SUMIT GUPTA, Ph.D.

R&D Associate

Carbon and Composites Group, Chemical Science Division
Oak Ridge National Laboratory, Oak Ridge, TN 37831-6053
Email: guptas@ornl.gov, Phone: +1 (530) 601-8402

Corresponding Address

1 Bethel Valley Road
Building No: 5800, Office: A117
Oak Ridge, TN 37831-6053

EDUCATION

Jan 2016 to May 2020	**Ph.D.** in **Structural Engineering,** University of California San Diego, CA, U.S., GPA 3.94/4
Sep 2014 to Dec 2015	**M.S.** in **Civil and Environmental Engineering**, University of California Davis, CA, U.S., GPA 3.90/4
July 2010 to July 2014	**Bachelor of Engineering** in **Construction Engineering**, Jadavpur University (Summa Cum Laude), Kolkata, India, GPA 9.35/10

RESEARCH EXPERIENCES

1. **R&D Associate, *Oak Ridge National Laboratory, Carbon and Composites Group, Chemical Sciences Division* (March 2023 – Present)**

   Areas of Research
   - Designing composites with enhanced performance and embedded multifunctionalities
     - Data-driven multiscale modeling for efficient materials design
     - Composites' interphase design for amplified resiliency
     - Additive manufacturing of sustainable materials with advanced properties
     - Nanomechanical testing
     - Electromechanical characterization
   - Inverse finite element methods for spatiotemporal sensing

2. **Postdoctoral Research Associate at *Oak Ridge National Laboratory* (September 2020 – February 2023)**

   Areas of Research
   - Developed novel approaches for creating multifunctional materials capable of doing sensing, energy-harvesting, and self-healing with enhanced mechanical properties
   - Multiscale modeling to describe the electromechanical properties of the advanced composites
   - Multiphysics modeling of the composites

   Advisor: Dr. Christopher C. Bowland and Dr. Amit K. Naskar

3. **Graduate Student Researcher at *University of California San Diego* (January 2016 – May 2020)**

   Areas of Research
   - Developed nanocomposite thin films via scalable, low-cost, and bottom-up fabrication
   - Characterized their electromechanical properties
   - Developed finite element-based inverse tomographic algorithm and measurement strategies and coupled them with nanocomposites for spatial sensing and structural health monitoring
   - Large scale structural testing

   Dissertation: *Multifunctional Nanocomposite-Enabled Tomographic Imaging for Structural and Human Health Monitoring*

   Advisor: Dr. Kenneth J. Loh

3. **Graduate Student Researcher at *University of California Davis* (September 2014 – December 2015)**

Areas of Research
- Developed self-sensing concrete by nanoengineering the cement-aggregate interfaces with a carbon nanotube-based thin film
- Characterized their electrical and mechanical properties
- Developed electrical impedance tomography algorithm for distributed damage detection

Advisor: Dr. Kenneth J. Loh

4. **Undergraduate Student at *Jadavpur University* (July 2012 – July 2014)**

Areas of Research
- Developed nonlinear optimization algorithm for damage detection from limited noisy static measurements

Advisor: Dr. Debasish Bandyopadhyay

5. **Summer Research Fellow at *Indian Institute of Technology* (May 2013 – July 2013)**

Areas of Research
- Developed algorithm for structural health monitoring in truss structures from limited dynamic responses

Advisor: Dr. Anjan Dutta

Awards and Honors

2021 Finalist of Your Science in a Nutshell Lightning Talk Competition, Oak Ridge National Laboratory

2019 University of California, San Diego, Department of Structural Engineering – Dissertation Fellowship

2019 University of California, San Diego-Jacobs Graduate Council Award

2019 University of California, San Diego – Outstanding Graduate Peer Mentor Award

2019 SPIE Optics and Photonics Education Scholarship

2015 Department of Civil and Environmental Engineering Graduate Fellowship, University of California, Davis

2014 University Medal, Jadavpur University, Kolkata, India

2014 Prabhatkumar-Upendra Memorial Gold-Centered Silver Medal, Jadavpur University, Kolkata, India

2013 Mira Rani Mitra Memorial Award (Gold Medal), Jadavpur University, Kolkata, India

2013 Summer Research Fellowship, IIT Guwahati

2013 Indubhushan Putatunda Memorial Award (Gold Medal), Jadavpur University, Kolkata, India

Best Paper Awards

2021 Structural Health Monitoring/ Nondestructive Evaluation Technical Committee Best Journal Paper Award

2019 ASME Structural Health Monitoring/ Nondestructive Evaluation Technical Committee Best Journal Paper Award (Runner up)

