Ishraq Shabib

Associate Professor, Mechanical Engineering
School of Engineering and Technology
Central Michigan University, Mt. Pleasant, MI 48859
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email: shabi1i@cmich.edu

Education:

Ph.D. (2009), Mechanical Engineering, Carleton University, Canada.
Thesis title: "Understanding the mechanical properties of nanotwinned Cu using Molecular Dynamics simulation"
Thesis Supervisor: Prof. Ron Miller
M.A.Sc. (2005), Mechanical Engineering, Carleton University, Canada.
Thesis title: "Multiscale modeling of the indentation of Ni-Al nanolayers".
Thesis Supervisor: Prof. Ron Miller
B.Sc. (2001), Mechanical Engineering, BUET, Bangladesh.

Research Interests:

Deformation behavior and properties of nanomaterials, irradiation induced damage of nuclear materials, atomistic and multi-scale modeling of material defects, multifunctional thin-films, additive manufacturing.

Appointments:

Associate Professor (Fall 2018 – Present), School of Engineering and Technology, Central Michigan University, Mt. Pleasant, MI, 48859 USA
Assistant Professor (August 2013 – