MEMORANDUM

September 25, 2019

TO: Members of the Board of Trustees

FROM: Kristina M. Johnson, Chancellor

SUBJECT: Approval of the Appointment of Dr. Gabrielle Gaustad as Vice President for Statutory Affairs of the New York State College of Ceramics at Alfred University

Action Requested

The proposed resolution approves the appointment of Dr. Gabrielle Gaustad as Vice President for Statutory Affairs of the New York State College of Ceramics at Alfred University

Resolution

I recommend that the Board of Trustees adopt the following resolution:

Whereas pursuant to NYS Education Law §355(1)(e), the appointment of the head of each statutory or contract college (including the New York State College of College of Ceramics at Alfred University) by the governing body of each such institution requires the approval of the State University of New York Board of Trustees; now, therefore, be it

Resolved that Dr. Gabrielle Gaustad be, and hereby is, appointed Vice President for Statutory Affairs of the New York State College of Ceramics at Alfred University, at an annual state salary of $235,000, effective immediately.

Background

Dr. Gabrielle Gaustad became the Dean of the Inamori School of Engineering at Alfred University in January, 2019. For ten years prior, she was an Associate Professor in the Golisano Institute for Sustainability at the Rochester Institute of Technology (“RIT”). At RIT, Dr. Gaustad conducted over
$2M in sponsored research programs graduating dozens of doctoral and masters students.

The Gaustad group conducts research quantifying the economic and environmental trade-offs for materials at their end-of-life with a focus on recycling, resource recovery, and promoting a circular economy. Methodologies include a variety of systems modeling techniques such as dynamic material flow analysis, optimization, simulation, systems dynamics, economic modeling, process based cost modeling, and life-cycle assessment, as well as traditional material characterization such as TGA, PSD, SEM, XRD, XRF, EDS, and ICP-MS. Specific projects include implications of material scarcity and criticality for clean energy technologies, aluminum and steel recycling technologies and compositional analysis, and environmentally benign and economically efficient recycling of lithium ion batteries, particularly those containing nanomaterials.

Dr. Gaustad received a B.S. degree in Ceramic Engineering from Alfred University in 2004 and holds a Ph.D. in Material Science and Engineering and an M.S. in Computation for Design and Optimization from the Massachusetts Institute of Technology.

A copy of Dr. Gaustad’s curriculum vitae is attached.
Dr. Gabrielle Gaustad

**CURRENTLY**

**Dean, Full Professor**

*Inamori School of Engineering, Alfred University*

Jan 2019-Current

Alfred, NY

The School of Engineering has 24 faculty, 10 staff including technical specialists, and roughly 450 undergraduate students majoring in ceramic engineering, glass science, materials science and engineering, mechanical engineering, renewable energy engineering, and biomaterials engineering.

**Previously**

**Associate Professor**

**Assistant Professor**

*Rochester Institute of Technology, Golisano Institute for Sustainability*

Aug 2009–Sept 2015

Rochester, NY

- $1.9M in research funding as Principal Investigator on research spanning the intersection of material science and sustainability from the National Science Foundation, International Steel Corporations, Environmental Protection Agency, the New York State Department of Environmental Conservation, and the New York State Energy Research and Development Authority.
- $2.3M in research funding as Co-PI or SP from federal sources, foundations, and industry collaborating with a wide diversity of researchers on inter-disciplinary projects
- 60+ peer-reviewed publications in high impact publications with excellent citation rates
- A decade of graduate teaching experience in Sustainable Material Selection and Decision Sciences with excellent peer and student evaluations as evidenced by nominations for Outstanding Teaching Awards
- Dozens of invited talks at national and international conferences and workshops
- Successfully mentoring dozens of graduate students to graduation in the intersection of Sustainability and Material Science including PhD (7), MS (10), and M.Arch. (5) as their primary advisor and serving on dozens of additional committees
- Founding faculty member of the Golisano Institute for Sustainability; served on and led committees that developed the curriculum, all policies, and hired all directors and faculty

**Research Overview:** A major sustainability challenge of the 21st century is exponentially increasing consumption of materials and the related energy and waste burden. The Gaustad group conducts research quantifying the economic and environmental trade-offs for materials at their end-of-life with a focus on recycling and resource recovery. Methodologies include a variety of systems modeling techniques such as dynamic material flow analysis, optimization, simulation, systems dynamics, economic modeling, process based cost modeling, and life-cycle
assessment, as well as traditional material characterization such as TGA, PSD, SEM, XRD, XRF, EDS, and ICP-MS. Specific projects include implications of material scarcity and criticality for clean energy technologies, environmental impacts of solar recycling, aluminum and steel recycling technologies and compositional analysis, and environmentally benign and economically efficient recycling of lithium ion batteries, particularly those containing nanomaterials.

