wednesday May 11; graduate student commencement on Thursday May 12; baccalaureate ceremony on Friday May 13; and undergraduate student commencement on Saturday May 14. Dean Heinricher thanked Dean Gericke for stepping into the upcoming role of interim Dean of Undergraduate Studies, and he wished the faculty a relaxing summer.

5. New Business

There was no new business.

6. Closing Announcements

Prof. Richman thanked everyone for their efforts during a difficult year that at the same time gave us opportunities both to test and to build community. He thanked everyone who participated in our faculty meetings and did what they needed to do everywhere and anywhere on campus throughout the year. He looked forward to meeting again in September to introduce ourselves to an exciting group of new faculty members.

7. Adjournment

Meeting was adjourned at 1:05pm by **Prof. Richman**.

Respectfully submitted,

Mark Richman
Secretary of the Faculty

Addenda on file with these minutes:

- Addendum #1 – COAP COG Motion on Promotion Criteria for Profs of Teaching – Minutes May 10 2022
- Addendum #2 – COAP COG Motion on Promotion Procedures for full Profs of Teaching - Minutes May 10 2022
- Addendum #3 – COAP COG Motion on Eligibility for Promotion of TTT Faculty – Minutes May 10 2022
- Addendum #4 – FAP-FBC-COG Resolution on Retirement Benefits – Minutes May 10 2022
- Addendum #5 – CITP Motion on Learning Management System – Minutes May 10 2022
- Addendum #6 – CGSR Motion to Extend BS-MS Double Counting – Minutes May 10 2022

Date: September 1, 2022
To: WPI Faculty
From: Committee on Academic Operations (Prof. Elgert, Chair)
Re: Motion to approve the August 2022 undergraduate student graduation list

Motion: The Office of the Registrar reports that the following candidates have, as of August 30, 2022, completed all of the requirements for the degree designated in the department or program indicated and are eligible to receive that degree. Therefore, as Chair of the Committee on Academic Operations, I move that these students be approved for August 30, 2022 graduation. (Strikethrough text denotes latest deletions and red text denote latest additions.)

Bachelor of Arts

Interactive Media and Game Development:
Patrick Luck

Bachelor of Science

Aerospace Engineering:
~~Rishi Patil~~
~~Double Major~~

Architectural Engineering:
Fangyi Liu

Biology and Biotechnology:
Meghan Staples
Minor: Global Public Health
Jackson Su
Elizabeth West

Biomedical Engineering:
Frederic Ghonda
Het Patel
Ryan Singer

Chemical Engineering:
Pedro Cintron
Samuel Presutti

Computer Science:
Denver Blake
Kevin Dang
Minor: Data Science
Joshua DeOliveira
Double Major

~~Andrew Fisher~~
~~Minor: Computer Science~~
~~Double Major~~
Benjamin Klaiman
Minor: Interactive Media and Game Development
Eva Labbe
Edward Matava
Double Major
Matthew Nagy
Double Major
Benjamin Slattery
Double Major
~~Vivek Wong~~
Jyalu Wu
Double Major

Data Science:
Joshua DeOliveira
Double Major
Jyalu Wu
Double Major

Electrical and Computer Engineering:
Timothy Lewis
Nicolas Machado
Double Major
Bryce McCue
Minor: Arabic Studies
Noelle Morgan
~~Anthony Striano~~
~~Double Major~~
Brendan Train

Humanities and Arts:

Benjamin Slattery
Double Major
Music Concentration

Industrial Engineering:

Christopher Boyce

**Interactive Media and Game
Development - Technology:**

Edward Matava
Double Major
Matthew Nagy
Double Major

Mathematical Sciences:

Jacob Jorgensen
Cyra Katoch
Minor: Computer Science

Mechanical Engineering:

Matthew Adams
Melissa Bazakas-Chamberlain
Nicholas Borowski
Mechanical Design Concentration
William Burnham
Nicholas Dal Porto
John Hoang Do
Nigel Kobayashi
Double Major
Aaron Rosner
Christopher Showan

Physics:

Robert Kramer
Patrick McCarthy
Minor: Psychology
Benjamin Petkie

Robotics Engineering:

Ander Carbajo Perez
Stephen Chavez
Andrew Fisher
Minor: Computer Science
~~*Double Major*~~
Nicholas Hudgins

Nigel Kobayashi
Double Major
Nicolas Machado
Double Major
~~Rishi Patil~~
~~*Double Major*~~
Luke Reid
Michael Scalise
~~Anthony Striano~~
~~*Double Major*~~

Date: September 1, 2022

To: WPI Faculty

From: Committee on Graduate Studies and Research (Prof. Medich, Chair)

Re: Motion to approve the August 2022 graduate student graduation list

Motion: The Office of the Registrar reports that the following candidates have, as of August 30, 2022, completed all of the requirements for the degree designated in the department or program indicated and are eligible to receive that degree. Therefore, as Chair of the Committee on Graduate Studies and Research, I move that these students be approved for August 30, 2022 graduation. (Strikethrough text denotes latest deletions and red text denote latest additions.)

Doctor of Philosophy

Biochemistry:

Lela Jackson

Bioinformatics and Computational

Biology:

Kevin Heath

Dayna Mercadante

Biomedical Engineering:

Shaoju Wu

Business Administration:

Luis Kleinknecht

Javad Norouzi Nia

Chemistry:

Yuting Liu

Computer Science:

Noura Alghamdi

Zeqian Li

Hamid Mansoor

Data Science:

Han Jiang

Rasika Karkare

Yingnan Liu

Fire Protection Engineering:

Veronica Kimmerly

Materials Science and Engineering:

Ridwan Ahmed

Luqman Azhari

Matthew Ryder

Christopher Sample

Mathematical Sciences:

Evan Witz

Mechanical Engineering:

Maryam Masroor Shalmani

Ajit Mohekar

Physics:

Debanik Das

Robotics Engineering:

Yinan Sun

Zhanyue Jimmy Zhao

Master of Business Administration

Jacquelyn Amico

Master of Engineering

Electrical and Computer Engineering:

Andrew Duncan

Coleman Ellis

Mehdi Faddi

Thomas Lott

Maxwell McNally

Biomedical Engineering:

Ali Guthrie

Power Systems Engineering:

Kayla Badamo
Sultan Behery
Emma Burke
Benjamin Chamberlain
Jordan Dibona
Bela Elekes
Jacob Farmer
Benjamin Fisk
Daniel Kim
Dwayne Leslie
Jacob McKinnon
Marissa Simonelli

Master of Mathematics for Educators

Michael Duva
Catherine Harvey
Dermot Kendal
Elizabeth Raymond
Elizabeth Schaffert

Master of Science

Aerospace Engineering:

Ethan Buckley
Joshua Martin

Biomedical Engineering:

~~Johanna Enzmann~~
~~Ali Guthrie~~

Bioscience Management:

Christopher Croce
Paul Henry
Guillermo Montoya
Ryan O'Reilly
Urvi Rajyaguru

Biotechnology:

Alessandra Molinaro

Chemical Engineering:

Kyle Joyce
Ronish Shrestha
Adam Strohm

Computer Science:

Denver Blake
Theodore Campbell
Jessica Forrett
Christopher Micek
Cory Neville
Noëlle Rakotondravony
Adrianna Staszewska

Data Science:

Mia Barger
William Carr
Ranier Gran
Truman Larson
Ridhima Saxena

Electrical and Computer Engineering:

Zaid Alqaisi
Corey Coogan
Benjamin Guerriero
Troy Strassburg
Zachery Van Ness
Shangjin Zhong

Fire Protection Engineering:

Sullivan Boyd
Lim Chew Ming Clayton
Anna Correia
Amanda Dacosta
Hannah Murray

Information Technology:

Xiaolin Jiang

Interactive Media and Game Development:

McKenna Gamos
Mikel Matticoli
Karitta Christina Zellerbach

Manufacturing Engineering:

Ningran Meng

Materials Science and Engineering:

Brandon McLaughlin

Mechanical Engineering:

Elliana Budri

Patrick Chernjavsky

Peter Fagerholm

Evan Muzilla

Calvin Thomas

Operations and Supply Chain Analytics:

Abigail Perlee

Power Systems Management:

Christopher Jarrett

Quentin Kroll

Robotics Engineering:

Fadi Alladkani

Jorge Diaz Barreto

Andrew Euredjian

Spencer Gregg

Pratik Jawahar

Nithin Senthur Kumar

Derek Larson

Jesse Morzel

Alfredo Rodriguez Diaz

Rohan Walia

Kehan Yang

**Science and Technology for Innovation
in Global Development:**

Kennedy Damoah

Julisse Sabater

Systems Engineering:

Gabriela Alatorre

Hayley Patton

Sabriya Silva

Sylvain William Timagni Koagne

Brief Biographies of New and Recently Appointed WPI Faculty Members Fall 2022

New Administrative Appointees:

Interim Provost

Arthur C. Heinricher, Interim Provost and Senior Vice President

BS, Applied Mathematics from the University of Missouri in St. Louis

PhD, Mathematics from Carnegie Mellon University

Art Heinricher joined WPI as Assistant Professor in Mathematical Sciences in 1992. His research focused on stochastic control theory with applications in mechanical engineering and finance. He helped develop the Insight Advising Program for first year students as well as the Center for Industrial Mathematics and Statistics supporting projects and research in industrial mathematics. In 2007, he was named the Associate Dean of Undergraduate Studies for the First Year Experience and charged with launching the Great Problems Seminars. He served as Dean of Undergraduate Studies from 2008 until becoming Interim Provost in May 2022.

Interim Dean of Undergraduate Studies

Arne Gericke, Professor, Interim Dean of Undergraduate Studies

Diplom-Chemist, Chemistry, University of Hamburg, Germany 1988

Dr. rer. nat., Chemistry, University of Hamburg, Germany, 1994

Arne Gericke joined WPI as the Head of the Department of Chemistry and Biochemistry in 2011. He transitioned in 2021 to the position of Associate Dean of Undergraduate Studies, and in 2022 to the position of Interim Dean of Undergraduate Studies. As Associate Dean he oversaw the operation of the Office of Undergraduate Research and Creative Activity and worked on improving the academic experience of transfer and non-traditional students. His research is concerned with the biophysical characterization of lipid mediated protein functions. Phosphoinositide lipids have been shown to influence or even control physiological processes like cell migration, survival and division. Dysregulation of global or local cellular phosphoinositide levels leads to a range of disease states, most notably cancer, diabetes and various neurological diseases. In addition to obtaining financial support for his research, he has received throughout his career several educational and scholarship grants and he has been director for NSF REU sites at his previous institution and WPI.