2018 Institute of Engineering in Medicine (IEM), 10th Anniversary Symposium Best Paper Award

2016 ASME Smart Materials, Adaptive Structures and Intelligent Systems (SMASIS) Best Symposium Paper in Structural Health Monitoring

Travel Grants

2019 SPIE Student Travel Grant, SPIE Smart Structures + Nondestructive Evaluation

2019 University of California, San Diego – Student Travel Award

Journal Publications

1. Z. Yu, N. Kanbargi, **S. Gupta**, Y. Shin, Y. Qiao, D. Merkel, C. C. Bowland, N. Labbe, K. Simmons, and A. K. Naskar, 2023 "Toughened Lignin-based Thermoplastic Rubber Adhesive for Metal-to-Metal Joining," (under review)

2. N. Kanbargi**,** D. Hoskins, **S. Gupta**, Z. Yu, Y. Shin, Y. Qiao, D. Merkel, C. C. Bowland, N. Labbe, K. Simmons, and A. K. Naskar, 2023, "A Renewable Lignin-based Thermoplastic Adhesive for Steel Joining," *European Polymer Journal* (11981), Elsevier

3. **S. Gupta**, A. K. Naskar, and C. C. Bowland, 2022, "An Engineered Multifunctional Composites for Passive Sensing, Energy Harvesting, and *In Situ* Damage Identification with Enhanced Mechanical Performance," *Advanced Materials Technologies* (2101549), Willey

4. **S. Gupta**, Y. Lin, H-J. Lee, R. Wu, J. P. Lynch, and K. J. Loh, 2021, "Self-Sensing Concrete Pavements and Electrical Impedance Tomography for *In Situ* Crack Mapping," *Journal of Concrete and Cement Composites* (0958-9465), Elsevier

5. **S. Gupta**, H. (Eric) Kim, H. Kim, and K. J. Loh, 2020, "Planar Array Capacitive Imaging for Subsurface Damage Detection in Carbon Fiber Reinforced Polymer Composites," *Measurement Science and Technology* (1361 – 650), IOP

6. **S. Gupta**, K. J. Loh, and A. Pedtke, 2020, "Sensing and Actuation Technologies for Smart Socket Prostheses," *Biomedical Engineering Letters* (2093-9868)*,* Springer

7. **S. Gupta**, G. Vella, I-N Yu, C-H Loh, W-H Chiang, and K. J. Loh, 2019, "Graphene Sensing Meshes for Densely Distributed Strain Field Monitoring," *Structural Health Monitoring* (1475-9217), Sage

8. C. Dhong, R. Miller, N. B. Root, **S. Gupta**, L. V. Kayser, C. W. Carpenter, K. J. Loh, V. S. Ramachandran, and D. J. Lipomi, 2019, "Role of Indentation Depth and Contact Area on Human Perception of Softness for Haptic Interfaces," *Science Advances* (2375-2548), AAAS

9. **S. Gupta**, H-J. Lee, K. J. Loh, M. D. Todd, J. Reed, and A. D. Barnett, 2018, "Noncontact Strain Monitoring of Osseointegrated Prostheses," *Sensors* (1424-8220), MDPI

10. **S. Gupta** and K. J. Loh, 2018, "Monitoring Osseointegrated Prosthesis Loosening and Fracture using Electrical Capacitance Tomography," *Biomedical Engineering Letters* (2093-9868), Springer