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**EDUCATION**

**Massachusetts Institute of Technology**  
PhD, Materials Science and Engineering  
Thesis: *Towards sustainable material usage: time-dependent evaluation of upgrading technologies for recycling*  
Cambridge, MA  
June 2009

**New York State College of Ceramics at Alfred University**  
Bachelor of Science, Ceramic Engineering  
Departmental Honors Alfred University Scholar, Minor in Chemistry & Fine Arts, Concentration in Composites  
Alfred, NY  
May 2004

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**Sponsored Research-Principal Investigator $1.8M**

- National Science Foundation Environmental Sustainability Program (ENG-CBET). Rare earth element extraction from secondary sources. $295,105. July 2018-June 2021. PI.
- National Science Foundation Environmental Sustainability Program (ENG-CBET). Student and Junior Faculty Travel Support for the International Symposium on Sustainable Systems and Technology (ISSST) Conference. $15,000. April 2015-September 2015. PI.
- Environmental Protection Agency (EPA) P3 Student Design Competition, Implementing practical micro-hydropower. $14,999. July 2013-August 2014. PI.
- National Science Foundation Environmental Health and Safety of Nanomaterials Program (ENG-CBET). Quantifying environmental risks and opportunities for nano-scale LiFePO4 and LiMnO2 cathode battery technologies at end-of-life. $292,999. Sept. 2011-Aug. 2015. PI.
- Pollution Prevention Institute, NYS Department of Environmental Conservation. Developing environmentally benign battery recycling processes: characterizing “green” leaching agents. $150,000. Sept. 2011-Current. PI.
- NYSEMDA PON 1704 Environmentally Preferable End-of-Life for Li-Ion Battery Technologies $195,869. August 2010-December 2012. PI.

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**Sponsored Research- Co-PI and SP $2.3M**

- AvanGrid Foundation Research Grant, The Next-Generation Grid, $35,000, April 2018-March 2019, Co-PI, PI: Trabold
• Consumer Technology Association, Sustainable Materials Management Metrics, $58,000, January 2018-December 2018. Co-PI, PI: Babbitt


• Pollution Prevention Institute, NYS Department of Environmental Conservation. Secondary applications for transportation batteries. $50,000. August 2015-Current. Co-PI (PI:Nenadic).

• Pollution Prevention Institute, NYS Department of Environmental Conservation. Scalable size separation technology to enhance recovery of metals from electronic wastes. $73,778. August 2015-Current. Co-PI (PI:Babbitt).


AWARDS

• Inducted into RIT Principal Investigator Millionaire Club (2015)
• Nominated for Edwina Award for contributing to diversity inclusion efforts at RIT 2016
• Nominated for the Eisenhart Outstanding Teaching Award (2015)
• RIT VP of Research, GIS College Research Award for Excellence in Research (2012)
• Special Congressional Recognition, Tom Reed, for role in AT&T Project (August 2011)
• McNair Scholar Recognition for mentoring of underrepresented students, 2010
• National Science Foundation Graduate Research Fellowship Winner (2005-2008)
• MIT-Dupont Alliance Fellow (2004-2005)
• Best Paper Honorable Mention, 6th Technology, Management, and Policy Consortium
• TMS 50th Anniversary $2,500 Essay Contest Winner (2007)
• The Materials Information Society/TMS Light Metals Division Poster Winner (2006)
• National Merit Scholar (2000)
• American Chemical Society (ACS) Women Chemists Eli Lilley Travel Award (2003)
• General Electric Award for Excellence in Glass Science (2003)
46. A. Leader, C. Babbitt, G. Gaustad, 2019, The Effect of Critical Material Prices on the Competitiveness of Clean Energy Technologies, Materials for Renewable and Sustainable Energy, Accepted
45. K. Krueger, A. Stoker, G. Gaustad, 2019, Challenges for alternative materials in the field. Smart and Sustainable Built Environment, Accepted.
43. Christopher Valant, Gabrielle Gaustad, Nenad Nenadic, 2019, Characterizing large-scale, electric-vehicle lithium ion transportation batteries for secondary uses in grid applications, Batteries, 5 (1), 8.
42. Leader, A., Gaustad, G., 2019, “Glasses, ceramics, and metals are critical for a clean energy and mobility transition”, American Ceramic Society Bulletin, 98 (1), 29-33.
40. Therese Garvey; Elizabeth A Moore; Callie Babbitt; Gabrielle Gaustad, 2018, "Comparing ecotoxicity risks for nanomaterial production and release under uncertainty", Clean Technologies and Environmental Policy, 1-14.
37. Moore, Elizabeth; Babbitt, Callie; Gaustad, Gabrielle; Moore, Sean, 2018, Portfolio Optimization of Nanomaterial Use in Clean Energy Technologies, Environmental Science and Technology, 52 (7), 4440-4448.


