

# Jing Du

## Associate Professor

Department of Mechanical Engineering  
 Department of Biomedical Engineering (Courtesy)  
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### EDUCATION

Ph.D.	Mechanical and Aerospace Engineering	Princeton University	2012
M.A.	Mechanical and Aerospace Engineering	Princeton University	2009
M.S.	Materials Science and Engineering	Tsinghua University	2007
B.S.	Mechanical Engineering and Automation	Tsinghua University	2005

### WORK HISTORY

<b>Associate Professor:</b> Department of Mechanical Engineering, Penn State University	2022-present
<b>Courtesy Appointment:</b> Department of Biomedical Engineering, Penn State University	2021-present
<b>Assistant Professor:</b> Department of Mechanical Engineering, Penn State University	2015-2022
<b>Postdoctoral Scholar:</b> Professor Sunita Ho at University of California, San Francisco	2013-2015
<b>Research Assistant:</b> Professor Wole Soboyejo at Princeton University	2008-2012
<b>Intern Scientist:</b> Cordis Corporation - a Johnson & Johnson Company	2010
<b>Research Assistant:</b> Professor Pan Zeng and Professor Dehai Wu at Tsinghua University	2005-2007

### SELECTED HONORS AND AWARDS

The Minerals, Metals & Materials Society (TMS), Functional Materials Division (FMD), Young Leaders Professional Development Award	2023
National Science Foundation (NSF) Faculty Early Career Development Program (CAREER) Award	2022
Oak Ridge Associated Universities (ORAU) Ralph E. Powe Junior Faculty Enhancement Award	2017
International Association of Dental Research (IADR) Mineralized Tissue Group Young Investigator Award	2015
Princeton University Harari Post-graduates Fellowship	2008
Princeton University First Year Graduates Fellowship	2007
Tsinghua University Best Thesis Award	2005
Beijing City Honored Graduate	2005
China National First-Class Scholarship	2004

### RESEARCH INTERESTS

Mechanics and Materials; Biomechanics and Biomaterials; Solid mechanics; Fracture mechanics; Bio-inspired design; Biomedical devices.

### JOURNAL ARTICLES

\* Supervised graduate student

\*\* Supervised undergraduate student

40. G. Liu\*, K. Hattar, W. Windes, A. Haque, **J. Du**, Finite element modeling of micro-X-ray tomography experiments on NBG-18 nuclear graphite, *Journal of Nuclear Materials*, in press.
39. Y. Wang, J. Baek, Y. Tang\*, **J. Du**, M. Hillman, J. S. Chen, Support vector machine guided reproducing kernel particle method for image-based modeling of microstructures. *Computational Mechanics*, pp 1-36, 2023.
38. G. Liu\*, Y. Tang\*, K. Hattar, Y. Wang, W. Windes, A. Haque, **J. Du**, An investigation of fracture behaviors of NBG-18 nuclear graphite using in situ mechanical testing coupled with micro-CT, *Journal of Materials Research*, 38(7), pp1984-1993, 2023.
37. Y. Zhou\*, **J. Du**, Atomic force microscopy (AFM) and its applications to bone-related research. *Progress in Biophysics and Molecular Biology*, 176, pp52–66, 2022. (Invited Paper)
36. K. Su\*, C. Gao\*, G. Qiu, L. Yuan, J. Yang, **J. Du**, Numerical simulation of mechanically adaptive bone remodeling around teeth and implants: A comparison with clinical images. *JOM*, 74(12), pp4640–4651, 2022. (Invited Paper)
35. **J. Du**, D. Katti, V. Thomas, Interactions between biomaterials and biological tissues and cells, Part I. *JOM*, 74(9), 2022. (Editorial Commentary)
34. X. Tan, E. Gerhard, Y. Wang, R. Tran, H. Xu, S. Yan, E. Rizk, A. Armstrong, Y. Zhou\*, **J. Du**, X. Bai, J. Yang, Development of biodegradable osteopromotive citrate-based bone putty. *Small*, 18, pp 2203003, 2022.
33. Y. Zhou\*, J. Dang, Y. Chen, S. G. Zheng, **J. Du**, Microstructure and mechanical behaviors of tibia for collagen induced arthritic mice treated with gingiva-derived mesenchymal stem cells. *Journal of the Mechanical Behavior of Biomedical Materials*, 12, pp 104719, 2021.
32. J. Wang, G. Zhou, M. Hillman, A. Madra, Y. Bazilevs, **J. Du**, & K. Su\*, Consistent immersed volumetric Nitsche methods for composite analysis. *Computer Methods in Applied Mechanics and Engineering*, 385, pp 114042, 2021.
31. **J. Du**, D. Katti, H. Heinz, Multiscale experiments and modeling in biomaterials and biological materials, part II. *JOM*, 73, pp 2332–2334, 2021. (Editorial Commentary)
30. Y. Tang\*, K. Su\*, R. Man, M. Hillman, **J. Du**, Investigation of internal cracks in epoxy-alumina using in situ mechanical testing coupled with micro-CT (Invited Paper). *JOM*, 73, pp 2452–2459, 2021.
29. **J. Du**, D. Katti, H. Heinz, Multiscale experiments and modeling in biomaterials and biological materials, part I. *JOM*, 73(6), pp 1673-1675, 2021. (Editorial Commentary)
28. K. Su\*, Y. Zhou\*, M. Hossaini-Zadeh, **J. Du**, Effects of implant buccal distance on peri-implant strain: A micro-CT based finite element analysis. *Journal of the Mechanical Behavior of Biomedical Materials*, 116, pp 104325, 2021.
27. Y. Zhou\*, M. Kastner, T. Tighe, **J. Du**, Elastic modulus mapping for bovine cortical bone from submillimeter- to submicron-scales using PeakForce Tapping atomic force microscopy. *Extreme Mechanics Letters*, 41, pp 101031, 2020.
26. Y. Zhou\*, C. Gong\*\*, M. Hossaini-Zadeh, **J. Du**, 3D full-field strain in bone-implant and bone-tooth constructs and their morphological influential factors. *Journal of the Mechanical Behavior of Biomedical Materials*, 110, pp 103858, 2020.
25. D. Schmitthenner, C. Sweeny, **J. Du**, A. Martin, The effect of a stiff foot plate on walking gait mechanics. *Journal of Biomechanical Engineering*, 142(9), pp 091012, 2020.
24. Y. Zhou\*, C. Gong\*\*, G. Lewis, A. Armstrong, **J. Du**, 3D full-field biomechanical testing of a glenoid before and after implant placement. *Extreme Mechanics Letters*, 35, pp 100614, 2020.