11. G. Fan, **S. Gupta**, and K. J. Loh, 2018, "Curing and Subsurface Damage Monitoring of Epoxy-based Composites," *Structural Health Monitoring* (1475-9217), Sage

12. **S. Gupta**, G. Fan, and K. J. Loh, 2017, "Noninvasive Monitoring of Epoxy Curing," *IEEE Sensors Letters* (2475-1472), IEEE

13. **S. Gupta** and K. J. Loh, 2017, "Noncontact Electrical Permittivity Mapping and pH-Sensitive Thin Films for Osseointegrated Prosthesis and Infection Monitoring," *IEEE Transactions on Medical Imaging* (0278-0062), IEEE

14. **S. Gupta** and K. J. Loh, 2017, "Non-Contact Tomographic Imaging and Nanocomposite Films for Monitoring Human-Prosthesis Interfaces," *Procedia Engineering* (1877-7058), Elsevier

15. L. Wang, **S. Gupta**, K. J. Loh, and H. S. Koo, 2016, "Distributed Pressure Sensing using Carbon Nanotube Fabrics," *IEEE Sensors Letters* (1530-437X), IEEE

16. **S. Gupta**, J. Gonzalez, and K. J. Loh, 2016, "Self-Sensing Concrete Enabled by Nano-Engineered Cement Aggregate Interfaces," *Structural Health Monitoring* (1475-9217), Sage

17. J. G. Gonzalez, **S. Gupta**, and K. J. Loh, 2016, "Multifunctional Cement Composites Enhanced with Carbon Nanotube Thin Film Interfaces," *Proceedings of the IEEE* (0018-0219), IEEE

CONFERENCE PUBLICATIONS

1. **S. Gupta**, A. K. Naskar, and C. C. Bowland, "Multifunctional Fiber-Reinforced Composites for Passive Sensing and Energy Harvesting with Enhanced Mechanical Performance," Proceedings of SPIE-29th Annual Symposium on Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring, March 6-9, 2022 (Online)

2. C. C. Bowland, **S. Gupta**, S. M. Rankin, and A. K. Naskar, "Passive Sensing of a Microparticle Modified Hybrid, Fiber-Reinforced Composites," Proceedings of SPIE-28th Annual Symposium on Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring, March 22-24, 2021 (Online)

3. **S. Gupta**, H. (Eric) Kim, H-J. Lee, H. Kim, and K. J. Loh, "Planar Array Capacitive Imaging for Subsurface Composite Damage Detection," Proceedings of the 12th International Workshop on Structural Health Monitoring, Stanford, CA, September 10-12, 2019

4. Y. Lin, **S. Gupta**, A. Pedtke, and K. J. Loh, "Monitoring Pressure Distributions at Human-Socket Prostheses Interfaces using Graphene-Fabric Sensors," Proceedings of the 12th International Workshop on Structural Health Monitoring, Stanford, CA, September 10-12, 2019

5. **S. Gupta**, G. Vella, W-H Chiang, and K. J. Loh, "Graphene Sensing Mesh for Distributed Strain Field Monitoring," Proceedings of the 14th International Workshop on Advanced Smart Materials and Smart Structures Technology (ANCRiSST 2019), Rome, Italy, July 18-21, 2019

6. **S. Gupta**, T. Zhang, and K. J. Loh, "Enhancing the Imaging Performance of Electrical Capacitance Tomography for Monitoring Osseointegrated Prostheses," Proceedings of SPIE-26th Annual Symposium on Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring, Denver, CO, March 4-8, 2019

7. G. Vella, **S. Gupta**, and K. J. Loh, "Large-area Distributed Strain Monitoring using Patterned Nanocomposite Sensing Meshes," Proceedings of SPIE-26th Annual Symposium on Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring, Denver, CO, March 4-8, 2019

8. S. Shivakumar, **S. Gupta**, X. Qiu, and K. J. Loh "Subsurface Concrete Rebar Corrosion Damage Localization using Nanocomposite Coatings and Noncontact Tomography," Sixth International Symposium on Nanotechnology in Construction, Sha Tin, Hong Kong, December 2-4, 2018

