

**WORCESTER POLYTECHNIC INSTITUTE**  
**August 27, 2020**

**To:** The WPI Faculty  
**From:** Tanja Dominko  
Secretary of the Faculty

The first Faculty meeting of the 2020-2021 academic year will be held on **Thursday, August 27th, 2020 at 3:15 pm via ZOOM.**

1. Call to Order
  - Approval of the Agenda
  - Approval of the Consent Agenda and the Minutes from 5-7-20
  - Approval of the Minutes from the Special Faculty meeting 5-21-20
2. Secretary of the Faculty Welcome
3. President's Welcome
4. Provost's Welcome
5. Committee Business
  - Committee on Academic Operations**  
Motion to approve September 2020 undergraduate student graduation list
  - Committee on Graduate Studies and Research**  
Motion to approve September 2020 graduate student graduation list
  - Committee on Governance**  
Motion to extend remote voting at faculty meeting
  - Committee on Governance**  
Motion to allow elected faculty governance committee members to vote on critical issues if a meeting of entire faculty cannot be called
  - Motion to suspend the rules\*
  - Committee on Academic Policy**  
Motion to adopt overloading policy for A-term 2020
6. Committee Reports
7. Introduction of New Faculty Members
8. New Business
9. Closing Announcements
10. Adjournment

\*indicates changes from meeting materials distributed with a one-week notice

**TABLE OF CONTENTS**  
**Faculty Meeting Materials, August 27, 2020**

	Page
1. Faculty Meeting Minutes: May 7, 2020	3
2. Special Faculty Meeting Minutes: May 21, 2020	10
3. Consent Agenda motions	23
4. Committee Business	29
5. Brief biographies of new faculty members	35

WORCESTER POLYTECHNIC INSTITUTE  
Faculty Meeting Minutes  
May 7, 2020

**Summary:**

1. Call to Order
  - Approval of Agenda
  - Approval of the Consent Agenda and Minutes from April 16, 2020
2. SoF Report
3. President's Report
4. Provost's Report
5. Committee Business: COG, COG/COAP, COG/CAP, CGSR
6. Closing Announcements
7. Adjournment

**Detail:**

1. Call to Order

The tenth Faculty meeting of the 2019-2020 academic year was called to order at 11 am via ZOOM by **Prof. Dominko** (BBT).

Approval of Consent Agenda and Minutes of April 16, 2020

The agenda and consent agenda (including the minutes from the April 16, 2020 Faculty meeting) were approved.

2. Secretary of the Faculty Report

Secretary of the Faculty Dominko announced that a Special Faculty Meeting will be held on May 21 at 11am. As the spring semester was extended, the primary reason for the meeting is that graduation lists of undergraduate and graduate students need to be approved for May graduation.

She then reflected on the past few months, during which we have undergone a transformational change as people, as professionals, as a community, and as an institution. We have managed this complex and complicated landscape of personal realities and professional challenges with determination that assured that our collective contributions maintain WPI's promise to our students and to each other.

The Faculty have quickly accommodated and guided our students through new ways of learning while providing comfort, understanding and optimism. Grading policies, at the very beginning of the term, were amended to put the students' minds at ease. Commencement participation policies were amended, and hopefully today, grading of projects policies will be addressed to alleviate concern of our students.

For colleagues, we have adjusted an extended probationary period for our tenure-track faculty. We have modified the use of course evaluations in ways that does not penalize colleagues that may have had trouble adjusting to the new way of delivering our D term content.

We are on the way to completing D-term in this new environment without losing any students in the process. Enrollments for D-term remained stable and no real loses were incurred, which is quite an accomplishment with the number of changes that needed to be implemented within a short two week period prior to the start of D-term. Congratulations to all! In addition, registrations for the summer have increased significantly when compared to previous years. A number of faculty are offering additional courses online for E Term as well.

Through all of this, we have continued to raise our research funding, and are on the way to \$50 million in research expenditures for the year; yet another milestone we should be very proud of.

While extending the term, we have honored and accommodated a lot of anxieties around the budgetary impact, at least for this term, for the administration. We will be voting today to complete our D term responsibilities on an extended timeline without any additional cost to the university.

Faculty Governance has continued working diligently on developing new programs and courses. Between CAO and CGSR and the past two months, the activities of Faculty Governance have been in full swing. We have approved a new graduate program in Applied Physics and a new department, Aerospace Engineering. She reflected how well everyone has adjusted to realities of a new term and how Faculty Governance continues honoring its roles and responsibilities to grow the institutional programs.

She expected that President Leshin and Provost Soboyejo will reflect on and address the impact of the crisis on the budget, in particular the impact on our academic community.

In closing, Secretary of the Faculty Dominko reflected on faculty participation in WPI Forward initiative. Many groups were considering budgetary implications and suggesting better operational procedures for a number of fields, with all recommendations residing with the President for the final decision.

The Faculty should also be proud of the impacts we have made in our broader Massachusetts community. Several colleagues have sacrificed time, energy and effort in donating equipment, 3D printing, sewing masks, and continued our research to contribute to solutions for this health crisis.

She thanked everyone for helping to navigate these difficult times and stated that her job as Secretary of the Faculty is easy because of the community that is dedicated, committed and supportive.

### 3. President's Report

**President Leshin** thanked the Faculty for their extraordinary work, and commended them in helping the students overcome adversity, both with coursework and also in everyday life right now. She also thanked Staff members, and supporting offices, and stated that she was impressed and deeply appreciative. She apologized, since she will not be available to stay through the entire meeting. She is on the State of Massachusetts reopening Board to the Governor, working

very hard, every day, and every weekend. She is on the front lines, and hears about the latest public health guidance, the latest thinking by other industry sectors, be they restaurants or golf courses. She spoke about re-opening plans for the Fall, and how seriously it is being taken. It is too early to tell anything yet, but options are being considered with a lot of thinking and planning. Her hope is for a re-opening soon rather than later, however that depends on the State. Flexibility and resilience will be key, and there will be more information to come within the next few weeks. The President spoke about financial planning for the coming fiscal year. She announced that WPI had to refund D-term housing and dining, so there is a shortfall, which is being managed. She reported that we have a freshman class for the fall, and thanked Amy Morton for all her work in this endeavor. The summer “melt” will be monitored, which will affect fall enrollment, and graduate admissions are a little light at this time. In any case, we need to plan for a scenario in which revenues are down in the fall. How much, we don’t know, but we need to be very conservative on spending. She stated that they will take a very conservative stance on things like hiring and non-essential spending. They do not want to take personnel actions right now. She praised the voluntary retirement incentive program, which Michelle Jones Johnson and her team had developed. She asked everyone to stay tuned for more opportunities, potentially for some voluntary temporary work adjustments, and that details will follow. She spoke briefly on the WPI Forward initiative, thanked Secretary of the Faculty Dominko and others for their work, and that various scenarios were being considered. It is important to stay strong, flexible and together. She stated that she is so impressed by the work that this community has done over the past weeks, that there will be adjustments in the way that we work and operate together. It won’t feel like a normal year, but we’re going to do everything in our power can to make it a great educational experience for our students. She thanked everyone and knows she can count on everyone.

#### 4. Provost’s Report

**Provost Soboyejo** expressed his appreciation to all the faculty for the hard work, from where we were just a few weeks ago, to where we are now is a great testimony to collaborative teamwork amongst all stakeholders. He stated that he is very grateful to Faculty Governance leaders who came together at such short notice to bring policies to satisfy the needs of the students as well as the IT support that we have across the campus. He spoke of the value of teamwork, the spirit of cooperation between all stakeholders, and the need to continue this community conversation.

The Provost announced that a group has been formed, that brings together Faculty and Governance leaders, for conversations with the administration. Input into the decision-making process is also needed; input about getting back to campus, that shapes social distance, and input that enables us to figure out the criteria for undergraduate and graduate programs. Provost Soboyejo stated that next year will be a transitional year, a year to plan for, and he hopes to do that collaboratively. He stated that he has talked with faculty and students and asked them what they miss most about WPI, which most responded by saying “the place” and “the people”...even with zoom meetings, where we sort of see each other, what is missed most is the sense of being in a time and place where we all interact the way we did which had been taken for granted. The Provost stated that he misses his colleagues, friends, faculty, and misses the feeling of being there as the seasons creep around me quietly without him noticing. He spoke about the changes and need for a “new normal” where all colleagues and stakeholders will value the strengths that we

all bring to the global enterprise of education for impact. He thanked everyone for giving him hope in this new normal, and for their great work they are doing to bring the best of WPI to our students, especially at this challenging time. He looks forward to seeing everyone when we are able to return to the most beautiful campus in the heart of New England.

## 5. Committee Business

### COG

**Prof. Gaudette** (BME), for the **Committee on Governance** (COG) moved that WPI faculty complete D term 2020 after their 9-month appointment for AY2020 by extending the AY2020 from May 14 to May 23, 2020. AY2021 will start on August 24, 2020, and ends on May 15, 2021. (See Addendum #1 attached to these minutes).

**Prof. Demetry** (ME) expressed concern for these extended dates, and the impact they would have on events such as Insight, New Student Orientation, and workshops on project advising. Prof. Gaudette stated that this was mostly due to federal regulations. **Prof. Fischer** (ME) spoke about the effect on Grants and that many forms would need to be updated. Prof. Gaudette stated that the Provost's office would be consulted in this matter. **Prof. Ryder** (BBT) asked if this would affect graduate student salaries, since they usually begin their employment in August. Prof. Gaudette stated that it would most likely not affect the graduate students but would be specifically for the Faculty. He stated that CGSR would be able to look into this. Prof. Ryder expressed concern with a continuing graduate student, and that there may be an overlap of a couple weeks. Prof. Gaudette stated that this was being proposed in the best interest of the faculty, and that perhaps the Dean of Graduate Studies and the VP should be consulted on the graduate student side of this. **Vice Provost Vernescu** asked for clarification on budget neutral and stated that Grant changes/timing would be affected. Prof. Gaudette stated that this motion was asking Faculty to work an extra 10 days, due to the shift in dates, and that some paperwork would most likely need to be updated. **Prof. Ottmar** (SSPS) expressed concern for those, like she, who have large teams of graduate students working during the summer, through grants, and how those two weeks would affect those situations. Prof. Gaudette reiterated that this change is primarily for Faculty, not graduate students. **Dean Comesano** stated that it would probably be wise to start the TAs on August 15<sup>th</sup>. Prof. Gaudette asked if the TAs would have a problem with courses that run after May 15<sup>th</sup>. Dean Comesano stated that she believed everyone was full aware that this was an unusual year, with special circumstances, and that no one was asking for extra pay.

**The motion passed.**

### COG

**Prof. Gaudette** (BME), for the **Committee on Governance** (COG) moved that Faculty governance committee elections, with the exception of the already completed COG, COAP and CTAF elections, be temporarily suspended until A term of 2020. Elected governance committee membership from AY2020 will remain through the end of A term 2020. (See Addendum #2 attached to these minutes).