23. K. Su\*, J. Yang, Y. Li, **J. Du**, Numerical simulation of mandible bone remodeling under tooth loading: A parametric study. *Scientific Reports*, 9, pp 14887, 2019.
22. Q. Mao, K. Su\*, Y. Zhou\*, M. Hossaini-Zadeh, G. Lewis, **J. Du**, Voxel-based micro-finite element analysis of dental implants in a human cadaveric mandible: Tissue modulus assignment and sensitivity analyses. *Journal of the Mechanical Behavior of Biomedical Materials*, 94, pp 229-237, 2019.
21. Y. Jiang, Y. Zhou\*, X. Bao, C. Chen, L. N. Randolph, **J. Du**, and X. L. Lian, An ultrasensitive calcium reporter system via CRISPR-Cas9 mediated genome editing in human pluripotent stem cells. *iScience*, 9, pp 27-35, 2018.
20. J. Hu, Y. Zhou\*, J. D. Obayemi, **J. Du**, W. O. Soboyejo, An investigation of the viscoelastic properties and the actin cytoskeletal structure of triple negative breast cancer cells. *Journal of the Mechanical Behavior of Biomedical Materials*, 86, pp 1-13, 2018.
19. J. Asare, E. T`urk`oz, B. Agyei-Tuffour, O. K. Oyewole, A. A. Fashina, **J. Du**, M. G. Zebaze Kana, W. O. Soboyejo, Effects of pre-buckling on the bending of organic electronic structure. *AIP Advances*, 7, pp 045204, 2017.
18. J. Asare, S. A. Adeniji, O. K. Oyewole, B. Agyei-Tuffour, **J. Du**, E. Arthur, A. A. Fashina, M. G. Zebaze Kana and W. O. Soboyejo, Cold welding of organic light emitting diode: Interfacial and contact model. *AIP Advances*, 6, pp 065125, 2016.
17. V. C. Anye, M. G. Zebaze Kana, **J. Du**, W. O. Soboyejo, Effect of pressure and MoO<sub>3</sub> hole injection layer on the current-voltage characteristics of organic light emitting diodes. *Advanced Materials Research*, 1132, pp 160-165, 2015.
16. O. K. Oyewole, D. Yu, **J. Du**, J. Asare, V. C. Anye, A. A. Fashina, M. G. Zebaze Kana, W. O. Soboyejo, Lamination of organic solar cells and organic light emitting devices: Models and experiments. *Journal of Applied Physics*, 118, pp 075302-075302-12, 2015.
15. **J. Du**, J. Lee, A. Jang, A. Gu, A. J. Miller, R. Prevost, M. Hossaini-Zadeh, D. Curtis, S. Ho, Biomechanics and strain mapping in bone as related to immediately-loaded dental implants. *Journal of Biomechanics*, 48(12), pp 3486-3494, 2015.
14. O. K. Oyewole, D. Yu, **J. Du**, J. Asare, D. O. Oyewole, V. C. Anye, A. Fashina, M. G. Zebaze Kana, W. O. Soboyejo, Micro-wrinkling and delamination-induced buckling of stretchable electronic structures. *Journal of Applied Physics*, 117(23), pp 235501-235501-11, 2015.
13. **J. Du**, X. Niu, W. Soboyejo, Creep-assisted slow crack growth in bio-inspired dental multilayers. *Journal of the Mechanical Behavior of Biomedical Materials*, 46, pp 41-48, 2015.
12. D. Yu, O. K. Oyewole, D. Kwabi, T. Tong, V. C. Anye, J. Asare, E. R. Rwenyagila, A. Fashina, O. Akogwu, **J. Du**, W. O. Soboyejo, Adhesion in flexible organic and hybrid organic/inorganic light emitting device and solar cells. *Journal of Applied Physics*, 116(7), pp 074506-074506-9, 2014.
11. **J. Du**, V. C. Anye, E. O. Vodah, T. Tong, M. G. Zebaze Kana, W. O. Soboyejo, Pressure-assisted fabrication of organic light emitting diodes with novel MoO<sub>3</sub> hole-injection layer materials. *Journal of Applied Physics*, 115(23), pp 233703-233703-9, 2014.
10. **J. Du**, T. Tong, W. Akande, A. Tsakiridou, W. Soboyejo, Pressure effects on the lamination of organic light emitting devices. *Journal of Display Technology*, 9(8), pp 601-606, 2013.
9. **J. Du**, X. Niu, N. Rahbar, W. Soboyejo, Bio-inspired dental multilayers: effects of layer architecture on the contact-induced deformation. *Acta Biomaterialia*, 9(2), pp 5273-9, 2013.