**INVITED TALKS**

1. Invited Lecture. 20/20 Research in Focus, Sustenance, November 9, 2016. Satisfying Society’s Technology Cravings. Colloquium promoting research and collaboration by women faculty at RIT

**PEER REVIEWED PUBLICATIONS – OTHER**  *italics=students*

13. G. Gaustad, M. Ganter, X. Wang, C. Bailey, C. Babbitt, B. Landi, Economic and environmental trade-offs for Li-based battery recycling, Battery Recycling Symposium, Energy Conversion and


GIS-ARCH-763 Sustainable Building Metrics
Fall 2014-2018

This course introduces students to prevailing metrics and assessment tools pertaining to the built environment and supports integration of these metrics into Integrated Building Systems courses in the Master of Architecture Program. The course explores measurement methods and calculations for the built environment, performance metrics and assessment methodologies over the building life-cycle, green building design guides and application of green building rating systems (especially LEED). Students will apply sustainable building concepts and evaluation methods through assignments and a final project.

5001-700 Selecting Sustainable Materials
Fall 2012

This class teaches the fundamentals necessary for designers to make informed material selection decisions in regards to environmental impacts. Traditional material selection strategies of balancing properties via the Ashby methodology are often ill-equipped to handle sustainability metrics and those that can are a black box when it comes to how those metrics are quantified. This course will explore how such metrics are quantified, uncertainty surrounding those quantifications, and what parameters drive change for these metrics. Material related sustainability metrics learned will include material consumption, extraction, scarcity, criticality, embodied energy, eco-efficiency, eco-toxicity, lifespan, and recyclability. Strategies for incorporating environmentally benign material selection into design will be explored for several methodologies.

GIS-ISUS-808: Multi-criteria Decision Analysis, Instructor
Spring ’10-18

Class explored how decisions are made when confronted with multiple, often conflicting, criteria or constraints. Case studies focused on sustainability multi-criteria problems such as energy planning, sustainable development, resource management, and recycling using the following analytical methods: linear and stochastic programming, optimization, and Monte Carlo simulation.

GIS-ISUS-701-06: Independent Study: Alternative Materials, Instructor
Spring 2012

As one step to reduce a building’s environmental impact, green building design guidelines and certification programs (e.g., LEED, Whole Building Design Guide) promote the specification of alternative, non-traditional building materials. Through a survey of green building programs and guidelines, existing literature on alternative materials, and life-cycle assessment using multiple inventory databases, students will tackle the following questions: a) what constitutes an alternative building material, b) what are the current barriers to their specification, and c) do alternative building materials present a “greener” alternative?

GIS-ISUS-701-06: Independent Study: Micro Hydropower, Instructor
Spring 2013

This course is to conduct the Phase I research proposed by our EPA P3 winning project on implementing micro-hydropower. The course will assess the feasibility of such a system in the Golisano Institute for Sustainability’s new building by 1) monitoring and metering the storm-water collection infrastructure, 2) using this data combined with a variety of turbine design systems to assess potential energy savings, and 3) using the data from (1) and (2) to characterize economic and environmental savings.