9. **S. Gupta** and K. J. Loh, "A Planar Array Capacitive Imaging System for Detecting Damage in Composite Structures," Proceedings of SPIE-25th Annual Symposium on Smart Structures and Materials and Nondestructive Evaluation and Health Monitoring, Denver, CO, March 4-8, 2018

10. **S. Gupta**, G. Fan, and K. J. Loh, "Noncontact Epoxy Curing Monitoring and Subsurface Damage Detection," Proceedings of the 11th International Workshop on Structural Health Monitoring, Stanford, CA, September 11-13, 2017

11. **S. Gupta** and K. J. Loh, "Noncontact and Noninvasive Strain Monitoring of Osseointegrated Prostheses," Proceedings of the 11th International Workshop on Structural Health Monitoring, Stanford, CA, September 11-13, 2017

12. **S. Gupta** and K. J. Loh, "Noncontact Tomography and a pH-Sensitive Nanocomposite for Monitoring Osseointegrated Prosthesis Interfaces," Proceedings of SPIE–23rd Annual Symposium on Smart Structures and Materials and Nondestructive Evaluation and Health Monitoring, Portland, OR, March 25-29, 2017

13. **S. Gupta** and K. J. Loh, "Noncontact Tomographic Imaging and Nanocomposite Films for Monitoring Human-Prosthesis Interfaces," Proceedings of the 6th Asia-Pacific Workshop on Structural Health Monitoring, Hobart, Tasmania, Australia, December 7-9, 2016

14. **S. Gupta** and K. J. Loh, "Numerical Simulations of Railroad Track Damage Characterization using Non-Contact Tomography," Proceedings of the First International Workshop on Structural Health Monitoring for Railway Systems, Qingdao, China, October 12-14, 2016

15. **S. Gupta** and K. J. Loh, "Characterization and Localization of Sub-Surface Structural Feature using Non-Contact Tomography," Proceedings of the ASME 2016 Smart Materials, Adaptive Structures, and Intelligent Systems (SMASIS) Conference, Stowe, VT, September 28-30, 2016

16. L. Wang, **S. Gupta**, K. J. Loh, and H. S. Koo, "Nanocomposite Fabric Sensors for Monitoring Inflatable and Deployable Space Structures," Proceedings of the ASME 2016 Smart Materials, Adaptive Structures, and Intelligent Systems (SMASIS) Conference, Stowe, VT, September 28-30, 2016

17. J. Gonzalez, **S. Gupta**, K. J. Loh, R. Wu, and N. Garg, "Nano-Engineered Cementitious Composites and Electrical Impedance Tomography for Spatial Damage Detection," Proceedings of the Transportation Research Board 95th Annual Meeting, Washington, DC, January 10-14, 2016

18. **S. Gupta**, J. Gonzalez, and K. J. Loh, "Damage Detection using Smart Concrete Engineered with Nanocomposite Cement-Aggregate Interfaces," Proceedings of the 10th International Workshop on Structural Health Monitoring, Stanford, CA, September 1-3, 2015

19. **S. Gupta** and A. Dutta, "Comparative Study of Damage Identification Techniques Using Limited Static and Dynamic Responses," Proceedings of the International Conference on Computer Aided Engineering (CAE-2013), Indian Institute of Technology, Chennai, India, December 19-21, 2013

20. **S. Gupta**, S. Bagchi, and J. S. Ali, "Damage Assessment of Structure from Limited Static Strain Measurement," Proceedings of the International Conference on Computer Aided Engineering (CAE-2013), Indian Institute of Technology, Chennai, India, December 19-21, 2013

21. S. Bagchi, **S. Gupta**, and J. S. Ali, "Finite Element Model Updating using Frequency Response Function Data," Proceedings of the International Conference on Computer Aided Engineering (CAE-2013), Indian Institute of Technology, Chennai, India, December 19-21, 2013

22. J. S. Ali and **S. Gupta**, "Spectral Strain Energy based Approach for System Identification in Structures," Proceedings of the International Conference on Structural Engineering and Mechanics (ICSEM), National Institute of Technology, Rourkela, India, December 20-22, 2013