There was no discussion.

**The motion passed.**

COG/CAP

**Prof. Heineman** (CS), for the Committee on Academic Policy (CAP) moved to give undergraduate students the option to be assigned a Pass/NR grade for project work completed in Dterm 2020. (See Addendum #3 attached to these minutes).

Professor Heineman gave a brief description of the motion. **Prof. Neamtu** (CS) expressed concern for the students who have already filed their CDR and completed their project, in keeping the original calendar, and take advantage of this retro-actively. Prof. Heineman stated that the Registrar's office could be brought into this detail. **Prof. Smith** (CS) asked if the faculty member would still be able to retroactively change prior term credit grades for the final CDR grade. Prof. Heineman stated that the fact that Faculty members still have the right to assign the letter grade A, B, C or NR has not been changed. The only P grade that is allowed would be for D Term. **Dean Rissmiller** offered a friendly amendment to make this motion applicable to E term projects. He stated that, in particular, we have nearly 50 students who will be doing remote projects at the Bar Harbor and Leone France project centers this summer. He stated that, in the spirit of the motion, it should be applicable to students who have been forced into remote projects and those who will apply to E term programs, which are also going to be remote. Prof. Heineman accepted the friendly amendment. **Prof. Sturm** (MA) stated that we have always had the ability to assign NR and NC. Prof. Heineman stated that only A, B and C grades can be turned into P grades. NR and NC grades would still be valid. **Prof. Brattin** (HUA) strongly agrees with the friendly amendment. **Prof. Sakulich** (CEE) strongly agrees with this motion and urges everyone to vote yes.

**The motion passed.**

COG/COAP

**Prof. Gaudette** (BME), for the Committee on Governance (COG) and the Committee on Appointments and Promotions (COAP) moved that the WPI faculty update the Faculty Handbook, Part2.1.C: Policies and Operating Procedures: Policies Regarding the Status of Faculty: Department Heads. (See Addendum #4 attached to these minutes).

He gave a brief description of the motion and stated that a previous friendly amendment by **Prof. Demetry** (ME) to change the wording of "Chairman" to Chair" had been accepted. There was no discussion. The motion passed.

CGSR

**Prof. Fischer** (ME), for the Committee on Graduate Studies and Research (CGSR), moved that a graduate program in Science and Technology for Innovation in Global Development be established by coordinated efforts from of faculty from 4 programs, 4 departments, and 3

schools. The program will award an MS degree in Science and Technology for Global Development. (See Addendum #5 attached to these minutes). **Prof. Krueger** (SSPS) gave a brief presentation on the motion (See Addendum #6 attached to these minutes).

**Prof. Gaudette** asked for a 10-minute extension to the meeting which was moved and seconded.

**Prof. Weathers** (BBT) asked about changes to experience for the program, and if the student populations had changed. Prof. Krueger stated that, due to Covid, if travel bans weren't lifted by January, this would need to be done remotely, and that the student population had decreased to below 10. Prof. Weathers shared concerns on possible Covid cures being developed with no sound scientific evidence, she stated that this is a great example of how science and technology need to better interact. **Prof. Demetry** (ME) asked about the collaboration of this project with Clark University. Prof. Krueger stated that Clark is still on board, but going through a Presidential transition right now, so that the details still need to be worked out. **Prof. Eddy** (HUA) asked about the requirements for applicants for this program; and if it is strictly for those with bachelors of science and engineering degrees, or if individuals with social science degrees or humanities degrees allowed to apply to this masters programming. Prof. Krueger stated that BA or a BS may apply.

**The motion passed.**

#### CGSR

**Prof. Fischer** (ME), for the Committee on Graduate Studies and Research (CGSR), moved that a BSMS and BA-MS degree in Science and Technology for Innovation in Global Development be established by coordinated efforts from of faculty from 4 programs, 4 departments, and 3 schools. The program will award an MS degree in Science and Technology for Global Development. (See Attachment #6 attached to these minutes).

There was no discussion.

**The motion passed.**

#### 6. Closing Announcements

**Dean McNeill** (Engineering) provided guidance to the faculty about accessing their campus offices and labs. He stated that, since the Worcester area is still in the surge of Covid 19 cases, it is preferred that everyone stay off campus until Governor Baker lifts the non-essential travel restriction, which is anticipated to be on May 18<sup>th</sup>. However, he stated, for faculty who need access to materials on campus, the CERT team has a process in place for approval of short-term access to limited space on campus. That process, which requires approval by your department head, allows you to specify which areas on campus you need to access, for example, your office or lab. This will enable proper coordination with campus safety and the Facilities staff. He went on to say that CERT has the list of faculty who are currently scheduled to teach in E term, so this will expedite the approval process. To summarize, one should contact their department head, who can begin the process for CERT to approve the access you may need to begin preparation



for E Term. **Associate Dean Weekes** (UG Studies), asked if this process was specifically for teaching purposes and not yet for research access. Dean McNeill stated that the process for research access will begin after May 18<sup>th</sup>, and would be the same process.

## 7. Adjournment

Meeting was adjourned at 12:35pm by **Prof. Dominko**.

Respectfully submitted,

Tanja Dominko

Secretary of the Faculty

### **Addenda on file with these minutes:**

1. **Addendum #1** COG – motion that WPI faculty complete D term 2020 after their 9-month appointment for AY2020 by extending the AY2020 from May 14 to May 23, 2020. AY2021 will start on August 24, 2020, and ends on May 15, 2021 - May 7, 2020.

2. **Addendum #2** COG - motion that Faculty governance committee elections, with the exception of the already completed COG, COAP and CTAF elections, be temporarily suspended until A term of 2020. Elected governance committee membership from AY2020 will remain through the end of A term 2020 - May 7, 2020.

3. **Addendum #3** - CAP - moved to give undergraduate students the option to be assigned a Pass/NR grade for project work completed in Dterm 2020 – May 7, 2020.

4. **Addendum #4** - COG/COAP - motion that the WPI faculty update the Faculty Handbook, Part 2.1.C: Policies and Operating Procedures: Policies Regarding the Status of Faculty: Department Heads – May 7, 2020.

5. **Addendum #5** - CGSR – motion that a graduate program in Science and Technology for Innovation in Global Development be established by coordinated efforts from of faculty from 4 programs, 4 departments, and 3 schools. The program will award an MS degree in Science and Technology for Global Development – May 7, 2020.

6. **Addendum #6** - CGSR - motion that a BSMS and BA-MS degree in Science and Technology for Innovation in Global Development be established by coordinated efforts from of faculty from 4 programs, 4 departments, and 3 schools. The program will award an MS degree in Science and Technology for Global Development – May 7, 2020.

WORCESTER POLYTECHNIC INSTITUTE  
Faculty Meeting Minutes  
May 21, 2020

**Summary:**

1. Call to Order
  - Approval of Agenda
  - Approval of the Consent Agenda
2. SoF Report
3. President's Report
4. Provost's Report
5. Committee Business: CAO, CGSR, COG, COG/CAP, COG/CGSR
6. Committee Reports: FAP, Special Faculty Resolution, COG
7. New Business
8. Closing Announcements
9. Adjournment

**Detail:**

1. Call to Order

The second Special Faculty meeting of the 2019-2020 academic year was called to order at 11 am via ZOOM by **Prof. Dominko (BBT)**. Prof. Dominko reminded everyone that meeting was being recorded.

Approval of Consent Agenda and Minutes of April 16, 2020

The agenda (including a Special Faculty Resolution concerning the Operating Budget for 20-21) was briefly discussed before approval. President Leshin asked if the special Faculty Resolution came from a committee. SOF Dominko stated that it came from a Faculty member. Prof. Hansen (HUA) asked if this Special Resolution could be moved to after the Committee Reports. SOF Dominko stated that this was an important item, and that hopefully we will hear updates on the 20-21 budget from the President and the Provost. The President stated that budget information was included in the FAP report (#7 on the agenda) and that she would address it, but that was the agreement, to include the information into the FAP presentation. Prof. Burnham stated that some budgetary information was included in the FAP presentation and also stated that Prof. Boudreau had agreed to move the Special Faculty Resolution to the end of the meeting. Prof. Weathers asked that a copy be sent to everyone to view ahead of the presentation. Prof. Boudreau distributed the Special Resolution to the Faculty.

**The agenda was approved. The consent agenda was approved.**

2. Secretary of the Faculty Report

**Secretary of the Faculty Dominko** announced that colleague Joe Policelli (HUA) had died due to Covid-19. Joe had been an adjunct professor in Humanities and Arts for 25 years.

“To successfully navigate difficult times, leadership matters. Leadership is defined by sound And thoughtful judgment, hard work. It honors representation, transparency and courage to do what is right. Faculty Governance leadership continues to demonstrate these principles, even more so during these challenging times. I thank all the faculty, faculty governance committee

members and committee chairs for their leadership. We did our jobs, though some things however, did not go as well as we hoped. In March, we introduced the statement in opposition To the process for creating institutional administrative policies, and we remain disappointed that the administration has not responded properly to the unanimous committee chairs' objections, and that the request to remedy the situations have not been addressed. Similarly, the statement by our AAUP chapter highlighting similar concerns has not been given a response. We cannot wait any longer to assure that our collective faculty governance concerns are represented before the administrative policy group. Faculty Governance proposes to establish an academic council in the upcoming academic year. The charge of the Council will be to inform and advise the provost on any and all faculty policy recommendations that need to be championed by the Provost, on behalf of the faculty. The Council will elect the chair set up the meetings and set the agenda of the Council. We have introduced the idea of the academic council to the Provost and we hope that he will welcome our recommendations.

Lastly, as we're concluding the academic year, I expect that the President the Provost will provide some clarity on the last outstanding issue; one that has been causing stress and anxiety, namely the status of the WPI Forward and the upcoming operating budget."

### 3. President's Report

**President Leshin** stated how nice it is to see everyone, and in their regalia. She stated that there is a Town Meeting at 3:00 today, and she would be giving a shortened version of that here. She spoke about the three "C's" - care, creativity and community, which is much more important than the "C" for Covid right now.