Department Head, Computer Science

Craig Shue, Department Head, Computer Science

B.S., Computer Science, Ohio University

M.S., Computer Science, Indiana University

Ph.D., Computer Science, Indiana University

Professor Shue's research in enterprise and residential network security has resulted in a range of government and private-sector funding, including a 2017 NSF CAREER Award. Shue directs WPI's Scholarship for Service Program and the WPI DoD Cyber Scholarship Program, both of which fund cyber security students. Shue is part of the Cyber Security program and led the creation of the MS degree in Cyber Security. Shue holds multiple patents and founded a start-up company to commercialize network security tools. Prior to joining WPI, Shue worked as a Cyber Security Research Scientist in the Cyber and Information Security Research Group at the Oak Ridge National Laboratory.

Department Head, Mechanical and Materials Engineering

Robert Hyers, Department Head of Mechanical Engineering

S.B., Materials Science and Engineering, Massachusetts Institute of Technology

Ph.D., Materials Engineering, Massachusetts Institute of Technology

Professor Hyers works at the interface between computers and the physical world. His most recent applications are in high-temperature materials processing systems. His recent projects include model-based experiments on the Space Station including magnetohydrodynamic effects on nucleation and solidification, novel methods for measurement of properties of matter at high temperature, scale-up of a novel metallurgical process by 1000X, and a novel approach to thermal management in spacecraft propulsion. He has extensive experience with startup companies, entrepreneurship, and innovation. His experience includes founding companies, co—founding an educational program in entrepreneurship and innovation which grew to over 200 students per semester and leading a privately-funded industrial startup for three years.

Department Head, Social Science and Policy Studies

Robert Krueger, Department Head, Social Science and Policy Studies

B.S. Oklahoma State University, Political Science

M.S.L. Vermont Law School, Environmental Law and Policy

M.A. Clark University, Environmental Science and Policy

Ph.D., Clark University, Human Geography

Professor Krueger’s scholarship focuses on bringing social scientific and cultural perspectives to improve cross-cultural co-design in engineering projects in sub-Saharan Africa. Krueger is nearing completion on three books in this area and are to be published by MIT Press and DeGruyter Press. Putting these ideas into practice, Krueger is PI on a US AID Resilience Food Security Activity project, that is charged with creating a market based sanitation economy that will spread improved hygiene and provide economic opportunities for women and youth in the East Hararghe region of Ethiopia. Working with partners in Ghana and Senegal, Krueger is working to increase income and improve the health associated conditions of e-waste processing. He is working with communities, private and government sector partners, and traditional leadership.

Tenured and Tenure-Track Faculty Members

Tenure-Track Teaching Faculty:

Department of Biology and Biotechnology

Louis Roberts, Associate Professor of Teaching

B.S., Biology and Biotechnology, WPI, 1992

Ph.D., Biochemistry, Molecular and Cell Biology, Cornell University, 1999

Lecturer, University of Massachusetts-Amherst, 2005-2012

Senior Lecturer, University of Massachusetts-Amherst, 2012-2015

Associate Teaching Professor, Worcester Polytechnic Institute, 2015-2022

Lou Roberts' teaching pedagogy is to leverage collaborations and apply backwards course design principles to develop classes that evolve to keep pace with the practices of modern biology. He creates course-based authentic research experiences for undergraduate and graduate students so they can develop an appreciation for how funded research is conceived and executed. He ensures the design of courses and delivery of their content are accessible to all students, who possess diverse backgrounds and learning styles. This provides students the most freedom to focus on learning and growing as scientists and people.

Department of Chemical Engineering

Laila Abu-Lail, Assistant Professor of Teaching

B.S., Civil Engineering, Jordan University of Science & Technology, Irbid, Jordan, 2003

M.S., Environmental Engineering, Worcester Polytechnic Institute, Worcester, Massachusetts, 2006

Ph.D., Civil Engineering, Worcester Polytechnic Institute, Worcester, Massachusetts, 2011

Assistant Teaching Professor, Worcester Polytechnic Institute, 2017-2022

Dr. Abu-Lail's teaching interests center on developing innovative teaching technologies, interdisciplinary approaches, and delivery strategies to improve the education practice in chemical and environmental engineering. In her work, she incorporates advanced technologies (such as augmented reality) and creates unique, interactive, digitalized laboratory experiences. She uses evidence-based approaches to develop new courses and improve current courses and establishes industrial collaborations to bridge theory to practice. She has over a decade of teaching experience in face-to-face and online teaching platforms and both lecture and laboratory courses. Her innovative work was presented at the regional ASEE conference and has been submitted for publication in the Advances in Engineering Education Journal. She strives to create a learning environment that promotes collaboration, care, flexibility, and open communication both inside and outside the classroom.

Department of Computer and Electrical Engineering

Koksal Mus, Assistant Professor of Teaching

B.Sc, Mathematics, Yildiz Technical University, 2004

M.S., Department of Cryptography, Middle East Technical University, 2009

Ph.D., Department of Cryptography, Middle East Technical University, 2015

Assistant Professor, Department of Computer Engineering, Istanbul Aydin University, 2015-2016

Assistant Teaching Professor, Worcester Polytechnic Institute, 2016-2022

Koksal Mus' research and teaching interests focus on Cybersecurity and Cryptography and extend to hardware programming in computer engineering. He is passionate not only about helping students grasp theoretical subjects but also by outing them to use through hands-on projects in a student-centered classroom via deep pedagogy. He enjoys sharing his knowledge and expertise with undergrads and grads on various levels in his classes. Prof. Mus also conducts research on standardization of Quantum Computer

Resistant Security by building the cybersecurity standards of the future, He has recently published his work in top-tier conferences in the field such as Computer and Communications Security (CCS), Symposium on Security and Privacy (Euro S&P). He is also a patent-holder on verifiable internet voting which provides digital security through personal computers.

Department of Humanities and Arts

Joseph Aguilar, Assistant Professor of Teaching

B.A., English, Westmont College, 2001

M.F.A., Creative Writing-Fiction, Oregon State University, 2007

Ph.D., Literature and Creative Writing, University of Missouri, 2013

Assistant Teaching Professor, University of Tampa, 2013-2014

Visiting Assistant Professor, College of Wooster, 2014-2016

Assistant Teaching Professor, University of Missouri, 2016-2018

Assistant Teaching Professor, Worcester Polytechnic Institute 2018-2022

Joe Aguilar's teaching and research interests include creative writing, Chicano literature, folklore, science fiction, and the contemporary American novel. He's the author of the poetry and prose collection *Half Out Where* and he has also published work in *DIAGRAM*, *Tin House*, *Iowa Review*, and *Threepenny Review*. He serves as a board member of the Worcester County Poetry Association, a co-editor of WPI's new literary journal *hex* (<https://hexliterary.com/>), and the art editor of *The Worcester Review*. He's currently working on both a science fiction novel and an oral history of the Mexican-American side of his family.

Joseph F. Cullon, Professor of Teaching

B.S., Natural Resources, Cornell University, Ithaca, New York, 1991

M.S., Environmental Studies (Land Resources), University of Wisconsin, Madison, 1995

M.A., History, University of Wisconsin, Madison, 1998

Ph.D., History, University of Wisconsin, Madison, 2003

Assistant Professor of History, Dartmouth College, 2003-2012

Lecturer, Massachusetts Institute of Technology, 2014-2017

Assistant Teaching Professor, Worcester Polytechnic Institute, 2013-2017

Associate Teaching Professor, Worcester Polytechnic Institute, 2017-2022

Professor of Teaching, Worcester Polytechnic Institute, 2022-present

Dr. Cullon is an American historian working at the intersections of urban, environmental, and technological methodologies. His most recent work adopts the tools of digital public humanities, where he engages a variety of publics to rethink the "archive" and their place in it. To accomplish this, he creates across multiple print and digital genres. His most recent research resulted in the 2019 museum exhibit LGBTQ+ Worcester for the Record, its 2020 published catalog of the same name, and the still growing digital archive at <https://lgbtqinthewoo.org/>. His parallel efforts to increase students understanding of urban form, structural racism, and environmental inequality received a major boost from a 2017-2020 Humanities Connections Grant from the National Endowment for the Humanities, which brought together faculty in History, Art, International and Global Studies, Biology and Biotechnology, and Civil, Environmental, and Architectural Engineering to draw thematic connections between existing and new courses in Urban Humanities. Since 2020, he has also served as Associate Head for the Humanities and Arts Department.

Lindsay Davis, Assistant Professor of Teaching

B.A., Political Science, University of Vermont, 2005

M.A, Liberal Studies, Dartmouth College, 2009

Ph.D., American Studies, The George Washington University, 2018

Assistant Teaching Professor, Worcester Polytechnic Institute, 2018-2022

Dr. Davis is an American cultural historian whose research examines the legal, political, social, and cultural dimensions of 19th and 20th century understandings of race, gender, sexuality, and other aspects of identity, particularly in the context of reproductive justice, mass incarceration, and feminist activism and theory. Her recent scholarship has been published in *Feminist Formations* and *Women's Studies Quarterly*. In 2019, she co-founded WPI's Gender, Sexuality, and Women's Studies program with Professor Rebecca Moody, offering a variety of undergraduate courses, a minor, and co-curricular opportunities for WPI students. Lindsay also serves as the co-chair for the Diversity, Equity & Inclusion Committee for the Department of Humanities and Arts as well as the Inclusion Partner for the College of Arts and Sciences on the Council for Institutional Diversity.

Wen-Hua Du, Associate Professor of Teaching

B.A., Philosophy, Soochow University, Taipei, Taiwan, 1997

M.A., Teaching Chinese as a Foreign Language, National Taiwan Normal University, Taipei, Taiwan, 2000.

Ph.D., Curriculum and Instruction, University of Wisconsin- Milwaukee, Milwaukee, Wisconsin, 2008

Assistant Teaching Professor, Worcester Polytechnic Institute, 2017-2022

Wen-Hua Du is a dedicated foreign language educator specializing in teaching Chinese as a foreign language. For the past two decades, her teaching passion has been closely aligned with her research interests: to help students learn Chinese more effectively and become autonomous learners through learner-centered curriculum design and research-informed pedagogy. Her research focuses include learners' strategies, need-based curriculum design, and fostering students' intercultural communicative competence. She is a co-author of a series of two textbooks *Advanced Chinese through Business Topics*. Dr. Du is a co-director of WPI's Hangzhou Project Center and co-founding director of the Taiwan Project Center. Before she joined the WPI faculty, Dr. Du was a senior lecturer and coordinator of the Chinese language program at the Pennsylvania State University, University Park, and a visiting assistant professor of Chinese at the University of Wisconsin, Madison.