GIS-ISUS-806: Risk Analysis, Instructor
Winter ’10-’11, ’11-’12

Course examined risk identification, quantification, and management from the standpoint of the three key components of sustainability science.
(economics, environment, and society). Economic subjects included cost-benefit analysis, value of information, time value of money, basic decision analysis, value functions, monetizing challenges for ecosystem services, and sustainability risk management. Environmental subjects included toxicological perspectives such as fate and transport and dose-response relationships including an overview of EPA’s current practice. Policy and societal subjects included utility theory and lotteries, risk perception, ethical issues in risk quantification, and impact statements.

GIS Elective Course – This class will explore intermediate programming for applied dissertation research. Optimization and numerical simulation case studies will be explored using Microsoft Excel, Matlab, and Lingo software. Students will formulate and code programs to explore multi-criteria sustainability problems related to their research projects. Special topics include advanced uncertainty analysis (including beginner stochastic programming) and algorithm improvement for faster processing. The final project deliverable will be a journal-quality paper including proper mathematical formulation of the program and algorithm, optimal solutions, and sensitivity analysis of both dynamic parameters and implicit uncertainty.

GIS-ISUS-822: Material Cycling – Closing the Loop, Instructor Winter Quarter ‘09-’10
GIS Elective Course – Class explored the economic and environmental incentives for recycling and resource recovery. The focus will be on end-of-life fate of materials (including plastics, metals, glass, and e-waste) while setting these within the context of overall ecosystem flows (carbon, sulfur, and nitrogen cycles, waste water, etc.). Technologies for the upgrading of secondary material streams will be studied including: physical and physico-chemical, hydrometallurgical (selective precipitation, leaching, ion exchange), biotechnological (biosorption, sulfate reduction), and pyrometallurgical (filtration and fluxing). Production issues (product quality, remelt thermodynamics, exergy accounting, etc.) within the secondary industry will be explored with an emphasis on removing barriers to increased usage of scrap. Efforts for enhanced collection efforts and motivation of consumer and firm participation will also be covered (municipal collection fees, corporate take-back initiatives, legislation such as the WEEE directive, state deposits, etc.).

GIS-ISUS-819: Tools for PhD Research, Instructor Fall Quarter 2010
Introduced graduate students to tools and software that will be of use in conducting, analyzing, and presenting their research. An introduction, highlights of key features, and the basics of operation were discussed for software aimed at: bibliographic referencing (e.g. Endnote, Latex), statistical analysis (e.g. Excel, SPSS, SAS), analytical work (e.g. Matlab, Mathematic, Maple), advanced plotting (e.g. Deltagraph, Illustrator, Origin), equation editing (e.g. Mathtype), and search engines (e.g. setting up RSS feeds, material property databases).

MIT, Department of Materials Science and Engineering
III-57: Materials Selection, Design, and Economics, TA Fall Semester 2007

Alfred University, New York State College of Ceramics
CES-309: Electrical, Optical, and Magnetic Materials, TA Fall Semester 2004

ADVISING
Graduate Advising-Primary-PhD
- Tess Garvey, Sustainability PhD 2016 “Identifying Potential Environmental Risks of Engineered Nanomaterials and Connections to Policy”, Primary Adviser
- Michele Goe, Sustainability PhD 2014 “Sustainability informed management of end-of-life photovoltaics: assessing environmental and economic tradeoffs of collection and recycling”
- Xue Wang, Sustainability PhD 2014 “Managing end-of-life lithium-ion batteries: an environmental and economic assessment”
- Mark Krystofik, Sustainability PhD 2013 “Product system implications at end-of-life: An economic and environmental assessment”

Graduate Advising-Primary-MS and MArch
- Naitik Gada, Material Science MS 2015
- Cibele Eller Rodrigues, M.Arch. 2016
- Kedar Badami, Sustainable Systems MS 2017, Capstone: “Firm level supply risk assessment of critical materials”
- Marta Borrego de Guzman, Sustainable Systems MS 2017, Capstone: “Estimating future markets for second life batteries from EV applications in NYS”
- Haleh Moghaddasi, MS capstone 2017, Primary Advisor
- Jon Schroeder, MS Capstone 2017, Primary Advisor
- Bixiao Shen, 2018 M.Arch. Thesis Committee Member
- Sabyasachi Das, Thesis: “Resilient Housing Design for Tsunami Prone Andaman and Nicobar Islands in India”, 2017 M.Arch. Thesis Committee Member