The President addressed the budget. She stated that no furloughs or layoffs were planned. Nothing is looming for July 1<sup>st</sup>. Right now, she stated, we are focusing on not filling open positions, focusing on executive compensation, on voluntary retirement and voluntary furloughs. Constant assessing of the budget will be needed for next year. Many colleague universities are starting to take their retirement plan matches down to zero. WPI will not be doing that, but we are temporarily (she stressed that it would be temporary) going to take them from 11% to 8% starting July 1<sup>st</sup>. A 10% budget shortfall is planned for the year. Based on WPI Forward, it is unclear if the retirement plan match will go all the way back up to 11%, but that remains to be determined. She announced that, thanks to Amy Morton, Andy Palumbo and Dean Camesano, undergraduate and graduate admissions are looking quite good. We know it will be very difficult for international students to get here. She stated that we are planning for a budget that has a significant reduction in it...more than \$30 million in spending reductions, so there will be only essential spending and restrictions on travel. Some funds have been set aside for financial aid appeals and additional support needs for the delivery of our academic program. The budget will be reviewed regularly, and Vice President Solomon is working closely with FAP, briefing them on that. That is, she stated she believes, the appropriate way that we've been asked to engage with faculty governance. Also, there are two faculty members on the Board's Budget and Finance committee which voted to approve this budget. In the meeting last week, those two members were present, and were involved in prior meetings, approved the budget and the Board approved it as well. She addressed WPI Forward and Fall planning. She thanked all those who worked on either of those project teams or the steering committee. She stated that many things are being looked into, like events, and mobile devices. Another is the administrative review, the structure of our organizations and things like how many employees does each supervisor oversee

and are there some opportunities for efficiency and re-organization. She thanked Profs. Johnson and Dominko for their work on the steering committee. President Leshin stated that she wants to try to put people's minds at ease by being smart and thoughtful, bringing the Covid world and WPI Forward world together. In regard to Fall planning, she stated that CERT is very hard at work. Hopefully the State will release its reopening plans, which she has spent most of the last three weeks working on. They met with over 75 different groups from across the Commonwealth in all sectors of all types of community organizations to make recommendations. WPI phases are a very much along the lines with the State's thinking. You will soon hear about a plan to reopen research and how individuals can create and submit for approval plans to repopulate their labs. Starting as early as next week, research labs will start reopening. According to the state reopening plans, we could begin repopulating offices in phase one. We are not in a rush to do that in most cases, because we need to make sure we have our processes and procedures in place. We won't be inviting people back in any kind of numbers and even then, it will start very slowly, most likely around the beginning of July. The President pledged to the community that anybody whose office might be reopening, will get at least two weeks' notice that you would be needing to consider if you are able to come back. And again, offices will have to make individual plans for office safety. The bottom line is, that most of us should be thinking about the fact that we will be working from home for a good part of the time for a while into the future, probably most all of us through June. Even as we are able to start repopulating, it will likely either be only certain employees for restricted times and other employees for other restricted times to keep the density down. We are working on how we accommodate people who are in the at-risk groups as well. It's going to be a different world, one of distancing guidelines, covering your face, washing your hands and cleaning spaces. An announcement will be made around July 1<sup>st</sup> and we are considering both remote options and in person options and the new normal. She stated that it will not be a normal year, everyone is working extra hard to accommodate both the new world we're living in and new ways of delivering our education. It is very likely that the workloads will be high, and she thanked everyone and asked everyone to take some downtime, some time for themselves this weekend and this summer. Rest up and recharge, WPI is going to need you next year as we carry WPI forward. Take time to recharge, you've definitely earned it.

#### 4. Provost's Report

**Provost Soboyejo** thanked the faculty, staff, administration, and the Board for the great effort that was made by all. He stated the success that we enjoy is really a great example of our ability to adapt and succeed, and in some senses needs us to celebrate, as well as reflect. To celebrate the way in which we've got this got through this together and to reflect in many ways on the things that we did, and the things that we could do better. Provost Soboyejo said that part of this will be convened in an event that's been organized on May 27 between 3:30 and 5pm where we're basically inviting all the faculty and all the Community to reflect on what happened in detail and to really begin to plan based on that insight on how we can continue to improve and adapt in the months ahead. He shared that he is really happy to see how our academic enterprise has continued to be active and innovative and delighted by stories of teachers to figure out new ways of teaching to show their empathy for student learning. Provost Soboyejo shared that he is excited by the research and how it responded to the coronavirus pandemic and how folks like Greg Fischer and others develop new solutions to problems in ways that are now impacting how we're approaching the pandemic in New England and other parts of the world. He shared his

appreciation for the coronavirus response of the campus as a whole. Some examples that he shared included the research, education, and outreach to local hospitals, even in faraway places is Africa, where some of our innovations are helping patients in countries across continents. He felt encouraged by the record number of undergraduate and graduate students that are registered for summer term. This year, thanks to the President, we actually were able to offer significant reductions in cost to the students and we found that by decreasing the cost of the summer programs and by advertising with Deans Art Heinricher and Terri Camesano working very hard with their teams. Provost Soboyejo shared that they are already working with the Faculty Governance, Department Heads, Program Directors, Deans, and the Vice Provost for research to put together an integrated team that would work over the summer into the next academic year to really deliver our programs. Currently he is looking in the short term as President Leshin referred to, to a staged return to campus, which they hope will begin as early as next week to achieve a hybrid model to blend onsite and online education. The guiding principles of this are protecting both the well-being of the students and faculty members, which is why faculty will have the choice as to how they deliver their lectures. Students will also have some choices in this approach. He shared that they are looking at ways of optimizing the use of online and on-site programs, but also looking at new technologies to expand the capabilities of the digital library and project resources.

Provost Soboyejo then congratulated Amy and Andy Palumbo for their success in bringing in the freshman class of over 1,400, while also mentioning that at least 10% of the students from abroad will not be here in the fall, which decreases the revenues. He mentioned that this creates the need for scenario planning. This scenario planning is to secure the jobs of everybody here and it means that we, in academic affairs, need to look at what I call a COVID 19 budget scenario, which President Leshin referred to. This looks at ways in which we can manage our costs while trying to protect our family and in doing that, we look very carefully at expenses in different ways. We're trying to minimize long term damage or any damage to the community by making responsible decisions. Provost Soboyejo stressed that scenario planning considers several projected revenue levels to manage our operations. Currently, he sees a need for at least a 10% cut in academic affairs. They are working with all the academic affairs budget managers, the department heads, the head of the PR all the folks in charge of the library academic components of the budget to really work with the bottom up approach in order to look at the budget allocations to the different units. They are asking the unit controllers to recommend the areas for the cuts. As they do this, they are also looking at travel expenses, meeting expenses, conferences, those kinds of expenses which we do not need to incur in the short to medium term. He stressed that they are doing their best to really minimize the possible impacts on jobs. In the next one or two weeks following this exercise, they will be sending out reappointment letters to most of our faculty, and for those that are not covered by these letters, they will be doing their best to protect their jobs, but also will be notifying them in cases where appropriate, so that they will begin to look for other opportunities if this arises. Provost Soboyejo again thanked the community, the faculty and staff and the administration of the Board for the great team effort that has gotten us this far. He also thanked the IT team for really working hard to continue to improve our online delivery for the next academic year. He thanked the faculty that work with them and those that are training over the summer to train others to elevate the impact of online education. He also thanked all the rest of the group that is looking very, very hard at the budget scenarios and developed in the guiding principles to protect our WPI family. WPI forward is looking at ways of using our resources in most efficient ways that make it possible for us to offer the best to our

students and our family. Provost Soboyejo concluded by stating that he looks forward to seeing everyone at the May 27th event where, we hope, we will get your insights and input to have a conversation as a community and reflect on ways in which we could develop and build our future strategies beyond the term.

## 5. Committee Business

### CAO

**Prof. Mathisen** (CEE), for the Committee on Academic Operations (CAO) moved that, pending final verification from the Registrar that all members of the distributed list have completed their degree requirements, they be approved for May 2020 graduation. (See **Addendum #1** attached to these minutes).

**Prof. Weathers** (BBT) asked what it would mean the list had been voted on and a name was found that was not supposed to be on said list. **Registrar Miles** clarified that the motion language indicates that all students on the list must still meet the degree requirements to graduate despite the vote. **Prof. Burnham** (PH) pointed out that Nicole Burns, who was on the Physics list, had not completed her MQP. Registrar Miles thanked her for this update. Prof. Weathers (BBT) pointed out that Jessica Marquez was also not caught up. Registrar Miles acknowledged this.

**The motion passed.**

### CGSR

**Prof. Fischer** (RBE) presented the motion on behalf of the Committee on Graduate Studies and Research (CGSR). They moved that pending final verification from the Registrar that all members of the distributed list have completed their degree requirements, they be approved for May 2020 graduation. (See **Addendum #2** attached to these minutes).

**Prof. Roberts** (CS) asked to remove Robert Salay from IMGD. **Registrar Miles** acknowledged this. **Prof. Korkin** (CS) asked to remove Zhaohui Li from BCB.

**The motion passed.**

Prof. Dominko congratulated all the graduates and thanked CAO, CGSR, and the Registrar.

### COG

**Prof. Gaudette** (BME), for the Committee on Governance (COG) moved that the WPI faculty endorse the proposal to elevate the Robotics Engineering Program to an independent Robotics Engineering Department. (See **Addendum #3** attached to these minutes).

Provost Soboyejo added that the robotics program has been a pioneer program that grew organically from the interest of the faculty in the 1990s into a concrete program and has been an innovating department over the last decade or so. He mentioned that the robotics program, in his opinion, is one of the best recognized aspects of WPI. Provost Soboyejo stated that this opportunity to evolve this program into a department will keep us at the forefront of this rapidly changing and important field. If approved, he stated that this department would be the pioneer robotics program in the world that is comprehensive in offering degrees from bachelor's, master's to PhD and it would be a signature department for WPI. Provost Soboyejo mentioned that WPI is ABET accredited and the recipient of the inaugural ABET innovation award. The combination of

ABET and innovation is no small task, but rather a standalone discipline with its own intellectual core. He said that the field of robotics has emerged from being a collaboration between multiple fields to a field that has its own intellectual call. If approved, this will be the fourth largest department in both the undergraduate and graduate populations at WPI. For now, we have what we think is a mature program with proven success distinctive curricula and graduates that are highly sought after both after the undergraduate and graduate degrees. Provost Soboyejo mentioned that with the emergence of the fourth industrial revolution, we feel that robotics is a key field as part of WPI efforts to really remain at the cutting edge. It also enables us to continue to expand our competitive edge in education and research. He stressed that there is general consensus and support for the move to a department. This process has taken a while, but this involved working with the core faculty and home departments to make sure that this would be possible with minimal impacts to the other departments. They also looked at issues related to tenure and promotion. Tenure track faculty would be able to choose the RBE department and will have members on the departmental Tenure Committee, which will solicit inputs from prior department heads to ensure a smooth transition. Provost Soboyejo stated that the intent is to have a gradual transition to the RBE department that will minimize the impacts on the existing departments and ensure that it will continue to be affiliates with both arts, sciences, and engineering. In forming this motion, they worked closely with an Ad Hoc committee that was formed that included Prof. Gennert (RBE), who as, you know, is the founder of RBE, Prof. Fischer (RBE), Prof. Michalson (RBE), Craig Putnam (RBE), and Jing Xiao (RBE). The deans and department heads in the relevant departments were also consulted, which resulted in their full support of the establishment of an RBE department. In terms of funding, this group continues to attract significant funds from the National Science Foundation from the NIH and Department of Defense. Provost Soboyejo stated that there's a lot of opportunity to grow, especially with industrial contributions as we expect a few million dollars in industry funding from industry. Robotics engineering currently has 18 core faculty members, including 13 TTT. We have a great blend of NTT faculty that contribute to the hands on and the blends of theory and practice. There's some administrative support and space and hopefully with the completion of the new building that will be even more space available in the new academic building. And so there's a framework in space and resources in which this new department will find itself. Provost Soboyejo said that he will be the head of the RBE program. He urged everyone to recognize that these impacts on other departments are very minimum, in terms of teaching in terms of the operating budget. There's no initial impact because they already have the administrative support and the supplements built in to the salary of the current director. There's planning for new space accommodation in the Sagamore road area for industrial robotics and in a new academic building. There's also space band for robotics engineering. So there's already built into our plans as an institution for the next few years. Provost Soboyejo ended by thanking all the stakeholders for the work that has been done to bring us this far and by recommending the establishment of a robotics engineering department to use the faculty of WPI.