Joshua Rohde, Associate Professor of Teaching

B.S., Civil Engineering, Univ of MN, 2011

B.M., Cello Performance, Univ of MN, 2011

M.S.M., Choral Conducting, Boston Univ, 2013

M.A., Choral Conducting, Univ of Birmingham, UK, 2014

D.M.A., Choral Conducting, Boston Univ, 2017

Assistant Teaching Professor, Worcester Polytechnic Institute, 2016-2022

Associate Teaching Professor, Worcester Polytechnic Institute, 2022

Rohde is the Director of Choral Activities and Coordinator of Music Ensembles at WPI, where he conducts all four of the university's choral ensembles. Giving forty to fifty performances a year in Worcester, Boston, Providence, and abroad, he has collaborated with multiple Pulitzer-Prize winning authors and composers (David McCullough, David Lang, John Luther Adams). Rohde overhauled the WPI choral curriculum to create a program where the diverse and poignant repertoire the students perform help to shape their view of the world, empathize with others, and express their emotions related to difficult and important issues. In the classroom, he added the topics focused course Music in Time of Conflict, where music is examined as a tool to address issues such as the destruction of war, rehabilitation in prisons, and medical studies involving Alzheimer's. Rohde was the 2021 Recipient of Romeo L. Moruzzi Young Faculty Award for Innovation in Undergraduate Education.

Department of Integrative and Global Studies

John Michael Davis, Assistant Professor of Teaching

B.A., Psychology, Wilfrid Laurier University, 2009

M.S., Integrated Water Resources Management, McGill University, 2012

M.A., Environmental Studies, Ben Gurion University, 2013

Ph.D., Geography, Memorial University of Newfoundland, 2017

Postdoctoral Fellow, Geography, University of Illinois at Urbana-Champaign, 2017-2019

Assistant Teaching Professor, Worcester Polytechnic Institute, 2019-2022

John-Michael Davis's research and teaching is grounded in community-based, action-oriented projects that address complex development challenges related to sustainable livelihoods, waste management, and civil society effectiveness. John-Michael's graduate research investigated the economic and environmental conditions of North-to-South e-waste trade and informal e-waste economies across the global South – with extensive fieldwork in the Israeli-Palestinian e-waste system. His award-winning research has been widely published in academic journals, featured in national and international media outlets, and directly influenced policy decisions. At WPI, he co-directs the Puerto Rico Project Center to provide enhanced academic experiences through community-based research projects for students to learn, create, grow, share insights, and contribute meaningfully to the well-being of communities and organizations in Puerto Rico.

Katherine Foo, Assistant Professor of Teaching

Katherine Foo, Assistant Professor of Teaching

B.A., Poverty Studies, Williams College, 2002

M.L.A. [Master of Landscape Architecture], University of Michigan, 2008

M.S. in Sustainable Systems, University of Michigan, 2008

Ph.D., Geography, Clark University, 2015

Postdoctoral Fellowship, Geography Department, Pennsylvania State University, 2015-2017

Assistant Teaching Professor, Worcester Polytechnic Institute, 2017-2022

Katherine Foo is an urban, development, and environmental studies researcher. She co-directs the Berlin Project Center and Hong Kong Project Center. Katherine teaches in the Global Projects, Community Climate Adaptation, and Environmental and Sustainability Studies Programs. Currently, her interests are in the role of reparations in shaping urban and regional environmental agendas. Her work engages the fields of urban geography, urban ecology, and political ecology, and her interests are in green infrastructure, environmental governance, smart cities, landscape visualization, and Justice, Equity, Diversity and Inclusion (JEDI). She was previously a Radcliffe/Rappaport Doctoral Public Policy Fellow and USDA Forest Service Sustainability Science Fellow. She has published in Landscape & Urban Planning, Cities, Geoforum, Landscape Ecology, Frontiers in Sustainable Cities, and other outlets.

Derren Rosbach, Associate Professor of Teaching

B.A., Human Ecology, College of the Atlantic, 1995

M.S., Biology, Western Carolina University, 2005

Ph.D., Planning, Governance, and Globalization, Virginia Tech, 2010

Assistant Teaching Professor, Worcester Polytechnic Institute, 2012-2016

Associate Teaching Professor, Worcester Polytechnic Institute, 2016-2022

Derren Rosbach teaches courses and conducts research focused on key areas of sustainability including energy, water, food, natural resources, and environmental planning. He draws on a diverse academic and professional background that includes work in sustainable forestry and agriculture, microbial ecology, wildlife biology, environmental planning, and almost two decades of teaching experience. His research and scholarship include publications and workshops on transdisciplinary collaboration and project-based learning pedagogy for first-year and sustainability courses. The overarching goal of his teaching and research is to prepare and inspire students to contribute to cross disciplinary efforts that address social and environmental sustainability challenges.

Department of Mathematical Sciences

Buddika Peiris, Associate Professor of Teaching

B.Sc., Mathematics, University of Sri Jayewardenepura, Sri Lanka, 2005

M.Sc., Mathematical Statistics, Southern Illinois University, Carbondale

Ph.D., Mathematical Statistics, Southern Illinois University, Carbondale

Postdoctoral Scholar, Worcester Polytechnic Institute, 2014-2016

Assistant Teaching Professor, Worcester Polytechnic Institute, 2016-2021

Associate Teaching Professor, Worcester Polytechnic Institute, 2021-2022

Buddika Peiris's research and teaching interests center on the statistical applications. He has taught almost all undergraduate and graduate level statistics classes. As the coordinator of Applied Statistics Master's program since 2016, he has advised all master's students and has mentored twenty-eight students. As the coordinator of the Statistics Consulting Lab (SCL), he has consulted a few projects for master's and Ph.D. students in other departments and for the companies around. He has published articles about restricted inference, meta-analysis, Circular variables and analyzing ROC curves in the journals Multivariate Analysis, Journal of Applied Statistics, and Communication in Statistics.

Department of Mechanical and Materials Engineering

Pradeep Radhakrishnan, Associate Professor of Teaching

B.E., Mechanical Engineering, PSG College of Technology, Coimbatore, India, 2006

M.S.E, Mechanical Engineering, The University of Texas at Austin, USA, 2010

Ph.D., Mechanical Engineering, The University of Texas at Austin, USA, 2014

Assistant Teaching Professor, Mechanical Engineering, Worcester Polytechnic Institute, 2014-2020

Associate Teaching Professor, Mechanical Engineering, Worcester Polytechnic Institute, 2020-2022

Pradeep Radhakrishnan teaches courses in engineering mechanics and in design. His research is related to the development of tools to enhance design and education of mechatronic systems. Through various projects, he has developed software tools for planar mechanisms, gear trains, bond graphs, and 3D printing for use in courses and training. He has worked at TVS Motor Company Ltd., Palo Alto Research Center, and GE Global Research.

Can Sabuncu, Assistant Professor of Teaching

B.S., Mechanical Engineering, Yildiz Technical University, 2005

M.S., Aerospace Engineering, Istanbul Technical University, 2007

Ph.D., Aerospace Engineering, Old Dominion University, 2011

Assistant Teaching Professor, Worcester Polytechnic Institute, 2017-2022

Ahmet Can Sabuncu's professional interests span from engineering education, history of science and engineering, thermo-fluids engineering, and microfluidic technology. Can is eager to discover the next generation workforce skills and to educate the next generation of engineers who will carry industry 4.0 forward considering the needs of the global world. Can's current work focuses on application of problem-solving cognitive models in classroom and enabling anytime-anywhere experimentation for engineering students.

Department of Physics

Rudra Kafle, Associate Professor of Teaching

B.Sc., Statistics, Physics, Mathematics, Tribhuvan University, Kathmandu, Nepal, 1992

M.Sc., Physics, Tribhuvan University, Kathmandu, Nepal, 1996

M.S., Physics, Worcester Polytechnic Institute, 2007

Ph.D., Physics, Worcester Polytechnic Institute, 2012

Postdoctoral Research Fellow in Biophysics, University of Michigan Ann Arbor, 2012-2015

Assistant Teaching Professor of Physics, Worcester Polytechnic Institute, 2015-2021

Associate Teaching Professor of Physics, Worcester Polytechnic Institute, 2021-2022

Rudra Kafle did his Ph.D. work in theoretical atomic physics on matter wave sensors, and his postdoctoral research in biophysics on in vivo studies of active processes in bacterial nucleoid. He has been applying his expertise in guiding students' major qualifying projects on the studies of such astrophysical phenomena as the formation and evolution of stars, and the intergalactic medium. He also advises physics education research projects, which focus on how to improve students' learning of physics concepts. He consistently adopts research-based methods to engage students effectively in their learning. He has successfully implemented studio-style teaching in introductory physics courses by introducing technology-based hands-on activities. As a WPI Global lab faculty fellow, he is deeply interested in implementing interactive multimedia in physics teaching and learning in developing countries like Nepal. He has presented his research and scholarly work at various institutions and international conferences and has published several articles in reputed journals.

Izabela Stroe, Associate Professor of Teaching

B.Sc./M.Sc., Physics, University of Bucharest, 1994

Ph.D., Physics, Clark University, 2005

Seaborg Postdoctoral Fellow, Los Alamos National Laboratory, 2005-2008

Assistant Professor/Teaching Professor, Worcester Polytechnic Institute, 2008-2018

Associate Teaching Professor, Worcester Polytechnic Institute, 2018-2022

Prof. Stroe is an experimental biophysicist with fourteen years of innovative teaching and curriculum development experience. She conducts both fundamental and applied research that bridges many disciplines. Her work on proteins and cell-protein interactions impacted current understanding of the role of water in the function and dynamics of proteins and the relationship between Alzheimer's and Type II Diabetic disease. She developed a novel detection method of amyloidogenic proteins that may lead to early detection of amyloidosis diseases, in particular Alzheimer's Disease. In her teaching, she has transformed and enriched the physics undergraduate and graduate curriculum by incorporating components of the Entrepreneurial Mindset learning to accelerate innovation and global technological and societal impact. She has led the Master of Science in Physics for Educators since 2015 and the Renewable Energy Materials STEM Scholars Program since 2018. Her work has been published in such high impact journals as PNAS and has been featured in the New and Views of Nature.

Dual-Mission Tenured and Tenure-Track Faculty:

Department of Biomedical Engineering

Diana Alatalo, Assistant Professor

Cert., Practical Nursing, Assabet Valley Regional Technical School, 1996

A.S., Sciences, Collin College, 2011

B.S., Electrical Engineering, The University of Texas at Dallas, 2015

M.S., Mechanical Engineering, The University of Texas at Dallas, 2016

Ph.D., Mechanical Engineering, The University of Texas at Dallas, 2021

Diana Alatalo's, graduate research projects were interdisciplinary in nature and bridge medical sciences and bio-transport phenomena. Her work centers on the emerging application of engineering models to breastfeeding mechanics with special emphasis on rheology of biological fluids, clinical experimentation, medical image and sensor analysis, and characterization of biomaterial properties. Diana's research involved international collaboration with clinicians and biochemist at Hartmann Human Lactation Research Group at the University of Western Australia where she conducted a clinical experimentation for 8 weeks in 2016 under her NSF East Asia and Pacific Summer Institute grant. Outside her primary research, she has collaborated with other labs on projects in additive manufacturing and biomechanics, particularly working on material characterization using her rheological background. In addition to her engineering background Diana has a nursing certificate and clinical work experience that provides a unique perspective for her research activities and will facilitate collaborative project with faculty in other departments as well as physicians at UMass Memorial. The results of Diana's research have been well received in both engineering and medical journals and at international conferences.