8. W. L. Shan, **J. Du**, E. P. Hampp, H. Li, M. Johnson, G. Papandreou, C. A. Maryanoff, W. O. Soboyejo, Degradation and adhesive/cohesive strengths of a reservoir-based drug eluting stent. *Journal of the Mechanical Behavior of Biomedical Materials*, 14, pp 208-215, 2012.
7. I. Yakub, **J. Du**, W. O. Soboyejo, Mechanical properties and design of porous clay-based ceramics. *Materials Science and Engineering A*, 558(15), pp 21-29, 2012.
6. **J. Du**, E. Hampp, W. Shan, H. Li, G. Papandreou, C. A. Maryanoff, W. O. Soboyejo, Adhesion between a suspended polymeric film and a metallic substrate: Experiments and models. *Journal of Materials Research*, 27(14), pp1797-1805, 2012.
5. W. L. Shan, **J. Du**, E. P. Hampp, H. Li, G. Papandreou, C. A. Maryanoff, W. O. Soboyejo, Adhesion and cohesion in structures containing suspended microscopic polymeric films. *Acta Biomaterialia*, 8(4), pp1469-1480, 2012.
4. **J. Du**, P. Zeng, Molecular vibrational modes of C<sub>60</sub> and C<sub>70</sub> via finite element method. *European Journal of Mechanics A/Solids*. 28(5), pp948-954, 2009.
3. P. Zeng, X. Yang, **J. Du**, A C-C bonding element and coordinate transformation for vibrational analysis of C<sub>60</sub> nano-molecule. *Chinese Journal of Computational Mechanics*, 02, pp150-155, 2008. (in Chinese)
2. P. Zeng, X. Yang, **J. Du**, Computational investigation for Raman vibration modes of C<sub>60</sub> molecule. *Journal of Vibration Engineering*, 02, pp185-188, 2007. (in Chinese)
1. P. Zeng, **J. Du**, X. Yang, An equivalent C-C bonding element for representing the force-energy relation of carbon-carbon covalent bond. *Acta Mechanica Solida Sinica*, 04, pp325-332, 2007. (in Chinese)