**The motion passed.**

#### COG/CAP

**Prof. Heineman** (CS), on behalf of the Committee on Governance (COG) and Committee on Academic Policy (CAP), moved to give students the option to receive a Pass/NR grade for any courses taken Summer of 2020. (See **Addendum #4** attached to these minutes).

**Prof. Fehribach** (MA) asked if this includes any project work and if it was the same as what we did in D Term. Prof. Heineman stated that this simply extended the previous motion for courses from D Term into the summer. The previous motion that applies to project work already extended to summer projects.

**President Leshin** mentioned that she supports this motion, but that we would have to think hard about extending it further. She stated that she understands the needs to be flexible to students, but this could have reputational impacts and needs to be thought out and considered going forward. Prof. Heineman mentioned that this motion was set in place with specific dates and terms for this reason and that this is on CAP's radar. The motion passed.

#### COG/CGSR

**Prof. Fischer** (RBE), on behalf of the Committee on Governance (COG) and the Committee on Graduate Studies and Research (CGSR), moved to give graduate students the option to receive Pass/NR for any course taken in Summer 2020. (See **Addendum #5** attached to these minutes). He clarified that this is for either summer term and it is only for courses and not for project work. **The motion passed.**

**A motion was made to extend the meeting for 15 minutes.**

#### 6. Committee Reports

##### FAP

**Prof. Burnham** (PH) presented for the Committee on Financial and Administrative Policy (FAP). She presented only on time sensitive matters such as the budget due to the time constraint. She thanked everyone for a cooperative year and highlighted Prof. Radzicki for not only his work as secretary of FAP, but also for his work on the WPI steering committee and health care subcommittee. FAP has been working to make the annual faculty review process more transparent. She stated that for most of her 20 years here, it has been a black hole between the time she submits her annual report and the time she gets her salary letter. Prof. Burnham also mentioned that FAP originally planned to spend the spring discussing WPI Forward, but this was replaced by talk about the COVID budget. Jeff Solomon provided the budget presented in the slides. Due to COVID-19, there is an expected 10% reduction in revenue that was previously mentioned. This means that cutting back to only essential spending was necessary for the summer. As President Leshin had previously mentioned, this means cutting retirement benefits temporarily from 11% to 8% as well as eliminating salary increases. This is allowing WPI to set aside some additional money to allow for special circumstances for students whose families have been affected financially as well as for cleaning and staying safe. Prof. Burnham mentioned that this doesn't allow for contingency funds, which will cause the budget to be reviewed on a monthly basis. She stated that median salaries for all ranks are at 110% of the median of our peer comparison schools. She concluded by thanking Prof. Dominko.

**Prof. Dominko** thanked Prof. Burnham and opened the floor for discussion as well as to questions for President Leshin.

**Prof. DeWinter** (HUA) asked what essential spending is.

**President Leshin** mentioned that there was some guidance sent out about a month ago, which is still in place. This can be resent if it would be helpful. She explained that revenue comes in twice a year, in the fall and the spring, which drives the institution. This allows WPI to continue operating and keeps everyone employed. Currently we are trying to be as conservative as



possible and she urged those who are budget managers to think really hard about every bit of spending that they need to do. And if they have questions, to talk to their dean, who can consult with the provost and we will be sending additional guidance.

**Prof. Sakulich** (CEE) asked if someone could speak about how the budget would affect those that are not part of the WPI family, such as the Chartwells workers and everyone else who has been laid-off.

**President Leshin** thanked Prof. Sakulich and stated that there are some assumptions in the budget about reductions in food service, but the real answer has much more to do with the scenario in the fall. The budget itself has much more to do with whether the campus is highly populated or not. She assured everyone that they are working closely with Chartwells colleagues on ensuring that there will be food service on campus. President Leshin shares that it is her hope and expectation that that many of those will be able to return as we repopulate the campus, but it depends on the specific situation. Chartwells is also impacted by the number of events that will happen on campus, which is likely to be somewhat lower than usual. She stated that Chartwells is working with their employees to make sure that they are accessing this enhances unemployment benefit that is available and WPI is in close touch with them working on plans so that this can be done safely while supporting the employees.

**Prof. Capogna** (MA) mentioned that the majority of the budget is salaries. Since the tenure track faculty have been reappointed, if salaries need to be cut it leaves only the non-tenure track faculty and staff. He proposed a solution of a 2-week furlough for the entire faculty. This was taken off the table at the beginning of the meeting, so Prof. Capogna asked for an explanation.

**President Leshin** stated that they are looking at this option for the summer since it is a time with a reduced workload for some, so it may be easier to take some time off. She stated that she believes faculty are paid over 12 months, but for 9 months of work, so she couldn't ask them to take a furlough in the summer. The furlough option could be explored as we approach fall, but it is difficult to do with 7 week terms. She welcomed any ideas as to how this could be approached. President Leshin also shared that they didn't offer voluntary salary reductions to anyone beyond the senior team because it didn't feel like the right thing to do and there were also legal concerns regarding lower paid employees feeling pressured to take pay cuts. She is open to discussions about getting creative around faculty.

**Prof. Boudreau** (HUA) acknowledged that President Leshin is going to have to make some painful decisions in these difficult times. She stated that this motion would only strengthen faith in the decisions made and the community because, although they are difficult for a president to impose, they protect our contingent faculty and staff. The cuts that are made may be temporary, but also may be universal and equitable. She mentioned that the University of Arizona is furloughing, but they are doing so in a graded way so the people at the lower end of this of the pay scale have fewer furlough days and it gets greater as you go up. There are other ways of doing this, of course, and she stated that she is really encouraged to hear that the cuts to the retirement contributions are temporary. She stated that she supports Prof. Capogna's suggestion and would love for us to be able to talk about how we can share the burden in a way that that avoids layoffs.

**President Leshin** repeated that there are not planned layoffs at this time. She is in favor of having faculty input on discussions that impact the academic enterprise. She shared that her hope for all of you in this moment is to focus on maintaining and even expanding our academic excellence in this era of remote teaching and learning in what, in the fall, will be an era of sort of blended everything. President Leshin states that she absolutely supports Provost Soboyejo

getting input from faculty governance on faculty feedback and she believes that he has done that and that there is a structure that permits us to do that through its existing mechanisms. To the extent that Provost Soboyejo is engaged with COG and their meetings; she does not believe we need a different structure going forward in order to do that. She agrees with Prof. Boudreau that these decisions are better, but not always possible. When possible, she believes we should do it. **Prof. Fehribach** (MA) stated that he thinks it is appropriate for FAP to be involved in the discussion.

**President Leshin** agreed that it is important because Jeff Solomon has spent two years building relationships with the faculty and FAP has spent hours every single week working with them. She stated that it is important to honor that time, which is why this structure is in place.

### Special Faculty Resolution

**Prof. Boudreau** (HUA) presented a Special Faculty Resolution. (See **Addendum #6** attached to these minutes).

She began by clarifying that this was not meant as a hostile act and she wishes she had been able to get it to everyone earlier. She mentioned that today is the deadline for notifying HR if people want to take the early retirement incentive and she knows there are people who are worried that if they don't take it, they may be laid off.

She then read the resolution. WPI faculty resolution concerning the WPI operating budget for academic year '21.

“We, the faculty of WPI note the dramatic and unprecedented contractions forced upon higher education by the novel coronavirus and note this global pandemic reached our campus during a year in which we were already considering significant budget cuts (WPI forward) originally intended to make way for larger student financial aid packages. Before the WPI community was able to fully reflect upon and develop a wise course of structural changes that would ensure both our long-term financial strength and the affordability of a WPI education, our campus was forced into isolation and our administrative leaders are not now forced to consider more drastic cuts in response to an acute and poorly understood financial crisis. Whereas the full financial impact of the novel coronavirus on our campus cannot be understood until we can better anticipate revenues and losses from tuition financial aid and room and board. Whereas deep budget cuts like the ones that may be required will be required and WPS operating budget of academic year '21 will have far reaching impact on students' employees and WPS reputation for years to come. Whereas any long-term cuts to personnel salaries and benefits will have personal consequences that outlast the financial crisis caused by the coronavirus crisis. Whereas any measures taken to navigate the institution through this global pandemic should be temporary, especially where the financial wellbeing of WPI employees is concerned. Whereas WPI's mission is entrusted to its faculty administration and trustees and any significant fiscal decisions affecting this mission should be collaboratively overseen by representatives from all three groups. And whereas in this time of collaborative of crisis collaboration between the faculty and administration is more critical than ever we the WPI faculty therefore resolve that:

1. The WPI operating budget for fiscal year '21 be formulated by a working group of faculty administration and trustees that has a strong faculty voice and includes faculty members selected by the Secretary of the Faculty and that
2. Any necessary cuts to full time personnel costs, including jobs salaries and benefits in response to the coronavirus crisis be temporary only, and that they not include long term

layoffs, or permanent reductions to WPI contributions to health insurance for retirement plans and that

3. This budget be developed in six month increments and revisited adjusted as needed and reported to the faculty at least at those intervals until the end of the fiscal crisis brought on by the coronavirus pandemic.”

Prof. Boudreau then shared that it was encouraging to hear from President Leshin, Provost Soboyejo, and Prof. Burnham. She thinks that this resolution is a vote of faculty support for what they are already doing for the principles and practices of the approach to budgeting to the year, if approved by faculty. She pointed out that President Leshin talked about reductions in contributions to retirement being temporary, but possibly made permanent through WPI Forward and that Prof. Burnham shared that the budget will be reviewed periodically and more frequently than the 6-month increments that are being proposed here. She stated that this is a request for faculty to be involved in the preparation of a budget other than FAP. The spirit of this is simply to say that these are difficult painful decisions that will be made by President Leshin and it is the perfect time for collaboration. Any budget cuts that affect the livelihood of full-time employees of this institution should be made temporary cuts. This is also an expectation. She stated that we are a collaborative community that is good at problem solving. There are institutions that have already published their budget cuts and they seem to be undertaken in a spirit that protects the employees and the long-term viability of the institutions. Prof. Boudreau invited the faculty to discuss this.