Business School

Dr. Kwamie Dunbar, Associate Professor of Finance

B.S., Economics, University of the West Indies, 1989.

M.B.A., Economics and Finance, Sacred Heart University, 1999.

Ph.D., Financial Economics, Fordham University, 2005.

M.S., Mathematics, Fairfield University, 2007.

Dr. Dunbar was a tenured Associate Professor of Finance at Simmons University. Prior to that, he was at Sacred Heart University, where he established and ran the MS program in Finance and Investments. He also served as Associate Dean for Sacred Heart University's Welch College of Business, where led strategic planning and budgeting, and coordinated accreditation efforts. His publications have appeared in excellent journals in Finance and Economics. He has an active program of research studying risk aversion and hedging activities related to blockchain and cryptocurrency assets. Professor Dunbar also comes to us with a wealth of industry experience, having served as Director of Quantitative and Risk Analytics at Mastercard Worldwide and as Manager of Insurance Investments at GE Asset Management.

Department of Chemical Engineering

Christina Bailey-Hytholt, Assistant Professor

BS, Chemical Engineering, Worcester Polytechnic Institute, 2015

Ph.D., Biomedical Engineering, Brown University, 2020

Dr. Bailey-Hytholt's research interests focus on drug and gene delivery, biomaterials, and non-invasive diagnostics particularly for applications towards prenatal and women's health. She has expertise in lipid-based systems, including cell-mimicking models to study molecular interactions and formulating lipid nanoparticles for non-viral gene delivery. Dr. Bailey-Hytholt has also previously developed non-invasive

techniques for prenatal screening. She completed her Ph.D. at Brown University in 2020 followed by a Postdoctoral Fellowship in Biologics Drug Product Development and Manufacturing at Sanofi.

Xiaowei Teng, James H Manning Professor

B.S. & M.S. Biochemical Engineering, East China University of Science and Technology, 2001

Ph.D., Chemical Engineering, University of Rochester, 2006

Before joining the faculty at WPI, Dr. Teng was a professor and Chair of the Chemical Engineering Department at the University of New Hampshire. He received his Ph.D. in Chemical Engineering from the University of Rochester in 2006. He then became a research associate at the Center for Functional Nanomaterials at the Brookhaven National Laboratory. He joined Chemical Engineering Department at the University of New Hampshire in 2008 and served as the Department Chair from 2020 to 2022. His research has been funded by the Department of Energy (DOE) and the National Science Foundation for the fundamental studies of chemical, physical, and transport properties of electrochemically active materials for energy conversion and storage applications, primarily using synchrotron X-ray and neutron tools. He received the DOE Early CAREER Award in 2013.

Department of Civil, Environmental and Architectural Engineering

Nan (Nancy) Ma, Assistant Professor

Bachelor of Environments, University of Melbourne, 2015

Master of Architecture, University of Melbourne, 2017

Ph.D. in Architecture, University of Pennsylvania, 2022

Nancy Ma's work investigates the integration of architectural, environmental, and computational knowledge to advance healthy, sustainable, and occupant-centric buildings. In pursuing this objective, her research applies multi-disciplinary simulation, experimental, and field study approaches using both objective and subjective measures. Specifically, her research interests include building performance for thermal comfort and energy efficiency, design for building occupants and behavior, IoT smart buildings and big data, and related indoor air/environmental quality field studies. Ma has led multiple interdisciplinary research projects in collaboration with various fields ranging from public health, biostatistics, computer science, mechanical engineering, to pediatric psychology. She was awarded 2021 Best Paper Award from the highly regarded journal Building and Environment and has received research funds from Kleinman Center for Energy Policy, GAPSA - Provost Fellowship for Interdisciplinary Innovation, and Penn Research Transition Fund. Prior to joining WPI, Ma held an appointment at the University of Melbourne and taught at all levels of instruction across schools in Australia and the United States. She worked as a research associate at the Center for Environmental Building & Design and the Thermal Architecture Lab at Penn. Ma holds a PhD in Architecture (building technology track) from the University of Pennsylvania, a Master of Architecture, and a Bachelor of Environments from the University of Melbourne, Australia.

Department of Computer Science (Data Science Program)

Fabricio Murai, Assistant Professor

B.S., Computer Science, Universidade Federal do Rio de Janeiro, 2007

M.S., Systems and Computer Eng. Universidade Federal do Rio de Janeiro, 2011

M.S., Computer Science, University of Massachusetts Amherst, 2014

Ph.D., Computer Science, University of Massachusetts Amherst. 2016

Before joining WPI, Fabricio Murai was an Associate Professor in the Department of Computer Science at the Universidade Federal de Minas Gerais, Brazil. His research lies in the application of mathematical modeling, statistics and machine learning to computer, informational and social networks. He has published in top scientific journals such as Data Mining and Knowledge Discovery, ACM TKDD and PLOS ONE. He serves as a TPC member for the ACM SIGKDD, ECML-PKDD and WWW

Department of Electrical and Computer Engineering

Bashima Islam, Assistant Professor

B.S., Computer Science & Engineering, Bangladesh University of Engineering and Technology, 2016

Ph.D., Computer Science, University of North Carolina at Chapel Hill, 2021

Bashima's research focuses on understanding and enhancing the usability, intelligence, and processing capabilities of tiny low-power edge devices to realize their full potential in our daily lives. She aims to develop a new set of intelligent edge computers that provide sustainable and scalable sensing solutions in various application domains ranging from health wearable to precision agriculture. The interdisciplinary nature of her research involves diverse domains, including Machine Learning, Mobile Computing, Embedded Systems, and Ubiquitous Computing. Her work has been published in top conferences, including IMWUT/UBICOMP, IPSN, RTAS, and MobiSys. In recognition of her work on time-aware intermittent systems, she received an honorable mention for the Gaetano Borriello Outstanding Student Award at UbiComp 2020. She was one of the Rising Stars in EECS, 2020, and received the N2Women Young Researcher Fellowship in 2017. Forbes named her as one of the 30 most influential scientists under the age of 30 in 2021. Bashima has spent a year as a Visiting Postdoctoral Research Associate at the University of Illinois at Urbana Champaign (UIUC).

Department of Humanities and Arts

Laura J. Eckelman, Associate Professor

B.A., Middlebury College, 2005

M.F.A., Yale University, 2011

University's Graduate School of Design and Theatre Management at Yale University's School of Drama. Prof. Eckelman came to WPI as an Associate Teaching Professor from Washington College, where she served for eight years as Assistant/Associate Professor, Production Manager, and Resident Designer. During that time, she developed nine new courses, overhauled the department's experiential learning curriculum, earned tenure & promotion, served as Chair of the Department of Theatre & Dance, and founded a new interdisciplinary program in Arts Management & Entrepreneurship (which she directed). While at Washington College, Prof. Laura also sat on several college-wide committees, including Curriculum, International Education, Diversity, and the First Year Task Force. As a theatrical lighting designer, Prof. Eckelman works professionally with theater companies, schools, and other institutions across the country, including Yale Repertory Theatre, Studio Theatre, Theater J, Keegan Theater, Triad Stage, The Welders, Perseverance Theatre, the Bearded Ladies Cabaret, Bang on a Can's Asphalt Orchestra, Capital Fringe, the New York Urban Theatre Festival, PTP NYC, the Byrdcliffe Arts Festival, the International Festival of Arts & Ideas, University of the Incarnate Word, Connecticut College, the Bard College Vocal Arts Program, and many others. She was a 2012 recipient of the S&R Washington Award. In addition to designing, Prof. Eckelman conducts pedagogical scholarship on theatre training in higher education, which she presents at national conferences such as the Association of Theatre in Higher Education (ATHE) and the United States Institute of Theatre Technology (USITT). Prof. Eckelman currently serves on the leadership of both ATHE (as Representative for the Design Technology Management focus group) and USITT (as co-Coordinator for the Distinguished Achievement Award in Education).

Department of Integrative and Global Studies

William San Martín, Assistant Professor

B.A. Pontificia Universidad Católica de Chile, 2006

M.A. Pontificia Universidad Católica de Chile, 2011

Ph.D. University of California, Davis, 2017

William San Martín (He/Him/El) is an interdisciplinary scholar of earth-systems sciences and global environmental governance trained in environmental history, international politics & relations, and science & technology studies (STS). His work focuses on socio-environmental (in)justices, international

development, Latin America & the Global South, and global policy. He is currently a Research Fellow at the Earth Systems Governance Project at Utrecht University. William is a former Fulbright Scholar (2011-2015); a Visiting Scholar and a Postdoctoral Associate jointly affiliated with the program of Science, Technology, and Society and the History Section at the Massachusetts Institute of Technology (2016-2018); and a Carson Fellow at the Rachel Carson Center for Environment and Society at the Ludwig-Maximilians-Universität München, Germany (2021). Prior to joining the Global School and the Department of Integrative and Global Studies, William was an Assistant Teaching Professor in WPI's Humanities & Arts Department, where he supported the creation of WPI's Latin American & Caribbean Initiative and academic programming for the Great Problems Seminar and Global Projects Programs. William is a contributing author to the International Nitrogen Assessment, the first global assessment addressing issues at the intersection of nitrogen science, management, and policy, and providing expert advice to the Nitrogen Working Group of the United Nations Environment Programme. He is also a Steering Council Member for the North American Chapter of the International Nitrogen Initiative. William is also co-editor of the Routledge Handbook of Environmental History (under contract) and author of various peer-reviewed articles and book chapters published in fields including history of science and technology, political ecology, environmental studies, sustainable development, and Latin American studies. He is currently working on a book manuscript entitled *Governing Nitrogen Species: Global Biogeochemical Cycles, Inequalities, and the Rise of Earth System Governance*.

Department of Mathematical Sciences

Adam Wagner, Assistant Professor

B.Aa, Mathematics, University of Cambridge, 2013

M.S., Mathematics, University of Cambridge, 2014

Ph.D., Discrete Mathematics, University of Illinois at Urbana-Champaign, 2018

Adam Wagner's research focuses on combinatorics, graph theory, and on exploring new ways computers and machine learning methods can be used in mathematics. He did his postdoctoral studies at Tel Aviv University and at ETH Zurich.

Department of Mechanical and Materials Engineering

Vladimir Vantsevich, Professor

Dip.-Eng., Mech. Eng. in Automobile and Tractor Engineering, Belarusian Polytechnic Institute, 1977

Ph.D. Automobile and Tractor Engineering, Belarusian National Technical University, 1981

Sc.D. Automobile and Tractor Engineering, Belarusian National Technical University 1992

Dr. Vantsevich serves as a professor and co-Director and Principal Investigator of the Autonomous Vehicle Mobility Institute. Prior to WPI, he was a professor at the University of Alabama at Birmingham and Lawrence Technological University (LTU) in Michigan. Before LTU, Dr. Vantsevich worked as a professor of Belarusian National Technical University and the Head of R&D Group on Multi-Wheel Drive Vehicles that designed mechatronic and mechanical driveline systems for various purpose vehicles in Belarus. His current R&D in autonomous ground vehicles includes vehicle mobility, maneuver, and energy efficiency. Dr. Vantsevich is author/co-author of 7 technical books and 200 research articles, delivered 170 seminars and invited lectures to industry, academia and professional societies across 18 countries. He is a registered inventor of the U.S.S.R. with 30 certified inventions, he has U.S. provisional patent application. Dr. Vantsevich is ASME Fellow and the founding Editor of two book series with CRC Press and ASME Press. Dr. Vantsevich is the founding Editor-in-Chief of the ASME Journal of Autonomous Vehicles and Systems, and Editor-in-Chief of the Journal of Terramechanics. He serves as Associate Editor of the SAE International Journal of Commercial Vehicles. He is the IFToMM TC Chair for Transportation Machinery Tech Committee. He is the founding Coordinator of the William Milliken Invited Lecture Award of the ASME Vehicle Design Committee. He served as the Chair of the ASME Vehicle Design Committee.

Department of Physics

William McCarthy, Assistant Professor

B.S. Physics, Worcester Polytechnic Institute

Ph.D. Nuclear Science and Engineering, Massachusetts Institute of Technology

I am passionate about researching topics that have the potential to make major impacts to the world's problems. For me this has resulted in the dual research focuses of plasma physics with fusion energy applications and Medical Imaging, with the common thread of nuclear science. For fusion I am particularly interested in plasma probe diagnostics and plasma material interactions. For Medical Imaging I am particularly interested in advanced reconstruction techniques in SPECT and MRI imaging. In my free time I enjoy spending time outside (particularly on or in the water), collaborative and group storytelling activities, cooking and painting.

Department of Robotics Engineering

Nitin J. Sanket, Assistant Professor, Robotics Engineering

B.E., Electronics and Communication

M. S. Ramaiah Institute of Technology, Bangalore, India, 2013

M.S. Robotics, University of Pennsylvania, Philadelphia, PA, 2016

Ph.D. Computer Science, University of Maryland, College Park, MD, 2021

Dr. Nitin J. Sanket was most recently an Assistant Clinical Professor at the First-Year Innovation and Research Experience (FIRE) and the Perception and Robotics Group at the University of Maryland (UMD), College Park where he worked with both graduate and undergraduate students to advance autonomy of small mobile robots with on-board sensing and computation by formulating bio-inspired algorithms and hardware. He built the world's first prototype of a RoboBeeHive. During his doctoral studies at UMD, Nitin worked with Prof. Yiannis Aloimonos and Dr. Conelia Fermuller where he worked on Active Vision based embodied Artificial Intelligence for hummingbird sized drones. Nitin's doctoral thesis won the Larry S. Davis award and the MDPI Drones Ph.D. Thesis award. Nitin is a recipient of the Dean's fellowship, Future Faculty fellowship, Ann G. Wylie fellowship and was the Maryland Robotics center student ambassador. He has also taught courses, including hands-on aerial robotics and vision, planning and control in aerial robotics. Prior to his Ph.D., he received his M.S. in Robotics from the University of Pennsylvania's GRASP lab. At GRASP, he worked with Prof. Kostas Daniilidis on developing a benchmark for indoor to outdoor visual-inertial odometry systems. Nitin is currently an Associate Editor for the Nature npj Robotics Journal and the IEEE Robotics and Automation Letters Journal. He is also a reviewer for RA-L, T-ASE, IMAVIS, CVPR, ICRA, RSS, IROS, SIGGRAPH and many other top journals and conferences.

Department of Social Science and Policy Studies

Richard Lopez, Assistant Professor

B.A., Psychology, Princeton University, 2009

Research Assistant and Fellow, Bridge to the PhD Program in STEM, Columbia University, 2011

Ph.D., Cognitive Neuroscience, Dartmouth College, 2017

Post-doctoral fellow, Translational Social Cognitive and Affective Neuroscience Lab, Rice University, 2019

Professor Lopez will teach undergraduate and graduate courses in social neuroscience and Open Science practices applied to functional neuroimaging. He also directs the Social Neuroscience of Affective Processes (SNAP) Lab at WPI. Professor Lopez completed his postdoctoral training in the Translational Social Cognitive and Affective Neuroscience Lab at Rice University, and he earned his Ph.D. in Cognitive Neuroscience at Dartmouth College. Outside of work, he enjoys spending time with his family, running, and hiking.

Trent Masiki, Assistant Professor

B.S., Computer Science, Southern University-Baton Rouge, 1992

M.A., English, Texas A&S University-College Station, 1996

M.F.A., Creative Writing, Emerson College, -Boston, 2001

M.A., Afro-American Studies, University of Massachusetts-Amherst, 2014

Ph.D., African American Studies, University of Massachusetts-Amherst, 2017

Trent Masiki is a Research Affiliate in Boston University's Center for Antiracist Research. He has a graduate certificate in African Diaspora Studies and a second one in Latin American, Caribbean, and Latino Studies. His research interests focus on the social, historical, and intercultural ties that bind African Americans to other ethnoracial communities of African descent in the US and the global African diaspora. His research and teaching have been funded by the Center for Humanistic Inquiry at Amherst College, the National Endowment for the Humanities (NEH), the Kilachand Honors College at Boston University, and the Fulbright Scholar program.

Full-time Non-Tenure Track (TRT) Faculty Members, Visiting Faculty Members, and Others with Teaching and Research Responsibilities

Department of Air Force Aerospace Studies

LTC Craig J Cude, Commander of AFROTC

Bachelor of Science in Aerospace Engineering, Embry-Riddle Aeronautical University, AZ

Squadron Officer School, Maxwell AFB, AL

Master of Military Operational Art and Science, Air University

Air Command and Staff College, by correspondence

Indonesian Language Basic Course, Defense Language Institute, Monterey, CA

Indonesian Air Command and Staff College, Bandung, Indonesia

Air War College, by correspondence

Lieutenant Colonel Craig J. Cude's team mission at WPI is to develop quality leaders by preparing students to become officers in the US Air Force and US Space Force while earning a college degree. Prior to this assignment, Lieutenant Colonel Cude was the Commander, 13th Air Support Operations Squadron at Fort Carson, Colorado. There, he led 175 Airmen and civilians in providing combat-ready Special Warfare operators to advise, integrate, and control effects from multiple domains for the Joint Force commander alongside the Army's 4th Infantry Division. Before Colorado, he served as squadron Director of Operations in Vilseck, Germany where he ensured Special Warfare operator readiness for EUCOM joint fires integration and rapid response for contingency operations. Prior to Vilseck, Lieutenant Colonel Cude was the Deputy Chief, Rated Operations Airmen Management Branch, at the Air Force's Personnel Center. While there, he was responsible for assignments and personnel policy for more than 18-thousand rated officers and enlisted aircrew and led the development and implementation of the Air Force's new assignment system, Talent Marketplace. During his career he has served in a variety of other roles as the Chief of Air Force Fighter Assignments, Foreign Area Officer, Chief of Wing Operations Training, Assistant Director of Operations, Mission Commander, and Wing Electronic Combat Pilot. Lieutenant Colonel Cude received his commission as a distinguished graduate of Embry-Riddle Aeronautical University, Arizona. He is a top graduate of the Indonesian Air Command and Staff College, a senior pilot with more than 1,250 hours in the T-37, T-38, and F-16C/D, and a certified Forward Air Controller, Air Liaison Officer, and Joint Terminal Attack Controller. He has flown combat missions in Operation Iraqi Freedom, deployed to the Republic of South Korea for a flying theater support package, and deployed to Afghanistan as an Air Liaison Officer and Joint Terminal Attack Controller in support of the 2d Striker Cavalry Regiment in Operation Enduring Freedom.

Department of Biology & Biotechnology

Christopher Collins, Associate Teaching Professor

B.S., Biology, Houghton College, 2002

M.S., Immunology & Infectious Disease, Albany Medical College, 2006

Ph.D., Ecology & Evolutionary Biology, SUNY Albany & NY State Museum, 2011

My teaching focus is biodiversity, ecology, anatomy and physiology. I'm excited to teach at WPI, because I believe project-based learning is the most effective and most fun way, to learn. I believe students learn best by doing, and my goal is to guide students through an exploration of each subject I teach. One of my interests is service learning, which allows students to learn by engaging in projects that serve their community. Past projects have included river and stream water quality analysis, and biodiversity surveys of local parks and natural areas. In my anatomy and physiology courses, students use instrumentation to collect data on heart, brain, and muscle function, and design their own experiments.

Business School

Dr. Daniel Treku, Assistant Teaching Professor of Information Technology

B.S., Physics, Kwame Nkrumah University of Science and Technology

M.S., Management Information Systems, Ghana Institute of Management and Public Administration

Ph.D., Information Systems, University of Texas Rio Grande Valley

Dr. Treku joins us from University of Texas Rio Grande Valley, where he earned a PhD in Business Administration with a Concentration in Information Systems. He earned an MS in MIS from the Ghana Institute of Management and Public Administration and a BS in Physics from the Kwame Nkrumah University of Science and Technology in Ghana. He has several years of work experience in business and information systems in Ghana before coming to the U.S. to earn his PhD. He has teaching experience gained while an MS and PhD student. His dissertation focuses on value creation and financial returns from blockchain technologies and cryptocurrencies.

Department of Computer Science

Matthew Ahrens, Assistant Teaching Professor

B.S., Mathematics & Computer Science, Bridgewater State University, 2014

M.S., Computer Science, Tufts University, 2016

Ph.D., Computer Science, Tufts University, 2022

I am a CS Educator who approaches students' interests by providing learning environments and tools to explore the computational thinking needed to make software like the systems they use on a regular basis. Prior to coming to WPI, I designed and led teaching experiences and workshops where pre-university, first-time programmers made smart appliances, web videogames, computer music performances, and wearable computing devices among other projects of their own designs. As part of a teaching fellowship during my graduate studies, I taught upper-level university students how to make programming languages (PL) in content areas of their own choosing using metaprogramming. My interest in teaching CS through motivating content areas stems from how I originally became excited about computing; during my undergraduate studies as a full-time symphony trombonist and music educator, I experienced both wonder and accomplishment when making software instead of only being an end-user. While my software engineering experiences are an eclectic collection of web, mobile, virtual reality, and other non-desktop hardware applications, my technical skills focus on making tools through visual and textual PL front-end design, metaprogramming and compiler design, and runtime systems implementations that run on small, commodity computers like Raspberry Pis and Arduinos.