Andrew Fischer, MS thesis 2018, Primary Advisor
Cristina Tapia, MS capstone 2018, Primary Advisor
Gillian Griffin, MS thesis 2019, Primary Advisor
Alexandra Leader, Current first year GIS PhD student, Primary Advisor
Leslie Brooks, Current first year GIS PhD student, Primary Advisor
Teija Mortvedt, Sustainable Engineering MS student, Primary Advisor

Graduate Advising-Other
Annick Anctil, Sustainability PhD 2011, Dissertation Committee Member
Chris Schauerman, Sustainability PhD 2013, Dissertation Committee Member
Matthew Ganter, Sustainability PhD 2013, Dissertation Committee Member
Jiefeng Lin, Sustainability PhD 2013, Dissertation Committee Member
Erinn Ryen, Sustainability PhD 2014, Dissertation Committee Member
Cam Hebda, Sustainable Systems MS 2015, Thesis Committee Member
Schuyler Matteson, Sustainability PhD 2015, Dissertation Committee Member
Matthew Burke, M.Arch 2014, Thesis Committee Member
Cory Merkel, Microsystems Eng PhD 2015, Dissertation External Chair
Jacqueline Ebner, Sustainability PhD 2016, Dissertation Committee Member
Felipe Freire, Material Science MS 2016, Dissertation Committee Member
Presentations by Graduate Students

35. Saptarshi Das (Eric Williams, Gabrielle Gaustad) 'Exploring the economic viability of coal ash as a source of rare earth metals”, Poster presentation, ISIE-ISSST Conference, Chicago, IL June 2017.


PRESENTATIONS, GUEST LECTURES, PRESS, AND OTHER OUTREACH

27. Fuel Cell Science Camp, July 2016, modules on material scarcity and clean energy systems (20 HS students).
26. Penfield Community Center, Miracle Makers Club, July 2016, modules on material scarcity and clean energy systems (8 HS students).
24. Imagine RIT Exhibit. Rare Earth Play Pit geared toward teaching about extraction and ore grade to pre-school to 4th grade students. May 2016.
23. WE@RIT Summer Camp for girls, Theme – World in Motion - two sessions 4-6th grade (20 girls) and 7th-8th grade (20 girls), Clean Energy Systems and Critical Materials Education Module, July 2015.
18. Recognized for participation in ACS SEED Summer Scholar Program. 
17. Article in City Newspaper, “Power to the People”, May 2012.
15. Guest Lecturer, GIS Fundamental of Sustainability Science course, Dr. Callie Babbitt, Metrics for Measuring Sustainability, October, 2011.
14. Guest Lecturer, RIT Sustainable Design course, Dr. Callie Babbitt and Alex Lobos, Material Selection for Designers, October, 2011.
13. “Green Hour” special on Channel 8 featuring spot on battery recycling work with interview, November 2011.
12. Guest Lecturer, Alfred University First Year Experience (FYE), Dr. Frederic Beaudry, Sustainability Implications for Modern Engineering and Science Problems, September 9, 2011.
9. Invited Lecturer, RIT Graduate Material Science course, Dr. S. Hubbard, Materials Science Applications in Sustainability, December, 2010.
7. Invited Lecturer, RIT Graduate Advanced Life-cycle Assessment course, Dr. C. Babbitt, Allocation Issues in LCA - Recycling, 2010.
1. W. Carty, G. Gaustad, Characterization of Infiltrated Fiber Tows for Control of Ceramic Matrix Composites, Poster Presentation at the 106th American Ceramic Society Convention, Indianapolis, IN, April 2004, Runner-up in Keramos Undergraduate Poster Competition.
Leadership at RIT

- Chair, GIS Admissions and Recruiting Committee 2014-Current
- GIS MS in Sustainable Systems Program Coordinator 2015-Current
- Office of the Vice President for Research Advisory Board (2012-2015)
- University Tenure Committee (2017-2018)
- Dismissal for Cause Committee (2017-2018)
- Chair, Mid-Tenure Review Committee (2017-2018)