**Prof. Hansen** (HUA) moved to refer the resolution concerning the WPI operating budget for FY 2021 to the committee on Financial Administration and Policy for its consideration for further action and/or recommendations to the faculty. He defended this motion by referring to both Prof. Fehribach and President Leshin’s remarks. Given the tensions that have existed between the faculty and administrations, he thinks that a vote of good faith by the faculty in the process of shared governance and in the collaborative structures of Faculty Governance is to refer this to the appropriate committee and have them consider it. It would be up to them if they would like to discuss this with other committees, but he stated that as a faculty, we owe it to respect our own forms of shared governance and **the motion** doesn’t present the best face of the faculty in this dialogue.

**Prof. Dominko** asked Prof. Hanlan to speak on the appropriateness of bringing this resolution to the Faculty Meeting.

**Prof. Hanlan** (HUA) stated that Prof. Boudreau has presented a resolution, but we need a motion to endorse this and then a second in order to have a discussion. Prof. Hansen’s motion is a motion to refer this to a committee, which needs a second as well.

**Prof. Boudreau motioned, and it was seconded by Prof. Richman (ME) for the resolution. The motion that was proposed by Prof. Hansen was then seconded by Prof. Sullivan (ME).**

**Prof. Spanagel** (HUA) stated that he would love to hear from FAP about their intentions are in regard to meeting over the summer. Typically, the committee tends to go on hiatus during the summer months. He stated that it is a worthy suggestion that Prof. Hansen offered, but he wants reassurance that it would be taken up in real time.

**Prof. Burnham** mentioned that as chair, she is willing to call FAP meetings over the summer as necessary in response to this very unusual situation that we are in. As chair, she is open to discussing Prof. Boudreau's motion.

**Prof. Boudreau** stated that she likes the idea of the motion made by Prof. Hansen. She stated that today's meeting has encouraged her that FAP is the faculty representative with whom we, the faculty, have entrusted with doing this work. If they can be brought in instead of a new working group, she likes that idea a lot.

**Prof. Richman** spoke against Prof. Hansen's motion by stating that it is a misinterpretation to see it as hostile and to think it is going to increase hostility. He defended that it was the opposite. He thinks it is a friendly reassuring resolution. He pointed out that the Secretary of the Faculty here is identified as the person who would figure out which faculty members would have input into this process, but it could be those members of FAP. It depends on how she wants to handle it. He believes we should leave it in the hands of the Secretary of the Faculty.

### **Motion was made to extend the meeting for 15 minutes.**

**Prof. Richman** added that we should not overly focus on point number one, which can be dealt with collaboratively, but rather these two other parts.

**Prof. Hansen** stated that they were discussing the motion to refer to committee, not the merits of the original motion.

**Prof. Richman** added that he was explaining why he was against the motion by Prof. Hansen. This is because there are other parts of this resolution that he thinks are important to have the faculty go on record prior to leaving this to smaller groups. He acknowledged the uncertainties and insecurities that people are feeling, which is why he thinks that this statement needs to be made before it is left to administration to take care of. Prof. Richman encouraged everyone to vote no on Prof. Hansen's motion, and to approve the resolution.

**Prof. Sullivan** explained that he had seconded the motion of Prof. Hansen because first of all, the members of FAP are elected by the faculty. FAP is a Faculty Governance system, so them being on the committee mentioned in item 1 of the resolution is appropriate. He stated that Prof. Richman's comments are orthogonal. This is not addressing items 2 or 3, but rather stating that the group mentioned in item 1 would be FAP.

**Prof. Sakulich** mentioned the phrasing of the temporary cuts. He pointed out that most vulnerable members of our population have already seen permanent changes to their livelihood. Pretending that this did not happen is disingenuous of us. He also added that these resolutions and motions do not mention the staff. He thinks that the staff voices should be heard.

**Prof. Dominko** stated that this is a faculty resolution. It's not intended to exclude anybody but understands the frustrations of Staff.

**Prof. Weathers** stated that she understands the intent, but she feels like it is redundant. She doesn't think it's good for us to keep having more committees and more jobs. She stated that Prof. Sullivan made excellent comments regarding that. She thinks that FAP is the group and has considered all the points already. Prof. Weathers understands we want a statement from the faculty but would prefer this get tabled or moved as Prof. Hansen stated. She said that we should let FAP do their job over the summer.

**Prof. Dominko** clarified that discussion should be limited for or against the motion made by Prof. Hansen.

**Prof. Gericke** (CBC) stated that he supports Prof. Hansen's motion mirroring what Prof. Sullivan and Prof. Weathers said. In addition, he thinks that it is important to note that FAP already has a very good understanding of the overall budget and so they will be most effective in discussing budget cuts.

**Prof. DeWinter** stated that she doesn't want this sent to FAP. She feels that this resolution isn't one that FAP can act upon. She stated that faculty voice needs to be strongly represented, and that is just strengthening FAP role. She argued that having just a couple people on FAP doesn't represent all the faculty, but this resolution directs faculty will. She added that she believes in Faculty Governance and would 100% depend on them to make decisions. She does not see this in opposition to Faculty Governance.

**Prof. Boudreau** proposed modifying the resolution so that the first point refers to FAP. She added that she doesn't want a new committee since we don't want to be redundant. She added that the rest of the resolution would stay with only minor revisions to wording.

**Prof. Fehribach** mentioned that he chairs the Fringe Benefits Committee (FBC), which is made up of both faculty and staff, so staff are somewhat involved in the process. This is done through his reports to FAP on a regular basis, but FBC could also meet in the summer.

**Kris Sullivan** stated that he is a staff member on FAP, so he is willing to work on this over the summer.

**Prof. Smith** (CS) added that she agrees with Prof. deWinter that it is appropriate that the resolution comes from the faculty. She also asked if FAP and FBC are required to work over the summer. Is there a structure in place for them to continue working with administration and the trustees over the summer?

**Prof. Burnham** added that most of the members of the staff would be willing to work over the summer as would she.

**Prof. Dominko** reminded everyone that faculty will be voting on a motion to refer the resolution for further consideration to FAP.

**The motion passed.**

The resolution will be moved to FAP for further consideration, so a vote will not be held for the original resolution.

COG

**Prof. Gaudette** (BME) presented on behalf of the Committee on Governance (COG). He mentioned that nine years ago the faculty voted to eliminate the three/five year rule, which basically said that non-tenure track faculty appointments could not be extended more than three times. Consequently, faculty want to ensure that the institution meets its commitment to the tenure track faculty delivering the majority of credits by ensuring that the tenure track faculty will increase in number as the university grows.

He then presented changes in numbers of TTT faculty, NTT faculty, and total credits delivered. He stated that the average number of credits delivered per tenure track faculty member in 2018-2019 was 353 and for teaching track faculty was 516. In addition, he spoke about research from the 2019 sponsored program activities report. He pointed out a continuous increase in the amount of research awards that our faculty are generating for WPI. In fall of 2019 we had an increase of about 2.3% in our undergraduate student population; we had an increase of over 5% in our full time equivalent graduate students; the number of tenure track faculty saw an increase 4.3%.

7. New Business

**Jacleen LeMay** recorded all faculty members offering congratulations to the class of 2020.

8. There were no Closing announcements

9. Adjournment

Meeting was adjourned at 1:12pm by **Prof. Dominko**.

Respectfully submitted,

Tanja Dominko  
Secretary of the Faculty

**Addenda on file with these minutes:**

1.**Addendum #1** CAO - motion that, pending final verification from the Registrar that all members of the distributed list have completed their degree requirements, be approved for May 2020 graduation. - May 21, 2020.

2.**Addendum #2** CGSR – motion that, pending final verification from the Registrar that all members of the distributed list have completed their degree requirements, be approved for May 2020 graduation. - May 21, 2020.

3.**Addendum #3** – COG – motion that the WPI faculty endorse the proposal to elevate the Robotics Engineering Program to an independent Robotics Engineering Department. - May 21, 2020.

4.**Addendum #4** – COG/CAP, motion to give students the option to receive a Pass/NR grade for any courses taken Summer of 2020 COG/COAP - May 21, 2020.

5.**Addendum #5** – COG/CGSR, motion to give graduate students the option to receive Pass/NR for any course taken in Summer 2020 CGSR – May 21, 2020.

6.**Addendum #6** - Special Faculty Resolution - May 21, 2020.

## **Consent Agenda Motions**

- CAO** - Remove ME 4718
- CAO** - Add CN 3561
- CAO** - Cross-list MA 4635 with Data Science

**Date:** August 27, 2020

**To:** WPI Faculty

**From:** Committee on Academic Operations (Prof. Mathisen, Chair)

**Re:** Motion to remove ME 4718 Advanced Materials with Aerospace Applications approved by Mechanical Engineering Department on 4/17/2020.

**Motion:** The Committee on Academic Operation recommends and I move, that ME 4718 Advanced Materials with Aerospace Applications be removed from the undergraduate catalog.

**Rationale:**

This course is the last vestige of cross-listed ME/AE courses that existed during the formation of AE as a program. AE dropped the cross listing and the course was offered in D20 by ME, but it is too specialized for Mechanical Engineering to continue.

**Course description:**

This course covers topics on the design, fabrication and behavior of advanced materials used in structural and propulsion components of aerospace vehicles. The design, fabrication, and properties of polymer, metal and ceramic matrix composites used in aerospace structures are presented. The fabrication and behavior of aluminum and titanium alloys used in propulsion components as well as the processing and performance of Nickel-based superalloys are also presented. The fundamentals of coatings for high temperature oxidation, hot corrosion and thermal protection are introduced.

Recommended background: Introduction to Materials Science (ES 2001), Stress Analysis (ES 2502) or equivalent.

**Note changes to catalog:**

Delete ME 4718.

**Impact on Distribution Requirements and Other Courses:** This course impacts only ME students; it is used as a 4000-level elective. There are 7 other materials courses remaining at the 4000 level.

**What term is this course typically offered and is it Cat. I or Cat. II?**

**Cat. I**

**If there is a course to replace this, which one?**

**Note if there are any changes to resource requirements.**

*No.*

**Implementation Date:** Implementation date for this action is immediate.



**Date:** August 27, 2020

**To:** WPI Faculty

**From:** Committee on Academic Operations (Prof. Mathisen, Chair)

**Re:** Motion to add CN 3561 (Business Chinese) in Academic 2020-2021 Category II

**Motion:** The Committee on Academic Operation recommends and I move, that CN3561 Business Chinese as described below, be added as a Category II course commencing in the 2020-2021 Academic Year. This request was approved by the Department of Humanities and Arts on May 6<sup>th</sup>, 2020.