Jennifer Mortensen, Assistant Teaching Professor

BA, Biochemistry & Molecular Biology, Clark University, 2012

MS, Computational Biology & Bioinformatics Yale University, 2016

Ph.D., Computational Biology and Bioinformatics, Yale University, 2018

Jennifer Mortensen is an assistant teaching professor in the Computer Science Department. Her research focuses on computational modeling of protein structures and the properties of protein interactions. Her work has revealed the important role of steric interactions in protein cores and reframed the prior understanding of the atomic packing of amino acids. Dr Mortensen was most recently an IRACDA postdoctoral scholar in the Chemistry department at Tufts University and an adjunct professor at Bunker Hill Community College. She received a BA from Clark University and an MS and PhD from Yale University.

Department of Electrical and Computer Engineering

Susrutha Babu Sukhavasi, Assistant Professor

M.Tech., Electronics and Communication Engineering, SRM University, India

Ph.D., Electronics and Communication Engineering, JNT University, India

Ph.D., Computer Science and Engineering, University of Bridgeport

Before joining the faculty at WPI Dr. Sukhavasi was an adjunct faculty member in Electrical Engineering at the University of Bridgeport. He received his Ph.D. in Computer Science and Engineering from the University of Bridgeport. Susrutha research uses face expression recognition to develop driver emotion detection system to predict the driver emotions under various pose variations, occlusions and illumination conditions. He is interested in developing AI (artificial intelligence) applications related to the medical and public safety. Susrutha has seven years of academic research and teaching experience in VLSI design, he would like to integrate AI with VLSI technology i.e., FPGA etc. This could be a potential solution to solve some of the current challenges in VLSI domain.

Department of Humanities and Arts

Kara Fontenot, Assistant Teaching Professor

B.S., Humanities, United States Air Force, 1996

M.A., Humanities, California State University-Dominguez Hills, 1999

M.A., English, University of Central Florida, 2006

Ph.D., English Literature, University of Maryland-College Park, 2018

Kara Parks has eighteen years of experience teaching writing at the college level. Before she was hired by WPI this year, she was a full-time lecturer teaching Writing in Engineering for the College of Engineering at University of Massachusetts Amherst. Throughout her career, she has taught a wide variety of undergraduate courses in composition, literature, and the humanities more broadly, including first-year composition, technical writing, African American and Ethnic American literature, folklore, world culture, and ethics. At University of Maryland-College Park, she taught first-year writing courses that combined disciplinary and interdisciplinary topics with a rhetoric-based approach to composition, which has prepared her well to teach Elements of Writing and Introduction to Rhetoric courses at WPI. Likewise, Kara's extensive experience teaching technical writing to future engineers and other STEM students at University of Massachusetts Amherst and Embry Riddle Aeronautical University, as well as her own undergraduate engineering background from her undergraduate coursework at the United States Air Force Academy, have prepared her well for teaching Writing About Science and Technology courses at a STEM-focused institution like WPI.

Hsin-Han Hung, Instructor

A.A., Spanish, Wenzao Ursuline University of Languages, 2009

BA, Applied Foreign Languages, National Yulin University of Science & Technology, 2011

M.A., Teaching Chinese as a Second/Foreign Language, National Kaohsiung Normal University, 2014

Hsin-han Hung is a Fulbright Scholar (2020-2022) who taught Chinese language skills and promoted intercultural communication at the University of Miami. She also served as the military language instructor (2019-2022) for the United States Department of Defense's summer overseas Chinese program that instructs students of Embry-Riddle Aeronautical University who minor in Chinese Studies. Before graduating from Kaohsiung Normal University-Graduate Institute of Teaching Chinese as a Second/Foreign Language, she served as an Event General Coordinator leading Taiwan's folk-dance representatives at the National Festival in Spain and Italy. Ms. Hung believes cultures are inalienably associated with languages; therefore, her teaching philosophy seeks to leverage an appreciation of the cultures surrounding language while developing a student's potential and learning style to achieve language proficiency. She incorporates interactive activities and technology to strengthen learning and retention of the material. To meet her

teaching goal of promoting students' communicative competence, she uses a task-based approach to engage students in meaningful real-life tasks that integrate their development of listening, speaking, reading, and writing skills. Her teaching and research focus is on multimedia-assisted materials and virtual reality technology related to computer-assisted language learning (CALL). CALL seeks to integrate language skills through multimedia and create a more authentic learning environment using a wide variety of media. These skills provide her with a broad perspective on course design and alternative curricula based on student aptitude.

Matthew Scinto, Assistant Teaching Professor

B.A., Music, Syracuse University, 2012

M.A., Music in Conducting, Syracuse University, 2014

Ph.D., Musical Arts in Conducting, Boston University, 2017

Dr. Matthew Scinto is excited to join the faculty of WPI this year as the Visiting Director of Orchestra & Assistant Teaching Professor. A native of Cape Cod, Dr. Scinto is the founder and music director of the Cape Cod Chamber Orchestra, as well as Director of Music at Pilgrim Congregational Church in Harwich Port. He has twice studied conducting at the Tanglewood Music Center, and also currently serves as a cover conductor for the Portland Maine Symphony. He received his Doctor of Musical Arts degree from Boston University, where he received the Conducting Department Award for Excellence in Conducting. He has since conducted such orchestras as the San Antonio Symphony, Baltimore Chamber Orchestra, Syracuse Symphony, Brandeis University Orchestra, and was previously the Music Director for the Civic Orchestra of New Haven. As the Founder & Music Director of the Cape Cod Chamber Orchestra, he has established the only professional chamber orchestra serving the region, with a mission to commission music collaboratively with individuals and organizations. Recently the orchestra was awarded the 1st prize in the American Prize Competition for Orchestral Performance, and was recently named "Best New Cultural Attraction" by Yankee Magazine. Dr. Scinto has been involved in Alzheimer's care for the past several years, working with memory care facilities across Cape Cod and the Alzheimer's Family Support Center of Cape Cod. By using aspects of music appreciation and conducting, Dr. Scinto has developed a curriculum for working with individuals dealing with memory loss in order to allow them to reconnect to their loved ones and enjoy fun movement to music. He continues to find ways to help alleviate symptoms of dementia and Alzheimer's disease by using classical music, conversation, and connection. An avid pianist and violist, Dr. Scinto looks forward to working with the talented students of WPI this upcoming school year.

Department of Integrative and Global Studies

Grant Alan Burrier, Visiting Associate Professor

B.A. Political Science/ Spanish, Sewanee: The University of the South, 2004

Ph.D. Political Science, University of New Mexico, 2014

Grant completed his Ph.D. with sub-field specializations in Comparative Politics and International Relations. His dissertation analyzed infrastructure investments and sustainable development in Brazil, focusing on the policymaking process in Brazil's developmental state and the socio-environmental impacts of hydroelectric dams in the Amazon. His focus lies on the intersection of development, sustainability, and politics with research being published in a range of academic journals and popular press outlets. Currently, he is working on two book manuscripts: a comparative analysis of hydroelectric dam projects in the Global South and a generalist introduction to Brazilian history and politics. Grant is passionate about working with students and has taught a variety of courses related to Environmental Studies, Comparative Politics, International Relations, American Government, Public Policy, and Latin America. He founded four separate study abroad programs in Cuba, Mexico, Argentina, and Brazil at previous institutions.

Melissa Butler, Instructor/Lecturer

B.A., University of Connecticut 1995

M.A., University of New Hampshire 2001

M.Div., Boston University School of Theology 2014

For more than 20 years, Melissa Butler has taught Sociology at a number of universities, most recently at Clark University where she worked as an adjunct from 2010-2015 and as a full-time faculty member from 2016-2021 teaching courses on Religion, Sport, and Sociological Theory; advising students majoring in sociology; and supervising honors theses, directed studies and independent research projects. Her scholarly interests center on exploring theological questions of worth within a capitalistic society as it relates to sport. Yet, her greatest passion lies in teaching and mentoring students to build personal and professional skills that help them develop grit and resiliency. A few years ago, Melissa had the opportunity to serve as an adjunct instructor for ID2050 and became intrigued by the rigor of the IQP student experience and the opportunities it afforded students to engage project-based learning while broadening their cultural horizons and learning how to work together as a team. More recent opportunities to advise in Bucharest and Taiwan were so personally and professionally rewarding that she decided to seek a full time position at WPI so she could devote herself more intentionally to global research projects. As an educator, Melissa believes in the power of education to empower students and is committed to teaching students an individual responsibility and corporate accountability that allows them to succeed in the classroom and beyond!

Carol L. Stimmel, Assistant Teaching Professor

B.A., Randolph-Macon Women's College

M.A., International Development, Clark University

Ph.D., Science, Technology and Society studies Clark University

Carol L. Stimmel has been lecturing at both the graduate and undergraduate levels since 2016, and with the Global School at WPI since 2020. Since 1999, she has been deeply involved with renewable energy and efficiency projects, humancentric smart city design, and social change theory and applications. Professor Stimmel has a varied career as practitioner, executive leader, and global advisor to nonprofits, academic projects, and government development projects in locations including Nepal, subSaharan Africa, Canada, and across the United States. She is an author, educator, purpose-driven researcher, and seasoned leadership executive with technology start-up and top tier global consultancy experience. In conjunction with her work at The Global School at WPI in Massachusetts, she maintains a research agenda related to science and technology policy development. She is the author or 4 books (1 with D.S. Olson), and 2 of which are standard industry texts, Big Data Analytics Strategies for the Smart Grid and Building Smart Cities: Analytics, ICT, and Design Thinking. Her most recent book, Evolving Innovation Ecosystems describes OpenXFORM (2017), describes a bioempathetic design model for open innovation scenarios. In 2022, she was a peer reviewer for the NSF GRFP (Sociology and Geographic Sciences), a prestigious fellowship program that recognizes and supports outstanding STEM graduate students pursuing advanced research-based degrees. When she's not teaching, writing, or speaking, she's hiking with her dogs or in a kayak on the Susquehanna River.

Department of Interactive Media and Game Development

Melissa Kagen, Assistant Teaching Professor

B.A., Literary Arts, Brown University, 2009

M.A., Humanities, University of Chicago, 2010

Ph.D., German Studies, Stanford University, 2016

After receiving her Ph.D. in 2016, Melissa Kagen designed and taught new programs in Game Design/Game Studies at Bangor University in Wales (2017–2019) and Curry College (2020–2022). Wandering Games, her first book, is forthcoming from MIT Press in October 2022. Her work has been published in Game studies,

Gamevironments, and Convergence: The International Journal of Research into New Media Technologies, as well as in German Quarterly, Opera Quarterly, and occasionally in popular outlets like The Guardian. She has served as an Associate Editor of the Journal of Gaming & Virtual Worlds since 2019.