Service to RIT

- Special Task Force, Graduate Maternity Leave Committee, 2017-2018
- GIS Academic Senate Alternate, 2014-2018
- RIT Research Compliance Committee 2016
- NTID Tenure Committee External Member, 2016
- GIS Third Year Review Committee Member, 2016
- External Committee Member, Microsystems PhD Dissertation Defense 2015
- Advance Grants Faculty Selection Committee 2015
- GIS M.Arch Admissions Committee, 2014-2016
- RIT Dean Assessment Committee 2015
- GIS M.Arch Faculty Search Committee Member, 2014-2015
- GIS B.Arch Program Development Committee Member, 2014-2016
- GIS Faculty Search Committee Member, 2013-2014
- RIT Resource Allocation and Budget Committee (2013-2016)
- GIS Admissions and Recruiting Committee Member, 2009- Current, Chair ’14-’15-’16
- Innovation Hall of Fame Nomination Committee (2012)
- Qualifying Examination Committee Member: Jennifer Russell (Part B), Elizabeth Wronko (Part B), Steven Barber (Chair), Cory Kreiss (Chair), Barbara Kasulaitis, Schuyler Matteson, Kirti Richa (Chair), Xuan Liu, Erin Ryen (Chair), Jiefing Lin, Ana Maria Leal Yepes, Chandramouli Venkatesan
- Master of Sustainable Architecture Curriculum Committee Member, 2009-2010
- Master of Sustainable Architecture Director Search Committee Member, 2009-2010
- GIS NIST Building Design Team – assisted with NIST proposal, met with architects, etc. to design classrooms, labs, and test beds for the new building
- Mentor, RIT McNair Program, 2010
- Represented GIS for strategic partnership meeting with A&T State delegates
- Semester Steering Committee – Intersession Sub-Committee Member 2009-2010
- NPRL Director Search Committee Member, 2009-2010
- GIS Faculty Search Committee Member, 2009-2010, 2010-2011
- GIS Curriculum Conversion Committee, 2009-2011
- GIS Curriculum Committee 2009-2012
- MS Sustainable Systems Proposal Curriculum Committee 2009-2010
- M.Arch. Sustainable Architecture Proposal Curriculum Committee 2009-2010

Leadership in the Field

- Organizer, REWAS 2019
• Associate Editor, Journal of Sustainable Metallurgy, 2017-Current
• Co-Editor, Resources, Conservation, and Recycling special issue on Circular Economy, 2016
• Organizer, MCARE 2018
• Sustainability (Area 12) Session Organizer (with Annick Anctil and Kristen Ardani), Chair of Sustainability Session, Chair of Trends in PV Deployment Session: Insights from Markets, Policy, and Financing, Photovoltaics Specialists Conference, Portland, Oregon, June 2016
• Sustainability Session Organizer and Chair(with Annick Anctil), Photovoltaics Specialists Conference, New Orleans, June 2015
• Organizing Committee Member, Paper Reviewer, Poster Session Chair, International Symposium on Sustainable Systems and Technologies (ISSST), May 2013
• Organizer, Proceedings Editor, Session Chair, The Minerals, Metals, and Materials Society (TMS) REWAS meeting on Resource Sustainability, San Antonio, Texas, March 2013
• **NSF US Representative and Reviewer**, G8 Initiative on International Collaboration: Material Efficiency, Tokyo, Japan, Nov. 2011 and April 2012
• Organizing Committee, Session Chair, Poster Competition Chair, International Symposium on Sustainable Systems and Technologies Conference, Boston, MA May 2012