23. J. S. Ali, **S. Gupta**, and S. Bagchi, "Damage Identification of Structure from Limited Static Test Data Based on Inverse Static Approach," Proceedings of the Indian Conference on Applied Mechanics (INCAM), Indian Institute of Technology, Chennai, India, July 4-6, 2013

24. J. S. Ali, S. Bagchi, and **S. Gupta**, "Parameter Identification of Structure from Static Displacement Measurement," Proceedings of the Indian Conference on Applied Mechanics (INCAM), Indian Institute of Technology, Chennai, India, July 4-6, 2013

25. J. S. Ali, S. Bagchi, and **S. Gupta**, "A Numerical Modeling of Externally Pre-stressed Concrete Beam," Proceedings of the International Conference on Innovations in Civil Engineering, Ernakulam, India, May 8-11, 2013

26. D. Bandyopadhyay, J. S. Ali, S. Sengupta, and **S. Gupta**, "Computational Study of Damaged Real Life Stone Masonry Structure under Earthquake Load for Effective Retrofit", Proceedings of the International Congress on Computational Mechanics and Simulation (ICCMS), Indian Institute of Technology, Hyderabad, India, December 9-12, 2012

27. D. Bandyopadhyay, J. S. Ali, S. Sengupta, and **S. Gupta**, "Seismic Damage Evaluation of Age-Old Masonry Building Based on Visual Inspection and Numerical Analysis," Proceedings of the International Conference on Earthquake Resistant Construction Practice (ICEQRCP), Chennai, India, December 9-12, 2012

BOOK CHAPTERS

1. **S. Gupta**, D. Ryu, and K. J. Loh, "Multifunctional Materials and Sensors," Sensor Technologies for Civil Infrastructures, Volume 2: Applications in Structural Health monitoring, Elsevier, 2020

2. B. M. Lee, **S. Gupta**, K. J. Loh, and S. Nagarajaiah, "Strain Sensing and Structural Health Monitoring using Nanofilms and Nanocomposites," Innovative Developments of Advanced Multifunctional Nanocomposites in Civil and Structural Engineering, Woodhead: Kidlington, United Kingdom, 2016

Poster Presentations

1. **S. Gupta** and K. J. Loh, "Noncontact Imaging for Monitoring Osseointegrated Prostheses (MOIP)," 10th Anniversary Symposium of Institute of Engineering Medicine (IEM), La Jolla, CA, November 1, 2018

2. **S. Gupta**, G. Fan, S. Shivakumar, and K. J. Loh, "Noncontact Structural Damage Detection and Human Health Monitoring," San Diego Innovation Showcase, La Jolla, CA, October 25, 2017

3. **S. Gupta** and K. J. Loh, "Non-Contact Tomography for Structural Monitoring and Biological Applications," Structural Engineering Research Showcase, La Jolla, CA, February 23, 2017

4. **S. Gupta** and K. J. Loh, "Damage Visualization using Nano-Engineered Structural Materials and Tomographic Methods," Research Expo, University of California, San Diego, La Jolla, CA, March 4, 2016

5. **S. Gupta**, J. G. Gonzalez, K. J. Loh, R. Wu, and N. Garg, "Nano-Engineered Cementitious Composites and Electrical Impedance Tomography for Spatial Damage Detection," Transportation Research Board 95th Annual Meeting, Washington, DC, January 10-16, 2016

Patents

1. C. C. Bowland, A. K. Naskar, and **S. Gupta**, "Polyacrylonitrile Fiber Reinforcement for Polymers and Fiber-Reinforced Composites," Provisional U.S. Invention Disclosure ID: 202205176, Filed on August 16, 2022

2. C. C. Bowland, A. K. Naskar, and **S. Gupta**, "Passive Sensing Fiber-Reinforced Composite," Provisional U.S. Patent, ID: 4810, Docket No: 202104810, DOE-S No: S-162,222, Filed on March 22, 2021