**Course/Catalog Description:**

**CN 3561 Business Chinese**

**1/3 credit. Cat II**

The objective of this content-based language course is two-fold: students with intermediate-high level and above will continue to build their language skills in business contexts through a curriculum design that incorporates interpretive, interpersonal and presentational modes of communication in the target language. Students will also acquire knowledge and understanding of how social and cultural factors come into play in doing business in China, thereby gaining sharper cultural awareness about Chinese business in the context of globalization. Course materials include actual business cases of Chinese companies as well as analysis of strategies adopted by multinational companies that have successfully entered the competitive market in China.

**Recommended Background:**

This course is designed for CFL (Chinese as a Foreign Language) and CHL (Chinese as a Heritage) students who complete the prerequisite of CN3543 or equivalent.

Students who have completed CN356X cannot receive credit for CN3561.

**Contact:** Wen-Hua Du, Department of Humanities and Arts

**Preferred term:** C-term

**Course type:** Language and discussion

**Intended audience:** Students pursuing HUA breadth or depth requirement in Chinese language or Chinese studies; students pursuing Chinese Studies minor; students interested in Hangzhou, Beijing, or Hong Kong project centers; students pursuing minor or major in international and Global Studies. This course can serve as the capstone for the HUA Requirement for those in the Chinese language track.

**Anticipated Instructor:** Assistant Teaching Professor Wen-Hua Du or Associate Teaching Professor Huili Zheng as a capable alternate

**Rationale:** Demand for more advanced Chinese language offerings on campus is growing, as more and more incoming students arrive on campus with intermediate Chinese levels and a desire to continue study of the language. At least 60 students were placed into the 5<sup>th</sup> term of the

Chinese sequence or higher since 2015<sup>1</sup>, and the trend continues to grow. In addition, WPI's three IQP centers and one MQP center in China have motivated Chinese language students to continue their study of the Chinese language beyond the six courses required for completing the HUA Requirement. Moreover, the Chinese Studies minor (approved in 2015) has attracted 51 students since its start in 2014. In addition, the courses in the existing Chinese language sequence are not intended for heritage speakers of Chinese. This course will allow these students to further their Chinese language study. With China identified as a strategic area for engagement for WPI, more advanced Chinese language courses offer our students a way to engage with the Chinese speaking world while on campus and beyond.

*Business Chinese* was first proposed and offered as an experimental course in C-term 2018 and again in C-term 2019, supported by the UISFL (US Department of Education's Undergraduate International Studies and Foreign Language Program) grant "*Expanding Expertise on China and International Entrepreneurship Education at WPI*", awarded in 2016. It was the first content-based language course offered since the WPI Chinese Program established in 2013. Enrollment has increased from 3 students in 2018 to 7 students in 2019<sup>2</sup>. The Curriculum reflects the grant's and WPI's emphasis on entrepreneurship. Course material has been adjusted from textbook-oriented materials to adoption of business case study research from WPI's Foisie School of Business faculty and to learning how social-cultural factors have influenced people doing business in China. In responding to students' growing needs for more advanced Chinese courses, the Chinese Program requests *Business Chinese* be officially adopted in the University course catalog commencing 2020-2021 and to be offered in alternate years thereafter.

**Assessment:**

Student feedback was gathered by using WPI's course evaluation, with particular attention paid to questions 1, 2, 3, 7 and 8. The result indicates students' overall satisfaction for the course and the instructor. Detailed breakdown of the evaluation as follows:

	2018 (n=3)	2019 (n=3)
My overall rating of this course	4.33	4.3
My overall rating of the instructor	4.67	4.7
The educational value of the assigned work	4.67	4.3
The amount I learned from the course	4.67	4
The intellectual challenge by this course	4.33	4.3

Additional feedback from the 2019 course evaluation:

- Really liked how the class was conversation based- interesting material covered
- Small class- no more daily quizzes! The discussions were helpful for me to practice speaking Chinese more than I would in a normal Chinese class. The reading assignments were also very informative

---

<sup>1</sup> Among the 60 students placed into the 5<sup>th</sup> term of Chinese sequence or higher since 2015, 10 students were placed into the 5<sup>th</sup> term, 19 into the 6<sup>th</sup> term, 15 into the 7<sup>th</sup> term, 3 students were placed into the 8<sup>th</sup> term, 6 into the 9<sup>th</sup> term, 3 into the 10<sup>th</sup> term, 2 into the 11<sup>th</sup> term (experimental courses), and two students were refer to take courses with Holy Cross as all the courses were maxed out. Currently the Chinese Program offers ten sequential courses as officially specified in the undergraduate course catalog.

<sup>2</sup> To meet the growing need of advanced students, the Chinese Program offered another experimental content-based language course CN357X "*Contemporary China: Culture and Trends*" in C-term 2020 with 8 students enrolled.

**Resource Requirement:**

No additional resources necessary. Once permanent, the course will become part of Assistant Teaching Professor Wen-Hua Du's regular courses and be offered every other year (Category II). Any smart classroom on campus will serve the purposes of this course.

**Impact on Distribution Requirements**

The course will accommodate students who enter WPI and place into courses in the second-year sequence (C/D-terms) or beyond who want to fulfill the HUA Requirement through the study of Chinese. In addition, the courses will enable students to attain a higher level of proficiency for project work in China, as well as post-graduation work in China. The courses will contribute to the development of global competency and a global mindset for enrolled students. More specifically,

- the proposed course can serve as the final inquiry practicum for students choosing to fulfill their HUA Requirement through the Chinese language track;
- students can combine language classes with 2000- or 3000-level Chinese history, philosophy, or culture classes and a China-related inquiry seminar related to China (e.g., Inquiry Seminar in Asian History, Urban History, Business in the Post-Socialist State, Comparative History, or Rhetorical Communication) to complete their HUA Requirement with a thematic focus on China. Or they can combine two Chinese language courses taken as breadth with depth courses from any other HUA discipline (with the exception of other languages) and an inquiry seminar/practicum in the selected depth discipline to complete their HUA Requirement;
- the proposed course can count toward the Chinese Studies minor.

**Implementation Date:**

The anticipated implementation date for the courses is AY20/21, with it being offered in alternate years thereafter.

**Expected enrollment:** The course will be capped at 18 students. Anticipated initial enrollment is 7-10 students, with the expectation that enrollment will increase as the Chinese language program grows.

**Date:** August 27, 2020

**To:** WPI Faculty

**From:** Committee on Academic Operations (Prof. Mathisen, Chair)

**Re:** Motion to cross-list MA4635 Data Analytics and Statistical Learning as DS4635 as approved by the Data Science program on 10/09/2018.

**Motion:** On behalf of the Data Science Steering Committee, the Committee on Academic Operation recommends, and I move, that MA4635 Data Analytics and Statistical Learning as described below be cross-listed as DS4635.

**Course/Catalog Description: MA4635/DS4635 Data Analytics and Statistical Learning**

Cat. I. The focus of this class will be on statistical learning; the intersection of applied statistics and modeling techniques used to analyze and to make predictions and inferences from complex real-world data. Topics covered include regression, classification/clustering, sampling methods (bootstrap and cross-validation), and decision tree learning.

Recommended background: Linear Algebra (MA2071 or equivalent), Applied Statistics and Regression (MA2612 or equivalent), Probability (MA2631 or equivalent). The ability to write computer programs in a scientific language is assumed.

**Anticipated Instructor:** Prof. Randy Paffenroth, Prof. Jian Zou, and other instructors of MA could teach the course as well.

**Rationale:**

This course closely follows the graduate version of the same class, DS502/MA543: STATISTICAL METHODS FOR DATA SCIENCE, developed for the graduate Data Science Program. It is thus equally an essential course for data science curriculum at the undergraduate level. The Department of Mathematics approved this cross-listing in a department meeting on November 27, 2018.

**Implementation:** Academic year 20/21.

## Committee Business

**Date:** August 27, 2020

**To:** WPI Faculty

**From:** Committee on Academic Operations (Prof. Mathisen, Chair)

**Re:** Motion to approve the September 2020 undergraduate student graduation list

**Motion:** The Office of the Registrar reports that the following candidates have either completed all the requirements for the degree designated in the department or program indicated, or are expected to complete their degree requirements for May 2020 graduation. They therefore are or will be eligible to receive that degree, and on behalf of the Committee on Academic Operations, I move that – pending final verification by the Registrar that all those on the list have in fact completed their degree requirements - they be approved for September 2020 graduation.

**Date:** August 27, 2020

**To:** WPI Faculty

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

**Re:** Motion to approve the September 2020 graduate student graduation list

**Motion:** The Office of the Registrar reports that the following candidates have either completed all the requirements for the degree designated in the department or program indicated, or are expected to complete their degree requirements for May 2020 graduation. They therefore are or will be eligible to receive that degree, and on behalf of the Committee on Graduate Studies and Research, I move that – pending final verification by the Registrar that all those on the list have in fact completed their degree requirements - they be approved for September 2020 graduation.

**Date:** August 27, 2020

**To:** WPI Faculty

**From:** Committee on Governance (Prof. Boudreau, Chair)

**Re:** Motion to extend remote voting in emergency settings only

**Motion:** The Committee on Governance (COG) recommends and I move that faculty meetings continue to be conducted remotely, including synchronous remote voting, through the first faculty meeting of C term 2021.

**Rationale:** Given WPI's hybrid mode of course delivery and ongoing efforts to keep the campus population safe during the COVID 19 pandemic, faculty meetings will continue to be held remotely for the duration of 2020. Although getting back to in-person faculty meetings remains our strong preference for conducting faculty business, our spring/summer experiment with synchronous remote voting at faculty meetings was successful, allowing for faculty meeting operations to continue during the emergency situation. This resolution extends that practice through the end of the calendar year. If necessary, faculty can consider a separate motion to extend the practice at a later time.

**Date:** August 27, 2020

**To:** WPI Faculty

**From:** Committee on Governance (Prof. Boudreau, Chair)

**Re:** Motion to allow elected faculty governance committee members to vote on critical issues if a meeting of entire faculty cannot be called

**Motion:** The Committee on Governance (COG) recommends and I move that if a Faculty meeting cannot be convened in a timely manner for any reason, **all the elected members of Faculty governance committees** will have the power to vote on critical time-sensitive issues through the first faculty meeting in C 2021 with a quorum of at least 25 percent of those members required. Any such vote would be revisited by the Faculty at the earliest possible convenience.

**Rationale:** In the current crisis, emergency situations may arise where Faculty approval is urgently needed. In emergency cases where waiting for the next scheduled Faculty meeting is not soon enough for a decision, a vote by a majority of elected Faculty governance members can serve as an interim decision of the Faculty. This group is large enough to represent the campus while also being small enough to quickly convene.



**Date:** August 27, 2020  
**To:** WPI Faculty  
**From:** Committee on Academic Policy (Prof. Heineman, Chair)  
**Re:** Overloading policy

**Motion:** The Committee on Academic Policy recommends, and I move, to change the policy regarding the overload policy.

CAP recommends that students be allowed to overload in A term 2020 (that is, register for more than three undergraduate classes) without receiving prior advisor approval. The registrar will email all faculty advisors the list of their students who have chosen to overload. The only students that would require advisor approval would be:

- First-year students
- Students enrolled in a full-term project work (either IQP or MQP)
- Students enrolled in ID 2050

### **Rationale**

Registration for courses which will result in an overload may take place, on a space-available basis, as of the first day of the term in which that course is offered. This proposal aims to streamline the registration process during the first week of A term.