Department of Mathematical Sciences

Nicole Buczkowski, Post-Doctoral Scholar

M.S., Mathematics, Jacksonville University, 2017

Ph.D., Mathematics, University of Nebraska-Lincoln, 2022

Nicole Buczkowski's research interests include nonlocal models and fracture mechanics. Prior to her time at WPI, Buczkowski received her BS in Mathematics and Mechanical Engineering from Jacksonville University and her MS and PhD from the University of Nebraska-Lincoln

Ernesto Caceres-Valenzuela, Post-Doctoral Scholar

B.S., Mathematical Engineer, University of Concepcion, 2015

Ph.D., Applied Mathematics, Brown University, 2022

My main research interest is the construction and analysis of numerical methods to model the behavior of some variables of interest arising from Partial Differential Equations that represent physics phenomena, in particular fluid mechanics. My research also focuses on the simulation of these models and the computational aspects of them. I enjoy teaching undergraduate courses such as Calculus, Algebra and Numerical Analysis, and working on applied math projects with students.

Tharindu Privan DeAlwis, Post-Doctoral Scholar

B.S., Statistics & Operations Research, University of Peradeniya, 2013

M.S., Mathematics, Southern Illinois University, 2017

Ph.D., Mathematics, Southern Illinois University, 2022

Class teaching is not only important for the transmission of knowledge from one generation to another but also an integral and necessary part of academic research. I teach many undergraduate mathematics and statistics courses including calculus, algebra, finite mathematics, data science, and introduction to statistics. My research in statistics is in the field of time series analysis which involves dimension reduction in the univariate and multivariate time series datasets. In particular, I am interested to develop algorithms based on sufficient dimension reduction techniques, envelope methods, deep learning, and machine learning methods. Moreover, applied such algorithms in analyzing real-world datasets.

Binan Gu, Post-Doctoral Scholar

B.S., Mathematics, University of Southern California, 2013

M.S., Mathematics, New York University, 2016

Ph.D., Mathematics, New Jersey Institute of Technology, 2022

Before joining WPI, Binan Gu earned his Ph.D. under the guidance of Dr. Linda J. Cummings and Dr. Lou Kondic. His research interests include mathematical modeling of dynamics on networks, fluid mechanics, partial differential equations, and stochastic processes. He also holds an M.S. in pure mathematics with a concentration on probability theory from the Courant Institute of Mathematical Sciences, and a dual degree in Mathematics and Economics from the University of Southern California. Aside from scientific research, Binan is an avid classical pianist and runs a weekly podcast on classical music.

Lakmini Nadeesha Jayaweera Imiya Mottige, Post-Doctoral Scholar

B.S., Mathematics, University of Kelaniya, 2015

M.S., Statistics, Texas Tech University, 2019

Ph.D., Mathematics, Texas Tech University, 2022

Nadeesha Jayaweera's research focuses on financial time series, spatial statistics, asymptotic theory, and higher-order approximations. She received a BSc (Pure Mathematics & Statistics) from University of Kelaniya, Sri Lanka and a MSc (Statistics, 2019) and a Ph.D. (Mathematics) concentration with statistics (2022) from Texas Tech University, USA.

Abby Pecoske Fulton, Post-Doctoral Scholar

B.A., Mathematics, Carthage College, 2013

M.S., Mathematics, Oregon State University, 2015

Ph.D., Mathematics, University of Pittsburgh, 2021

Dr. Pecoske Fulton's research interests include mathematical biology, dynamical systems, and computational mathematics. Her dissertation focused on modeling dynamics of DNA knots and links in a fluid. She used deterministic and stochastic immersed boundary methods to dynamically study the energy landscape of DNA knots and links. She has been an Assistant Research Professor for the past year and is now moving into the Postdoctoral Scholar position.

Carly Thorpe, Professor of Practice

B.S., Mathematics, Virginia Polytechnic Institute & State University, 2010

M.B.A., Worcester Polytechnic Institute, 2019

Carly previously worked as a statistician in the Endoscopy division at Boston Scientific. In her role, she provided statistical consulting to R&D, quality, and manufacturing engineers, trained engineers on an array of statistical applications, and reviewed analyses conducted by product development teams as part of medical device regulation requirements. She is excited to bring her industry experience into the classroom and show how statistics can be applied to a variety of real-world scenarios

Samuel Tripp, Assistant Teaching Professor

B.A., Mathematics, Williams College, 2014

Ph.D., Mathematics, Dartmouth College, 2022

I received my Ph.D. at Dartmouth College in mathematics under the instruction of Ina Petkova. My research is in combinatorial and computational methods in low-dimensional topology.

Nathan Uricchio, Post-Doctoral Scholar

B.S., Mathematics & Computer Science, University of Hartford, 2013

M.S., Mathematics, University of Vermont, 2016

Ph.D., Mathematics, Syracuse University, 2022

Nathan Uricchio is a postdoctoral scholar in the Department of Mathematical Sciences. His research interests include matroid theory, graph theory, design theory, and combinatorics. He works with powerset operators and their applications to matroid theory. Nathan received a BS from University of Hartford, a MS from University of Vermont, and a PhD from Syracuse University.

Department of Mechanical and Materials Engineering

Lee Moradi, Professor of Practice

B.S., Engineering, University of Alabama at Birmingham, 1979

M.S., Civil Engineering, University of Alabama at Birmingham, 2003

Ph.D., Civil Engineering, University of Alabama at Birmingham, 2007

At the University of Alabama at Birmingham (UAB), Prof. Moradi had extensive experience leading design activities within Engineering & Innovative Technology Development (EITD) and the School of Engineering. EITD was a multidisciplinary organization composed of 40 engineers and technicians with expertise in hardware development and prototyping. His most recent work involved development of highly efficient cryogenic and freezer technologies for rapid freezing and preservation of science samples on the

International Space Station (ISS). His other areas of expertise include analysis, design, test, verification, and management of complex systems and programs for DoD, DoE, Nuclear, Rail, and Automotive industries. At UAB, Dr. Moradi was the General Manager for the \$35M Autonomous Vehicle Mobility Institute (AVMI) Program which involved 30 scientists and engineers for off-road vehicles. The core of the AVMI program concentrates on autonomy in mobility and maneuver of vehicles in difficult terrains.

Kyle Tsakopoulos, Assistant Research Professor

B.S., Chemical Engineering, Worcester Polytechnic Institute, 2015

M.S., Material Science and Engineering, Worcester Polytechnic Institute, 2017

Ph.D., Material Science and Engineering, Worcester Polytechnic Institute, 2019

Following her graduate and postdoctoral training in materials science and engineering at WPI with Prof. Danielle Cote, Dr. Kyle Tsakopoulos joins as an Assistant Research Professor to continue her work exploring metallic materials for additive manufacturing applications. Her main research focus includes the characterization and optimization of feedstock materials for cold spray additive manufacturing and wire arc additive manufacturing. She investigates the use of computational thermodynamic and kinetic modeling to optimize material properties and microstructure. Dr. Tsakopoulos has published more than 13 peer reviewed journal articles and given 12 conference presentations.

Department of Military Science

LTC Joseph Mazzocchi, Department Head and Professor of Military Science

B.S. Political Science, University of Scranton, 2006

M.A. Diplomacy, Norwich University, 2012

M.A. Philosophy, Columbia University, 2016

Lieutenant Colonel Mazzocchi assumed command of the Bay State Battalion on August 1, 2022. He graduated from the University of Scranton and commissioned as an Armor Officer. Over his career, he has served in a series of command and staff positions. LTC Mazzocchi previously served as a Scout Platoon Leader and Executive Officer in Blackfoot Troop, 6th Squadron 4th U.S. Cavalry; the Commander of Comanche Troop, 1st Squadron, 2d Cavalry Regiment; the Commander of Warhorse Troop, 4th Squadron, 2d Cavalry Regiment; the Regimental Plans Officer for 2d Cavalry Regiment; both as an Instructor and Assistant Professor of Philosophy at the United States Military Academy; a Squadron Operations Officer and the Regimental Operations Officer for 11th Armored Cavalry Regiment, and most recently as a Strategic Innovator and Action Officer on the Army Talent Management Task Force at the Pentagon. LTC Mazzocchi has deployed in support of Operation Enduring Freedom three times, serving in Nuristan, Kunar, Zabul, and Kandahar Provinces. He has served overseas in Europe for nearly five years.

Department of Physics

Thomas Noviello, Instructor

B.S., Physics & Mathematics, Florida Institute of Technology, 2007

M.S., Physics for Educators, Worcester Polytechnic Institute, 2018

Ph.D., Physics, Worcester Polytechnic Institute, (in progress)

I have spent the majority of my career in the K-12 setting, including serving as a physics teacher, in administrative roles, and as a mentor for teacher candidates and new teachers. My passions are teacher preparation, teacher support, physics education, and ensuring all learners have equal access to curriculum that is engaging and student-centered.

Department of Robotics Engineering

Andre Rosendo, Assistant Teaching Professor

B.Eng., Mechanical Engineering, Bahia Federal University, Brazil, 2008

M.S. in Information Science from Hokkaido University, 2011

Ph.D. in Information Science from Osaka University, 2014

Dr. Rosendo was a Postdoctoral Researcher at the University of Cambridge and an Assistant Professor at ShanghaiTech University. His research combines machine learning algorithms and legged robots/manipulators to create robots capable of learning while interacting with their environment. Beyond software implementations to hardware, he believes that truly intelligent robotic behavior emerges from well designed structures, easing the computational burden of controlling algorithms. He focuses on the mechanical/biomimetic development of robots and soft robots, and on the application of Bayesian learning (Gaussian Processes and Bayesian Neural Networks) to efficiently search morphological and control parameters for soft manipulators and legged/whegged robots. He received the 2019 National Natural Science Foundation of China Grant, the 2019 Young Oriental Talent Grant, and the 2021 Shanghai Young Talent Award. He has created syllabi for two courses, Mechatronics and Mechanical Design, and taught those over 4 years. His courses combine theory and applications, and require a final project where students develop a hardware to instantiate the theoretical knowledge seen in class. While in China he organized outreach activities, teaching Scratch programming to children from low-income neighborhoods in Shanghai. He published over 45 peer-reviewed papers with over 680 citations and has an Erdos number of 5.

Department of Social Science and Policy Studies

Hermine Vedogbeton, Assistant Research Professor

M.S., International Development & Social Change, Clark University

Ph.D., Economics, Clark University

Hermine Vedogbeton completed her Ph.D. in Economics with a focus in Environment and Development at Clark University. She also earned a Master of International Development and Social Change at Clark University. Her current work examines how historically disadvantaged communities can find sustainable solutions to address social and environmental disparities. Her research interests include social justice, environmental justice, ecosystem services, sustainable communities, and gender and health in the developing world.