3. K. J. Loh and **S. Gupta**, "Non-Contact Tomographic Imaging and Thin Film Sensors for Monitoring Prosthesis and Infection," U.S. Patent 2018/0220920 A1. Issued August 9, 2018

4. K. J. Loh, L. Wang, H.S. Koo, and **S. Gupta**, "Multifunctional and Distributed Sensing Fabrics," Provisional U.S. Patent 62/299,344. Filed February 24, 2016

Invited Talks

1. "Model-enabled Design of Sustainable and Resilient Infrastructure Materials", Chemical Sciences Division, Oak Ridge National Laboratory, January 10, 2023
2. "Autonomous Materials Development for Resilient Structural Systems", Department of Civil and Environmental Engineering, University of Vermont, April 7, 2022
3. "Development of Multifunctional Materials for Resilient Structural Systems", 2022 Spring Mechanical Engineering Graduate-Faculty Seminar (MENG 585), New Mexico Tech, March 9, 2022 (Online)
4. "Multifunctional Materials for Structural and Human Health Monitoring", Carbon and Composites Group, Oak Ridge National Laboratory, TN, September 14, 2020 (Online)
5. "Inverse Tomographic Algorithm and Measurement Strategies for Distributed Sensing", Acellent Technologies, Palo Alto, CA, June 6, 2020 (Online)
6. "Multifunctional Material and Tomographic Methods for Structural and Human Health Monitoring", Department of Civil Engineering, University of California, Irvine, CA, March 6, 2020
7. "Densely Distributed Structural Sensing using Multifunctional Materials and Tomographic Algorithm and Measurement Strategies", Department of Mechanical and Aerospace Engineering, Arizona State University, AZ, January 28, 2020 (Online)
8. "Materials-Based Structural and Human Health Monitoring", Department of Structural Engineering, University of California San Diego, CA, November 13, 2019

9. “Multifunctional Material and Tomographic Methods for Damage Detection in Concrete”, Department of Construction Engineering, Jadavpur University, Kolkata, India, March 24, 2018

10. “Damage Detection and Localization using Multifunctional Cement Composites and Electrical Impedance Tomography”, 7th International Conference on Experimental Vibration Analysis for Civil Engineering Structures (EVACES), San Diego, CA, July 12, 2017

Live Hardware Demonstrations at Conferences and Expositions

1. Warfighter Health Imaging: Advanced, Lightweight, Electrical, Real-Time, Tomography (HI-ALERT), Rim of the Pacific (RIMPAC) maneuvers, Honolulu, Hawaii, June 27-30, 2018

2. Rapid and Noncontact Subsurface Structural Damage Detection System, International Workshop on Structural Health Monitoring (IWSHM) SHM-in-Action, Stanford, CA, September 13, 2017

3. Monitoring Osseointegrated Prostheses: Noncontact Infection & Loosening Imaging, Military Health System Research Symposium (MHSRS), Kissimmee, FL, August 27-30, 2017

4. Monitoring Osseointegrated Prostheses: Noncontact Infection & Loosening Imaging, Naval Future Force Science & Technology (S&T) Expo, Washington, DC, July 20-21, 2017