Note that students enrolled in ID 2050 are still highly discouraged from overloading during this term.

The reason for amending the policy is the ongoing impact of the COVID-19 pandemic. The traditional practice of “seeking a signature for an overload” is complicated because not all academic advisors are going to be physically on campus when A term starts. More challenging, however, is that the students often would “try out a course” by attending a few lectures when deciding their courses. For online and even hybrid courses, all course material is in Canvas, and thus can only be accessed by students in the course; and with de-densified classrooms, there is literally no opportunity for an unregistered student to attend a class.

Due to the unprecedented situation in D-term 2020, CAP proposed a one-time change to the overload policy.

Overloading: Beginning March 23, undergraduate students may overload up to 21.75 credits (C and D credits included in total) on Bannerweb. Students are *strongly encouraged* to consult with their advisor BEFORE registering for an overload. Anything over 21.75 credits will require permission from their advisor (see above for steps). Students enrolled in ID 2050 or a full-unit project (that is, 9 credits of IQP or MQP) in D-term are not eligible to overload. Advisors will get a list of any advisees overloading by March 27.

The limit of 21.75 credits is equivalent to seven undergraduate courses plus a 1/12<sup>th</sup> PE credit. There were 629 students who overloaded in D-term 2020 which was actually lower than the 639 students who overloaded in D-term 2019. It seems that students “did the right thing” in D term, and this trend should continue.

This policy will not apply to first-year students or to students who are completing a full-term project (such as an IQP or MQP).

### **Implementation Plan**

The registrar will include the following information in emails to undergraduate students.

Overloading: Beginning August 24 with sophomore or higher standing may overload up to 21.75 credits (C and D credits included in total) on Bannerweb. Students are *strongly encouraged* to consult with their advisor BEFORE registering for an overload. Anything over 21.75 credits will require permission from their advisor (see above for steps). Students enrolled in ID 2050 or a full-unit project (that is, 9 credits of IQP or MQP) in A-term must receive permission from their advisor to overload. Advisors will get a list of any advisees overloading by September 9.

The registrar will send a report of the total number of overloaded students to CAP by Monday September 9<sup>th</sup>.

## Brief Biographies of New Faculty Members

### Department of Aerospace Engineering

#### Zhangxian Yuan, Assistant Professor

B.S. in Aircraft Design and Engineering from Nanjing University of Aeronautics and Astronautics in Nanjing, China, 2010

M.S. in Engineering Mechanics from Nanjing University of Aeronautics and Astronautics in Nanjing, China, 2012

M.S. in Aerospace Engineering from Georgia Institute of Technology, 2015

Ph.D. in Aerospace Engineering from Georgia Institute of Technology, 2017

Prior to Dr. Yuan joining the faculty at WPI, he spent three years as a Postdoctoral Fellow in the Daniel Guggenheim School of Aerospace Engineering at the Georgia Institute of Technology. His research is concerned with the mechanics of advanced structures, composite materials and structures, computational methods for high performance computing, structural dynamics, stability, and fracture mechanics. Work in the area of solid mechanics involves the development of novel theories for lightweight structures, as well as novel computational methods with applications in the structural analysis. He has published 33 peer-reviewed papers, served as reviewer for more than 25 international journals, and organized several conference sessions for the ASME International Mechanical Engineering Congress and Exhibition.

### Department of Biomedical Engineering

#### Olufunmilayo (Funmi) Ayobami, Assistant Teaching Professor

B.S. in Biomedical Engineering & Professional Writing from Worcester Polytechnic Institute, 2011

M.S. in Biomedical Engineering from Cornell University, 2015

Ph.D. in Biomedical Engineering from Cornell University, 2017

Postdoctoral Fellowship in Biomechanical Engineering at the Hospital for Special Surgery, NY, 2017-2018

Dr. Ayobami will be joining the faculty at WPI in January 2021. Currently, she is the Assistant Dean for Inclusion and Engagement in the Graduate School at the University of Massachusetts Amherst, where she has spent the last two years. In her role, Funmi oversees the Office of Inclusion and Engagement, and is focused on increasing access, fostering belonging, and promoting success of all graduate students, especially those from historically underrepresented populations. Prior to joining UMass, she completed her PhD in Biomedical Engineering at Cornell University and a postdoctoral fellowship at the Hospital for Special Surgery. Her areas of expertise include orthopedic biomechanics, mechanobiology, and contact mechanics in human joints during activities of daily living. In addition to her biomedical engineering interests, Funmi has also conducted pedagogical research aimed at exploring the persistence and success of traditionally underrepresented populations in higher education. She has received numerous awards and funding during her academic career, including support from the National Science Foundation, the Sloan Foundation, and the Orthopaedic Research Society, and she was awarded the Cornell University Zellman Warhaft Commitment to Diversity Award in 2014. She looks forward to returning to WPI, her alma mater, where she received her bachelor's degrees in Biomedical Engineering and Professional Writing.

### Department of Electrical and Computer Engineering

#### Fatemeh Ganji, Assistant Professor

B.Sc. in Electrical Engineering from K. N. Toosi University of Technology, Tehran, Iran, 2006

M.Sc. in Electrical Engineering from Malek Ashtar University of Technology, Tehran, Iran, 2010

Ph.D. in Electrical Engineering from Technical University of Berlin, Berlin, Germany, 2017

Before joining the Department of Electrical and Computer Engineering at Worcester Polytechnic Institute (WPI), Fatemeh was a Post-Doctoral Associate at the University of Florida (from 2018-2020) and at the Telecom Innovation Laboratories/Technical University of Berlin (from 2017-2018). She defended her dissertation "On the Learnability of Physically Unclonable Functions" at the Technical University of Berlin, with an overall grade of "distinction" (equivalent to *summa cum laude*). For her dissertation, she was awarded the BIMoS Ph.D. Award 2018 and nominated by the Technical University of Berlin for the ACM Dissertation Award. Fatemeh's research focuses on interdisciplinary approaches covering two main aspects of hardware security, namely machine learning and cryptography, for design and evaluation of security-critical hardware. Her research has been funded by the European Union (Horizon 2020 and Seventh Framework Program), the German Federal Ministry of Education and Research (BMBF), the National Science Foundation, and the National Institute of Standards and Technology. Fatemeh has contributed to her technical community as a reviewer for IEEE and ACM journals as well as a technical program committee member of the Conference on Cryptographic Hardware and Embedded Systems (CHES, 2020-2021), Field Programmable Logic and Applications (FPL, 2020), Design, Automation, and Test in Europe Conference (DATE 2021), and Conference on Security, Privacy and Applied Cryptography (SPACE 2020).

Shahin Tajik, Assistant Research Professor

B.Sc. in Electrical Engineering from K. N. Toosi University of Technology, Tehran, Iran, 2010

M.Sc. in Electrical Engineering from Technical University of Berlin, Berlin, Germany, 2013

Ph.D. in Electrical Engineering from Technical University of Berlin, Berlin, Germany, 2017

I joined Worcester Polytechnic Institute in July 2020 as an assistant research professor. Before joining WPI, I was an assistant research professor at Florida Institute for Cybersecurity (FICS) Research at University of Florida. I received my Ph.D. degree in Electrical Engineering in 2017 from the working group SECT, a collaboration of the Technical University of Berlin and Deutsche Telekom Innovation Laboratories in Germany. My field of research mainly includes non-invasive and semi-invasive side-channel analysis, Physically Unclonable Functions (PUFs), machine learning, FPGA security, and designing anti-tamper mechanisms against physical attacks. My ACM CCS'17 paper with the title "On the Power of Optical Contactless Probing: Attacking Bitstream Encryption of FPGAs" was awarded the 1st place in Applied Research Competition of European Cyber Security Awareness Week (CSAW) in 2017. I have served as a reviewer for IEEE and ACM journals as well as a technical program committee member of many hardware security conferences, including Conference on Cryptographic Hardware and Embedded Systems (CHES), Symposium on Hardware Oriented Security and Trust (HOST), and Workshop on Fault Diagnosis and Tolerance in Cryptography (FDTC). Security and Trust (HOST), and Workshop on Fault Diagnosis and Tolerance in Cryptography (FDTC).

Dr. Edvina Uzunovic, Assistant Teaching Professor

B.Sc. in Electrical and Computer Engineering University of Sarajevo, Bosnia and Herzegovina 1990

M.Sc in Electrical and Computer Engineering University of Waterloo, Canada 1996

Ph.D. in Electrical and Computer Engineering University of Waterloo, Canada 2000

Dr. Edvina Uzunovic has over 20 years of experience in the power systems industry. She has been a vital contributor to the overall success of several leading power and energy industry organizations while serving different roles. In 2012 she joined Worcester Polytechnic Institute as an Adjunct Professor and Associate

Director of Power Systems Engineering with Corporate and Professional Education department and currently, she is reappointed to the Assistant Teaching Professor position in the Electrical and Computer Engineering Department.

Her years spent in the power and energy industry have influenced her research interest toward innovative, industry applicable research. The presently growing interest in smart power grid initiatives requires strong industry/academia relationships to upgrade the existing power system (that served us well in the past) to the smart grid that will continue serving us well in the future. Her research activities focus on power system modeling, simulation, control and optimization in distribution and transmission power systems. Edvina is also interested in high voltage high current power electronics devices such as High Voltage Direct Current (HVDC) and Flexible AC System (FACTS) devices.

During the course of her career, she has received a number of awards such as: the Electric Power Research Institute Awards for 2002 Innovators and EPRI Technology Award for the contributions to the Flexible AC Transmission Systems (FACTS) technology, US National Committee of CIGRE : Recognition Awards for the noteworthy 2002 and 2006 CIGRE Technical papers.

She is also very active in her volunteer work with the IEEE Power and Energy Society, currently serving as IEEE Power and Energy Society Vice President Education.

### **Foisie Business School**

Farnoush Reshadi, Assistant Professor of Marketing

B.S., Computer Engineering, Bu Ali Sina University, 2009

M.Sc. in E-commerce, Iran University of Science and Technology, 2012

M.B.A., University of Tehran, 2015

Ph.D. in Business Administration (Marketing), West Virginia University, 2020

Dr. Reshadi joined the faculty of the Foisie Business School at WPI in July 2020. She received her Ph.D. in Business Administration with an emphasis on marketing from West Virginia University. Dr. Reshadi's research interests include consumer well-being, financial and health-related decision making, and social influence. Her research has been published in the Journal of Consumer Association and the International Journal of Marketing and Business Communication. Dr. Reshadi has presented her work at several national and international conferences including Marketing and Public Policy, Society for Consumer Research, Society for Marketing Advances, and the Institute for the Study of Business Markets conferences.