**Service to Field**

• Reviewer, Materials and Design, 2016
• Invited Reviewer, Chinese Ministry of Science and Technology (MOST) and Netherlands Minister of Education, Culture, and Science (OCW), 2016
• Reviewer, Solar Energy Materials and Cells, 2016-Current
• Reviewer, Separation and Purification Technology, 2016-Current
• Reviewer, Photovoltaics Specialists Conference, Portland, Oregon, June 2016
• Reviewer, Clean Technologies and Environmental Policy 2015-Current
• Reviewer, Photovoltaics Specialists Conference, New Orleans, June 2015
• Reviewer, NSF Environmental Sustainability, 2015
• Reviewer, NSF Environmental Health and Safety of Nanomaterials Division, 2013
• International Reviewer, Fundacao para a Ciencia e a Tecnologia (FCT), Portuguese Foundation for Science and Technology, October 2012
• Reviewer, Journal of Cleaner Production, 2014-Current
• Reviewer, Waste Management, 2012-Current
• Reviewer, Progress in Photovoltaics, 2012-Current
• Reviewer, MDPI Materials, 2012-2014
• Reviewer, Environmental Science and Technology, 2010-Current
• Reviewer, Resources, Conservation, and Recycling, 2009-Current
• Reviewer, Environmental & Engineering Science, 2012-Current
• Reviewer, Energy and Environmental Science, 2012-2015
• Reviewer, National Science Foundation, SBIR Materials and Sustainability, Phase I 2010 (Recycled Materials), Phase I 2011 (Recycled and Sustainable Materials), Phase II 2012 (Recycled Materials), Phase I 2012 (Structural Materials and Sustainability)
• Reviewer and symposium co-organizer, TMS Sustainable Production and Processing symposium within the Materials and Society Division 2009-2010
- National Research Council of Canada – site visit review panel member – Process for Advanced Management and Technologies for Aircraft End of Life, 2010
- Reviewer and editor for light metals proceedings papers from TMS 2010
- Active Member ASM, Active Member ASIE
- Active Member ISIE
- **Academic chair**, MIT Graduate Materials Council (2004-2006)
- Active Member, The Minerals, Metals, and Materials Society
- Member, The Materials Information Society
- Member, Association of Iron and Steel Technology
- Member, American Ceramic Society
- Treasurer, Alfred University Chapter of the Society for Women Engineers (2000-2004)
- Secretary, Alfred University Chapter of Keramos, Ceramic Honors Society (2003-2004)
- Peer mentor at both MIT and Alfred University
- Member, Phi Kappa Phi Honors Fraternity
- Member, Tau Beta Pi, Engineering Honors Fraternity
- Member, Alpha Lambda Delta, Honors Fraternity

### PREVIOUS APPOINTMENTS & RESEARCH EXPERIENCE

<table>
<thead>
<tr>
<th>Position</th>
<th>Institution</th>
<th>Dates</th>
<th>Location</th>
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<tbody>
<tr>
<td>Post-Doctoral Researcher</td>
<td>MIT, Materials System Laboratory</td>
<td>May 2009 – August 2009</td>
<td>Cambridge, MA</td>
</tr>
<tr>
<td><strong>PhD Candidate</strong></td>
<td>MIT, Department of Materials Science and Engineering</td>
<td>January 2004 – May 2009</td>
<td>Cambridge, MA</td>
</tr>
<tr>
<td>Graduate Research Fellow</td>
<td>Alcoa Primary Metals</td>
<td>Summer 2007</td>
<td>Massena, NY and Davenport, IA</td>
</tr>
<tr>
<td>Graduate Research Fellow</td>
<td>Norsk Hydro Aluminum</td>
<td>Summer 2005</td>
<td>Porsgrunn and Oslo, Norway</td>
</tr>
<tr>
<td>Co-Op Engineer</td>
<td>Ceralink Inc.</td>
<td>Summer 2005</td>
<td>Alfred, NY</td>
</tr>
<tr>
<td>Undergraduate Research Fellow</td>
<td>Alfred University ARGUS Grant</td>
<td>January 2003 – May 2004</td>
<td>Alfred, NY</td>
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<tr>
<td>Undergraduate Summer Scholar</td>
<td>Lawrence Livermore National Laboratory</td>
<td>Summer 2003</td>
<td>Livermore, CA</td>
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<tr>
<td>Undergraduate Research Fellow</td>
<td>Center for Environmental Research</td>
<td>May – August 2002</td>
<td>Alfred, NY</td>
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<tr>
<td>Undergraduate Research Fellow</td>
<td>NASA Reduced Gravity Flight Opportunities Program</td>
<td>Summer 2001</td>
<td>Houston, TX</td>
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<tr>
<td>Undergraduate Research Intern</td>
<td>Buffalo China Research and Development Division</td>
<td>May – August 2001</td>
<td>Buffalo, NY</td>
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