Mentorship Activities

ORNL Tech Talk Coach for Graduate Students	Mr. Juan Francisco Ortiz (2021 ORNL GEM Fellow, Industrial Eng., University of Houston), Mr. Daniel Cruz (2021 ORNL GEM Fellow, Comp. Sc., University of Texas, El Paso), Mr. Xavier Perez (2021 ORNL GEM Fellow, Elec. Eng., UC San Diego), Ms. Aaleyah Lewis (2021 ORNL GEM Fellow, Comp. Sc., UW Seattle)
Graduate Students	Mr. Gaochen Fan (MS in Material Science and Engineering), Mr. Sashank Shivakumar (MS in Material Science and Engineering), Mr. Gianmarco Vella (MS in Material Science and Engineering), Mr. Xi Qiu (MS in Material Science and Engineering), Ms. Yumeng Ma (MS in Material Science and Engineering), Ms. Yening Shu (MS in Structural Engineering), Ms. Tianjiao Zhang (MS in Material Science and Engineering, Ms. Yun An Lin (MS in Structural Engineering)
Undergraduate Students	Mr. Bin Feng (Civil Eng., Zhejiang Univ., 2015), Ms. An Zheng (High school student, 2015), Ms. Sayuri Yano (CETyS Ensenada, 2016) [UC San Diego ENLACE], Ms. Brianna Llamas (Southwest High School, 2016) [UC San Diego ENLACE], Mr. Uendel Andrade Rocha (Civil Eng., Centro Universitário da FEI, Brazil, 2016) [Brazilian Scientific Mobility Program], Mr. Jonathan Torres (Civil Eng., University of Puerto Rico, 2016) [UC San Diego STARS], Mr. Ian Yasui (Mechanical Eng., Chico State Univ., 2016), Mr. Andre Macedo de Abreu Santa Rosa (Materials Sci., Federal University at ABC, Brazil, 2016) [Brazilian Scientific Mobility Program], Mr. Aaron Vongsa (Structural Eng., UC San Diego, 2016 – 2017), Ms. Christina Ngo (Structural Eng., UC San Diego, 2016 – 2017), Ms. Khyraa Mitchell (Structural Eng., UC San Diego, 2016 – 2017), Mr. Bhawesh Thapa (Howard University, 2017) [UC San Diego STARS], Mr. Arash Rohani (Structural Eng., UC San Diego, 2016 – 2018), Ms. Megan Boelter (Structural Eng., UC San Diego, 2017 – 2018), Mr. Garrette Grijalva (Structural Eng., UC San Diego, 2017 – 2018), Mr. Chunxiao Ning (Dalian University of Technology, 2018), Yinsheng Li (Dalian University of Technology, 2018), Ms. Danlin Jiang (Structural Eng., UC San Diego, 2019 – present), Ms. Nada Jamalallail (UC Berkley, 2019), Mr. Mohammed Almudhry (UC Irvine, 2019), Mr. Austin Dunbar (Embry-Riddle Aeronautical University, NSF REU Program, 2019), Ms. Nicole Hurtado-Savin (San Diego State University, NSF REU Program, 2019), Mr. Chi-Lin Chen (National Taiwan University, International Summer Research Program, 2019), Mr. Dante Khandelwala (Mechanical and Aerospace Eng., UC San Diego, 2019 – 2020)

Teaching Appointments

Instructor	• Summer 2020, Mechanics III: Vibration (SE 101C), Department of Structural Engineering, University of California, San Diego

Teaching Assistant

- Spring 2020, Structural System Testing and Model Correlation (SE 168/268), Department of Structural Engineering, University of California, San Diego
- Spring 2020, Dynamics (SE 101B), Department of Structural Engineering, University of California, San Diego
- Fall 2018, Sensors and Data Acquisitions (SE 164/ 264), Department of Structural Engineering, University of California, San Diego
- Fall 2017, Sensors and Data Acquisitions (SE 164/ 264), Department of Structural Engineering, University of California, San Diego
- Fall 2016, Mechanics III: Vibration (SE 101C), Department of Structural Engineering, University of California, San Diego

Scientific and Professional Society Memberships

Since February 2018	The International Society for Optical Engineering (SPIE)
Since March 2016	American Society of Mechanical Engineers (ASME)
Since March 2016	American Society of Civil Engineers (ASCE)
Since March 2016	Institute of Electrical and Electronics Engineers (IEEE)
Since March 2015	Concrete Reinforcing Steel Institute (CRSI)
Since August 2013	Indian Concrete Institute (ICI)

Journal Manuscripts Peer Review

Reviewer:	Cement and Concrete Composites
Reviewer:	Structural Health Monitoring
Reviewer:	Sensors and Actuators: A. Physical
Reviewer:	Measurement Science and Technology
Reviewer:	Journal of Intelligent Material System and Technology
Reviewer:	Measurement
Reviewer:	Construction and Building Materials
Reviewer:	Advances in Structural Engineering
Reviewer:	Materials