Prior to joining WPI, Farnoush has taught Consumer Behavior and Marketing Research courses at West Virginia University. Her overarching teaching goals include preparing students for applications of marketing skills after graduation, developing students' critical thinking skills, inspiring students to seek knowledge after graduation, and broadening their overall perspectives and worldviews.

### **Department of Humanities and Arts**

Kelly Ricciardi Colvin, Assistant Teaching Professor

A.B., French and History, Bowdoin College, 2001

M.A., History, Brown University, 2003

Ph.D. European History, Brown University, 2008

Kelly Colvin comes to WPI from the University of Maryland and Brown University, where she taught courses on European history and gender history. Her research focuses on the intersection of gender, culture, and politics, and how these factors have impacted the major moments and movements of the twentieth

century, including the Second World War and decolonization. She has published a book on gender and suffrage, as well as several articles on topics such as beauty culture and voting. A native of New Jersey, she received her BA from Bowdoin College in history and French Studies, and then her PhD in European history from Brown University.

Mitchell Lutch, Assistant Teaching Professor

B.A., Music Education, University of Lowell, 1985

M.A., Music, New England Conservatory of Music, 1990

Ph.D., Musical Arts, University of Washington, 2008

Prior to his current position at WPI, in 2019 Mitchell Lutch served as Interim Associate Director of Bands at the University of Northern Colorado and from 2005-2018 he was Associate Professor of Music and Director of Bands at Central College in Pella. Martin founded the Iowa Chamber Players in the summer of 2017, directed the Central Iowa Wind Ensemble for 13 years and the Grinnell College Symphonic Band for 10 years. His book *In Search of Meaning: Frank L. Battisti – The Conservatory Years and into the New Millennium* was published by Meredith Music and released by Hal Leonard in 2019. Mitchell is also a contributing author to *Instrumental Music Education: Teaching with the Musical and Practical in Harmony*, now in its 3rd edition through Routledge Publisher. His other writing and research appear in four additional Meredith Music publications, the *Alta Musica* publication of the International Wind Music History Conference, the *World Association of Symphonic Bands and Ensembles Journal*, and the *Iowa Bandmasters Magazine*. He is Past President of the New York State Band Directors Association. Conducting appearances and research presentations include concerts and conferences throughout the United States, Quebec, London, Japan, The People’s Republic of China, the former Soviet Union, Luxembourg, and Mexico. He began his teaching career in the Malden Public schools in Massachusetts.

Sarah Riddick, Assistant Professor

B.A., English, Spanish, Virginia Commonwealth University, 2011

M.S., Literature, University College London, 2013

Ph.D., English, University of Texas at Austin, 2020

Sarah Riddick is an Assistant Professor in the Department of Humanities and Arts, where she teaches courses in rhetoric and writing, as well as directs the Professional Writing program. She holds a rhetoric PhD from the Department of English at the University of Texas at Austin; a master’s degree in comparative literature from University College London; and bachelor’s degrees in English and Spanish with a minor in creative writing from Virginia Commonwealth University. Her work explores the relationship between classical rhetorical theory, digital rhetoric and cultures, and emergent media.

**Department of Mathematical Sciences**

Francesca Bernardi, Assistant Professor

B.S., Engineering Physics, Politecnico di Milano. Milan, Italy, 2009

M.Sc., Nuclear Engineering, Politecnico di Milano, Milan, Italy, 2013

Ph.D., Applied Mathematics, University of North Carolina, 2018

Francesca Bernardi is an Assistant Professor in the Department of Mathematical Sciences with affiliation in Mechanical Engineering. She has been a Dean's Postdoctoral Scholar in the Department of Mathematics at Florida State University for the past two years (2018-2020). Her research focuses on small-scale fluid mechanics and microfluidics, in particular modeling particle transport and wastewater filtering systems. Francesca is from Italy and moved to the U.S. in 2013 to enroll in the Ph.D. program in Applied Mathematics at the University of North Carolina. While at UNC Chapel Hill, she also received a Graduate Certificate in Women's and Gender Studies focusing on equity and justice in STEM. In 2018, she joined the leadership of 500 Women Scientists, a global non-profit grassroots organization aimed at making science more open, inclusive, and accessible. Francesca is the co-founder of Girls Talk Math, a free Math and media camp for female and gender non-conforming high school students hosted at UNC Chapel Hill, at the University of Maryland at College Park, at the University of Minnesota Twin Cities, and at UCLA. In 2020, the four camps merged into an online program serving students across the United States. Recently, Francesca has been trained as a WikiScholar as part of an effort to increase the representation of Women scientists on English-language Wikipedia.

Guanying Peng, Assistant Professor

B.S., Mathematics, Peking University, 2007

Ph.D., Mathematics, Purdue University, 2014

Guanying Peng grew up in Harbin in northeastern China. He received a bachelor's degree in Mathematics from Peking University in 2007 before coming to the US for graduate study. He completed his Ph.D. in Mathematics from Purdue University in 2014, and then took postdoc positions at the University of Cincinnati and the University of Arizona. He is interested in partial differential equations with a focus on applications to the sciences.

Adam Sales, Assistant Professor

B.S., Physics and Mathematics, Johns Hopkins University, 2005

Ph.D., Statistics, University of Michigan, 2013

Adam Sales is an Assistant Professor of Statistics in the Mathematical Sciences department. He is affiliated with the Learning Sciences and Technology program and with the Data Science program. From 2013-2015 Dr. Sales was a postdoctoral researcher in the Carnegie Mellon Statistics department as part of the Carnegie Mellon and RAND Traineeships in interdisciplinary education research. From 2015-2020 he was the lead statistical consultant in the University of Texas College of Education. He is joining the WPI Mathematical Sciences faculty in support of the Learning Sciences and Technology program. His research focuses on methods for causal inference using administrative or high-dimensional data, especially in education.

**Department of Mechanical Engineering**

Aswin Gnanaskandan, Assistant Professor

B.S. in Aeronautical Engineering from Madras Institute of Technology, India, 2006

M.S. in Aerospace Engineering & Mechanics from University of Minnesota, 2012

Ph.D. in Aerospace Engineering & Mechanics from the University of Minnesota, 2015

Prior to Dr. Gnanaskandan joining the faculty at WPI, he spent three years as a Research Scientist in Dynaflo Inc., where he primarily worked on developing numerical models for multiphase flows for applications in aerospace engineering, marine engineering, and biomedicine. At Dynaflo, he was the

principal investigator of a \$150,000 grant award from National Institutes of Health (NIH) and a co-investigator of a \$1,000,000 grant award from NIH, among other grant awards from the Office of Naval Research (ONR) and the Department of Defense (DOD). Prior to this he was at California Institute of Technology as a post-doctoral researcher where he worked on subgrid scale modeling of high-pressure multispecies flows for which he received a “NASA certificate of recognition” in 2018. He is an active reviewer for multiple international journals and the recipient of a “Certificate for outstanding contribution in reviewing” from the International Journal of Multiphase flow. He has been invited to chair multiple technical sessions in AIAA’s SciTech meetings and International Symposium of Cavitation. At WPI, his research will mainly focus on developing high-fidelity mathematical models for multiphase flows and leverage their applications to answer critical questions in engineering and biomedicine.

## **Department of Physics**

### Raisa Trubko, Assistant Professor

B.S., Optics, University of Rochester, 2010

B.A., Physics, University of Rochester, 2013

Ph.D., Optical Sciences, University of Arizona, 2017

Raisa Trubko is an assistant professor in the Department of Physics. She comes to WPI from Harvard University, where she was a postdoctoral fellow. Previously, she was a visiting research fellow at the Vienna University of Technology in Austria. Raisa is an experimental quantum physicist. In her research, she uses ensembles of Nitrogen-vacancy quantum defects in diamond to image magnetic fields with high spatial resolution. She was an NSF graduate research fellow and earned her Ph.D. in optical sciences from the University of Arizona. She also founded the University of Arizona Women in Physics group. Raisa is a graduate of Mass Academy.

## **Department of Robotics Engineering**

### Markus P. Nemitz, Assistant Professor

PhD – The University of Edinburgh, 2018

MSc – The University of Edinburgh, 2014

BEng – Bochum University of Applied Sciences, 2012

Dr. Nemitz obtained his B.Eng. in electrical engineering from Bochum University in Germany and his M.Sc. and Ph.D. in electronics and electrical engineering from the University of Edinburgh in Scotland. At the University of Edinburgh, he worked under the guidance of [Prof. Adam A. Stokes](#). During his doctoral studies, Dr. Nemitz was a visiting scholar at the University of Michigan in the Department of Computer Science and Engineering, working with [Prof. Edwin B. Olson](#). Following his graduate research, he trained as a postdoctoral fellow at Harvard University in the Department of Chemistry and Chemical Biology, advised by [Prof. George M. Whitesides](#), before starting as an Assistant Professor in the Department of Robotics Engineering at Worcester Polytechnic Institute in July 2020. The [Nemitz Robotics Group](#) seeks to blur the line between robots and materials. They are becoming a multi-disciplinary robotics group that embeds intelligence into elastomeric polymers and textiles, combining the fields of magnetism, fluidics, and machine learning. Dr. Nemitz’ group aims for developing co-bots, collaborative robots that support, protect and interact with humans, with specialized applications in healthcare and (under-)water environments.

## **Department of Social Science and Policy Studies**



Crystal H. Brown, Assistant Professor

B.A., English Literature and Communications, DePaul University, 2004

MPA, Pennsylvania State University, 2006

M.A. Political Science, Comparative Politics, University of Oregon, 2015

Ph.D., Political Science, University of Oregon, 2019

Crystal Brown is an Assistant Professor in the Social Sciences and Policy Department. She came to WPI in 2018 as an Assistant Teaching Professor. Crystal earned her Ph.D. in Political Science with a focus in the subfields of Comparative Politics, International Relations, and U.S. Foreign Policy at the University of Oregon. She also has a Master of Public Administration (MPA) from Pennsylvania State University. Her areas of interest include comparative immigration and integration policies, human rights, refugees, race/ethnicity and politics, and international security studies. She is most interested in the effect of political culture, technology, institutions and individual decision-making on different political systems around the world and the historical development of those political processes and structures.

Stacy Shaw, Assistant Professor

B.A., Human Development, California State University, 2012

M.A., Psychology, University of California, Los Angeles, 2016

Ph.D., Psychology, UCLA, 2020

Stacy Shaw's research focuses on understanding creative thinking in mathematics, how anxiety and other threat experiences affect mathematical cognition and reasoning, as well as how classroom experiences can affect performance and learning in STEM. She graduated with her Ph.D. in psychology from UCLA in 2020, and is an Ambassador for the Center for Open Science, Catalyst for the Berkeley Initiative for Transparency in the Social Sciences, and a part of the Better Book research team for the [Coursekata](#) project.