#### BOOK CHAPTERS

4. **J. Du**, W. Soboyejo, "Introduction to Volume 9 Bioengineering". In *Comprehensive Structural Integrity*, 2nd Edition, Editors: Ferri Aliabadi and Wole Soboyejo, Elsevier Science, Amsterdam, Netherlands, 2023.
3. **J. Du**, X. Niu, N. Rabhar, W. Soboyejo, "Natural Teeth and Bio-Inspired Dental Materials". In *Comprehensive Structural Integrity*, 2nd Edition, Editors: Ferri Aliabadi and Wole Soboyejo, Elsevier Science, Amsterdam, Netherlands, 2023.
2. **J. Du**, X. Niu, W. Soboyejo, "Bio-inspired Design of Dental Functionally Graded Multilayer (FGM) Structures". In *Bioinspired Structures and Design*, Editors: Wole Soboyejo and Leo Daniel, Cambridge University Press, Cambridge, UK, 2020.
1. X. Niu, **J. Du**, "The Mechanics and Bio-inspired Design of Dental Materials". In *Frontiers in Bionic Mechanics*, Shanghai Jiaotong University Press, Shanghai, China, 2020. (in Chinese)

#### CONFERENCE PAPERS

4. A. Madra, K. Su\*, **J. Du**, M. Hillman, (2019). Multi-scale reduced-order model of composite microstructure based on X-ray micro-CT imaging, In: *14eme Collq. Natl. En Calc. Des Struct. (CSMA 2019)*, Giens (Var), France, 2019. (pp. 1–8).
3. Y. Zhou\*, C. Gong\*\*, M. Hossaini Zadeh, **J. Du**, (2019). 3D Contact and Strain in Alveolar Bone under Tooth/Implant Loading, In: *TMS (Ed.), TMS 2019 148th Annual Meeting & Exhibition Supplemental Proceedings*. The Minerals, Metals & Materials Series. (pp. 793–798). Cham: Springer.
2. Y. Zhou\*, M. A. Hernandez Lamberty\*\*, G. S. Lewis, A. D. Armstrong, **J. Du**, (2018). 3D Full-field Mechanical Measurement of Shoulder Bones under Implant Loading, In: *TMS (Ed.), TMS 2018 147th Annual Meeting &*

*Exhibition Supplemental Proceedings*. The Minerals, Metals & Materials Series. (pp. 287–293). Cham: Springer.

1. K. Su\*, L. Yuan, **J. Du**, (2017). Bone Remodeling Under Tooth Loading. In: *TMS (Ed.), TMS 2017 146th Annual Meeting & Exhibition Supplemental Proceedings*. The Minerals, Metals & Materials Series. (pp. 331–340). Cham: Springer.

### **INVITED TALKS AND SEMINARS**

29. "Mechanical behaviors of biological and engineered composites", The Minerals, Metals & Materials Society (TMS) 2024 Annual Meeting & Exhibition, March 3 – 7, 2024, Orlando, FL.
28. "Nanomechanical Mapping in Bone", The Minerals, Metals & Materials Society (TMS) 2024 Annual Meeting & Exhibition, March 3 – 7, 2024, Orlando, FL.
27. "Mechanical behaviors of biological hard tissues", School of Medicine Songjiang Institute, Shanghai Jiao Tong University, December 2023.
26. "Mechanical behaviors of biological and engineered composites", College of Engineering, Westlake University, December 2023.
25. "Mechanical behaviors of biological and engineered composites", Department of Mechanical Engineering, City University of Hong Kong, November 2023.
24. "Mechanical behaviors of biological and engineered composites", Department of Mechanical Engineering, Tsinghua University, October 2023.
23. "Mechanical behaviors of biological and engineered composites: Bone, teeth, implant and more", Department of Structural Engineering, the University of California San Diego, March 2023.
22. "A combined experimental and computational study of dental implant", The Minerals, Metals & Materials Society (TMS) 2023 Annual Meeting & Exhibition, March 19 – 23, 2023, San Diego, CA.
21. "Mechanical behaviors of biological and engineered composites: Bone, teeth, implant and more", Department of Mechanics and Aerospace Engineering, Southern University of Science and Technology, December 2022.
20. "Mechanical behaviors of bone across multiple length scales", Department of Mechanical and Energy Engineering, Southern University of Science and Technology, February 2022.
19. "The mechanical behaviors of bone across multiple length scales", Department of Mechanical Engineering, University of Connecticut, January 2022.
18. "Imaging-based experiments and modeling for bone-implant biomechanics", School of Biomedical Engineering, Science and Health Systems, Drexel University, January 2021.
17. "Imaging-based experiments and modeling for bone-implant biomechanics", Penn Center for Musculoskeletal Disorders, University of Pennsylvania, October 2020.
16. "Crack growth and fracture toughness in bio-inspired design of dental multilayers", Society of Photo-Optical Instrumentation Engineers (SPIE) Smart Structures + Nondestructive Evaluation Digital Forum, April 27-May 1, 2020.
15. "Bio-inspired design of functionally graded dental materials", Department of Biomedical Engineering, Pennsylvania State University, September 2017.
14. "Mechanics and Materials in Dental Research", Department of Mechanical Engineering, Temple University, February 2017.
13. "Mechanics and Materials in Dental Research", School of Mater Science and Engineering, University of Science and Technology Beijing, December 2016.