Undergraduate Studies, STEM Education Center

Jillian DiBonaventura, Professor of Practice

Bachelor of Music Education, UMass Amherst

M.Ed., Worcester State University

Jillian joins the STEM Education Center as the Director of Teacher Preparation with deep and rich experiences as a classroom teacher in middle school science and most recently as the Coordinator of Teacher Education at Smith College. She taught science for over 10 years in the Worcester Public School District and 4 years in the Wachusett Region School District. She has taught education courses as adjunct faculty at American International College, Fitchburg State University, and Smith College. Jillian has a particular interest in inquiry-based teaching methodology and in incorporating the latest in brain research into how students learn. She also has a passion for supporting students through differentiated instruction methods and believes that all students can succeed in a rigorous course of study with the appropriate level of support. Jillian has been a long-time asset to the Worcester community and was a WPI Camp Reach instructor.

Appendix

**DRAFT Resolution
Calling on Worcester Polytechnic Institute to
Divest from Fossil Fuels**

(see next page)

Resolution Calling on Worcester Polytechnic Institute to Divest from Fossil Fuels

Sponsor: The Worcester Polytechnic Institute Faculty Governance

Whereas climate change is a global crisis that is [a paramount threat](#) to the lives and livelihoods of current and future generations necessitating bold, immediate action;

Whereas the Intergovernmental Panel on Climate Change [stated](#) that global greenhouse gas emissions, which are products of the combustion of fossil fuels, must be reduced to net zero by 2050 to avoid the worst impacts of climate change;

Beyond simply exacerbating natural disasters and creating unprecedented displacement of vulnerable people, climate change [poses a substantial threat](#) to global food supplies, to world peace, and to the global economy.

Whereas disease pandemics, like that of COVID-19, will likely occur [not only more frequently](#), but also with [more severity](#) as a result of climate change;

These two types of catastrophe will inevitably compound and collectively hinder effective response to either of them.

Whereas historically, institutions of higher education, and particularly the nation's most visible and influential institutions, have been effective conduits for social change on issues of moral uncertainty;

This is exemplified through [rejection of the tobacco industry](#) (for which the discourse closely parallels that of the fossil fuel industry) in the 1990's, and [South African apartheid](#) before that. Experts acknowledge that [divestment at scale is an effective way to combat climate change](#);

Whereas investing in the fossil fuel industry exacerbates the extreme social and racial inequalities our institution strives to help solve.

Climate change perpetuates inequality between developed and developing nations by placing most of its consequence on nations that have contributed the least. Even [within developed nations](#), climate change [aggravates existing class and racial inequities](#), as evidenced in part through respiratory illnesses and [cancers succeeding the building of refineries and power plants](#).

Whereas the fossil fuel industry is uniquely responsible for climate change; merely 100 companies are responsible for the emission of roughly [71% of the world's carbon dioxide](#), the most prevalent greenhouse gas, since anthropogenic climate change was officially recognized;

Whereas the fossil fuel industry is using COVID-19 panic [to successfully lobby for](#) environmental regulation rollbacks and multi-billion dollar government bailouts, on top of the trillions of dollars in taxpayer money they already receive;

While the fossil fuel industry continues profiteering in the midst of this unprecedented crisis, [there has been less stimulus](#) offered for renewable energy sources.

Resolution Calling on Worcester Polytechnic Institute to Divest from Fossil Fuels

(cont'd)

Whereas despite these immense harms, the fossil fuel industry has led [a concerted, multi-decadal campaign to misinform the public](#) and spread [doubt about the realities around climate change](#);

These disinformation campaigns mimic those of the tobacco industry (which saw widespread divestment on moral grounds), and are in direct opposition to our institution's values of turning knowledge into action, the betterment of society, and innovation.

Whereas [student body presidents from the Big 10 Conference](#) and [Ivy League](#) each passed a unanimous resolution to endorse divestment of their universities' endowment funds from fossil fuels in response to the tremendous harms that these companies pose to student and alumni wellbeing;

Whereas Worcester Polytechnic Institute emphasizes student wellbeing as a major pillar of its most recent strategic plan, [Lead with Purpose](#), while describing climate change as a major challenge to the planet. Worcester Polytechnic Institute can support both initiatives by joining other universities in their decision to divest;

Whereas a university, known for its ability to “think global, act local”, must consider the implications of its own local actions within a global context and climate crisis;

Whereas [coursework](#), [students projects](#), and [research](#) at Worcester Polytechnic Institute are dedicated to sustainability, the university cannot truly claim to be acting with environmental interests in mind while simultaneously investing in the fossil fuel industry;

Whereas Worcester Polytechnic Institute demonstrated a resolve to evaluate its financial practices by signing onto the [Principles for Responsible Investing \(PRI\)](#), a United Nations-supported framework and reporting tool for responsibly managing investments in September 2021;

Worcester Polytechnic Institute agreed to abide by [six principles](#) to include environmental, social, and governance issues in investment analysis and decision making, as well as being active owners in practice.

Whereas the Principles for Responsible Investing [discuss that divestment](#) “communicate[s] to the wider market that the investor believes the targeted company's long-term strategy is likely to remain misaligned with relevant sustainability performance thresholds”;

Fossil fuel companies inherently contribute to the climate crisis by design and cannot continue to function at large scale in a renewable economy. Worcester Polytechnic Institute must divest from fossil fuel companies and reinvest in companies that support a renewable economy. Making no change and remaining in fossil fuels cannot meet the standards agreed upon by this university.

Resolution Calling on Worcester Polytechnic Institute to Divest from Fossil Fuels

(cont'd)

Whereas Worcester Polytechnic Institute has been endowed with \$505 million in support of advancing technical progress;

Fossil fuel investments do not demonstrate scientific progress, but rather glue us to the energy systems of 19th century industrialization. New investments in renewable energy and sustainable technologies are necessary to truly uphold our commitment to technical progress.

Whereas divesting is a crucial component of maintaining sustainable long-term financial growth of endowment funds;

In fact, [Brown University has committed to divestment](#), asserting “The decision to halt investments in fossil fuel extraction companies reflects the view that, as the world shifts to sustainable energy sources, investments in fossil fuels carry too much long-term financial risk.”

Whereas in addition to the clear moral imperative upon which Worcester Polytechnic Institute must act, it is [increasingly financially irresponsible](#) to invest in the fossil fuel energy sector;

Investment experts, from academics to BlackRock to [CNBC's Jim Cramer](#), emphasize that fossil fuel investments are “in the death knell phase” and are becoming increasingly unappealing as an asset, in part because of social movements like the push for divestment.

Whereas for reasons both moral and financial, institutions across the world are beginning to act on divestment from fossil fuels;

Peer universities like the [University of California system](#), among other schools, have committed to divest on [solely financial grounds](#), while others like [Georgetown University](#) have made the same decision as a part of their commitment to sustainability. Likewise, top universities have reaffirmed their core values through divesting, such as [Harvard University's decision to divest based on their responsibility](#) “as fiduciaries to make long-term investment decisions that support our teaching and research mission.” These universities are among [a growing list](#) of institutions acting on divestment, including but not limited to [US cities](#), philanthropies like the [Rockefeller Foundation](#) (whose wealth stems from fossil fuels), [the Vatican](#), and even [entire countries](#).

Whereas campaigns by the Students for a Just and Stable Future (2012-2014) and divestWPI (2019-present) have demonstrated students' [support in favor of divestment through letters](#) and discussion with administration, in conjunction with faculty support;

The issue has not been acted upon publicly while other universities join the list of divested colleges routinely.

Resolution Calling on Worcester Polytechnic Institute to Divest from Fossil Fuels

(cont'd)

Whereas divesting is both a commitment and a process;

Divesting Worcester Polytechnic Institute's endowment will take a few short years in practice; however, publicly committing to developing a divestment plan and timeline will not. Making the promise to implement a cleaner investment strategy would be the first step along the road to a better future.

Whereas we, as students, taxpayers, and citizens of the world, whose communities are already feeling the impacts of climate change, and whose future is in jeopardy, feel both a responsibility and a right to demand that our university does better—to demand that our institution is not complicit in the intentional harms of fossil fuel companies; and

With our peers already suffering the plights of drought-induced [forest fires](#), [civil unrest](#), [displacement due to rising sea levels](#), and [urban pollution](#), we feel compelled to call upon our university to take responsibility for the well being of their constituents and lead the nation and the world towards a brighter future.

Whereas given the institutional power we wield, the corruption and societal negligence displayed by fossil fuel companies, and the unparalleled havoc that the climate crisis promises to deliver;
now, therefore, be it

Resolved, that the Worcester Polytechnic Institute Faculty:

1. Acknowledges the severity of climate change, and further, the need for swift action to prevent the earth's average temperatures from warming more than 1.5 °C to ensure a habitable future;
2. Hereby advocates that Worcester Polytechnic Institute commits to ceasing all new investments in the fossil fuel industry (as defined below) via a public declaration made in FY2023;
3. Calls on the leadership of Worcester Polytechnic Institute to commit to creating a divestment plan in FY2023, with full divestment of endowment funds from the fossil fuel industry by FY2026 at the latest;
4. Calls on the Division of Finance & Operations to develop a plan for pursuing the highest possible ratings under the Principles for Responsible Investment, with annual communications on the fulfillment of the plan and current ratings to the Student Government Association and the Green Team

Resolution Calling on Worcester Polytechnic Institute to Divest from Fossil Fuels

(cont'd)

SIGNATORIES:

Worcester Polytechnic Institute Faculty

Definition of Fossil Fuel Divestment:

While there is no universally accepted definition for what it means to be divested from fossil fuels, in alignment with guidelines outlined by 350.org, we believe that a fossil fuel free portfolio includes but is not limited to:

- No investments (direct or indirect) in any of the [top 200 fossil fuel companies](#) by size of reserves.
- No investments (direct or indirect) in any company that explores for, extracts, processes, refines, or transmits coal, oil, and gas.
- No investments (direct or indirect) in any utilities whose primary business function is to burn fossil fuels to produce electricity.

For more information regarding carbon risk and fossil fuel divestment, explore [this comprehensive list of resources](#) compiled by the Intentional Endowments Network and [this guide to Fossil-Free Investing](#) by Trillium Asset Management.

For inquiries, reach out to gr-divestWPI@wpi.edu.

Acknowledgements:

This Resolution was authored by DivestWPI, Student Government Association, and the Faculty Governance at Worcester Polytechnic Institute.

This Resolution was inspired by the [Ivy League Universities Resolution for Fossil Fuel Divestment](#) written by the [Student Sustainability Association at Penn](#) and the [University of Pennsylvania Undergraduate Assembly](#), and passed by the student body presidents of the universities that make up the Ivy League universities. Their Resolution was also inspired by [Big 10 Schools Divestment Resolution, which was passed](#) by the student body presidents of the universities that make up the Big 10 Conference.