12. "Mechanics and Materials in Dental Research", Department of Mechanical Engineering, Tsinghua University, December 2016.
11. Bio-inspired design of functionally graded dental materials, Department of Engineering Science and Mechanics, Pennsylvania State University, October 2016.
10. "Mechanics and Materials in Dental Research", College of Engineering, Peking University, December 2016.
9. "Adhesion and Contact in Healthcare or Energy Related Materials and Structures", Department of Mechanical Engineering, Clemson University, March 2015.
8. "Adhesion and Contact in Healthcare or Energy Related Materials and Structures", Department of Mechanical and Nuclear Engineering, Pennsylvania State University, March 2015.
7. "Adhesion and Contact in Biomedical Materials and Structures", Department of Mechanical Engineering, University of Nevada, Reno, February 2015.
6. "Adhesion and Contact in Healthcare or Energy Related Materials and Structures", Department of Mechanical Engineering and Materials Science, Duke University, February 2015.
5. "Adhesion and Contact in Healthcare or Energy Related Materials and Structures", School of Mechanical Engineering, Purdue University, February 2015.
4. "Adhesion and Contact in Biomedical Materials and Structures", Department of Biomedical Engineering and Department of Mechanical & Industrial Engineering, New Jersey Institute of Technology, February 2015.
3. "Adhesion and Contact in Healthcare or Energy Related Materials and Structures", Department of Mechanical Engineering, University of Rochester, January 2015.
2. "Adhesion and Contact in Soft and Hard Materials: From Organic Electronics to Drug Eluting Stents", Department of Mechanical Engineering, University of South Florida, March 2012.
1. "Design of Dental Multilayer Structure", Structural Analysis and Plastic Forming Lab, Tsinghua University, December 2009.

### **RESEARCH SUPPORT**

- "CAREER: Structures and Properties of Bone at Multiple Length Scales", National Science Foundation, 2022-2026
- "Biomechanics Study Towards Patient-Specific Implants for Osteoarthritic Shoulders", Center for Biodevices, Penn State University, 2020-2022
- "An Integrated Computational-Experimental Approach to Three-dimensional Fracture in Polymer-Ceramic Composites", National Science Foundation, 2018-2022
- "Assessing the Performance of Additively Manufactured Variable Lattice Structures", Stryker Corporation, 2018-2019
- "Image-based Alveolar Bone Biomechanics Study: from Laboratory to Clinical Computed Tomography (CT)", National Institutes of Health, Clinical and Translational Science Institute of Penn State University, 2017-2018
- "3-Dimensional full-field mechanical properties and microstructure measurement of polymer-ceramic composites," ORAU (Oak Ridge Associated Universities), 2017- 2018.
- "Adhesion between a polymer and a transition metal oxide: Atomic- and macro- scales investigations," Material Computation Center, Penn State University. 2017-2018.

### **TEACHING EXPERIENCE**

ME 597 Mechanical Behaviors of Biological Tissues and Biomaterials (New Course Developed)      2019-present

ME 360 Mechanical Design, Penn State University	2017-present
ME 461 Finite Elements in Engineering, Penn State University	2015-present
Summer Course, Fatigue and Fracture of Materials, African University of Science and Technology, Nigeria	2011

### STUDENT SUPERVISING

#### **Completed Students:**

2024, Michael Shulock, Master, Placement: Kromek Group  
 2023, Chenyao Gao, Master  
 2020, Dr. Yuxiao Zhou, Ph.D., Placement: Assistant Professor at Texas A&M University  
 2020, Dr. Kangning Su, Ph.D., Placement: Align Technology  
 2019, Alyssa Minnier, Master, Placement: Voith Hydro  
 2019, Eleanor van der Ent, Master, Placement: VDE Machines  
 Supervised 25 undergraduate students for their research projects. 14 of them went on to pursue graduate studies.

#### **Current Graduate Students:**

Yichun (Leo) Tang, passed the Ph.D. comprehensive exam  
 Chengyao Gao, passed the Ph.D. comprehensive exam  
 Gongyuan Liu, passed the Ph.D. qualifying exam

### PROFESSIONAL SERVICES AND AFFILIATIONS

- **Professional Societies**
  - Chair, Biomaterials Committee, Minerals, Metals and Materials Society (TMS)
  - Member, Mechanical Behavior of Materials Committee, Minerals, Metals and Materials Society (TMS)
  - Member, Bone Mechanics Theme, Solids Technical Committee, Summer Biomechanics, Bioengineering, and Biotransport Conference (SB3C)
  - Membership: Materials Research Society (MRS), American Society of Mechanical Engineers (ASME), Society of Engineering Science (SES), American Association of Dental Research (AADR)
- **Editorial Experiences**
  - Associate Editor– *ASME Journal of Biomechanical Engineering*, 2023-present.
  - Editorial Board – *Frontiers in Bioengineering and Biotechnology*, *Frontiers in Molecular Biosciences* and *Frontiers in Materials*, 2020-present.
  - Editorial Board – *Scientific Reports*, 2019-2023.
  - Co-editor – Elsevier’s book series *on Comprehensive Structural Integrity*, Volume 9 “Bioengineering”, 2023.
  - Guest Editor – Special issue “Interactions between Biomaterials and Biological Tissues and Cells” for *JOM* journal, Part I in September 2022 and Part II in December 2022.
  - Guest Editor – Special issue “Additive Manufacturing for Medical Applications” for *JOM*, December 2021.
  - Guest Editor – Special issue “Multiscale Experiments and Modeling in Biomaterials and Biological Materials” for *JOM* journal, Part I in June 2021 and Part II in August 2021.
- **Grant Review**
  - National Science Foundation (NSF)
  - National Institutes of Health (NIH)
  - Oak Ridge Associated Universities (ORAU)
  - Research Grant Council (RGC) of Hong Kong, China

- Paris Region Fellowship Programme
- **Journal Review**

*AIP Advances, Annals of Biomedical Engineering, ASME Journal of Medical Devices, Bioactive Materials, Biomechanics and Modeling in Mechanobiology, BioMedical Engineering OnLine, Biomimetics, Composite Interfaces, Computers in Biology and Medicine, Dental Materials, Extreme Mechanics Letters, Frontiers in Bioengineering and Biotechnology, IEEE Transactions on Device and Materials Reliability, JOM, Journal of Applied Physics, Journal of Biomechanics, Journal of Materials Research and Technology, Journal of Polymer Research, Journal of the Mechanical Behavior of Biomedical Materials, Journal of the Royal Society Interface, Materials, PLOS ONE, Progress in Biophysics and Molecular Biology, Scientific Reports*
- **Conference Organizing**
  - Organizing Committee, Materials Science for Global Development - Health, Energy, and Environment, Honorary Symposium for Wole Soboyejo. TMS 2024
  - Organizer for the Advanced Biomaterials for Biomedical Implants Symposium. TMS 2023
  - Organizer, Session Chair and Judge for the Biological Materials Science Symposium. TMS 2018 to 2023
  - Reviewer, Solids Technical Committee, Summer Biomechanics, Bioengineering, and Biotransport Conference (SB3C), 2020 and 2021
  - Organizer and Session Chair for the Dental Biomechanics session at the 16th International Symposium on Computer Methods on Biomechanics and Biomedical Engineering, and 4th Conference on Imaging and Visualization (CMBBE), August 14-16, 2019, New York, NY.
  - Session Chair for the Educational Symposium at the 22nd International Congress of Dento-Maxillo-Facial Radiology and Joint Conference of the American Academy of Oral & Maxillofacial Radiology, August 22-25, 2019, Philadelphia, PA.
  - Judge for National Science Foundation (NSF) Poster Competitions at the ASME's International Mechanical Engineering Congress and Exposition (IMECE), November 11-14, 2018, Pittsburgh, PA.
  - Session Chair for the Mineralized Tissue II poster session at the 47th Annual Meeting of American Association for Dental Research (AADR), March 21-24, 2018, Fort Lauderdale, FL.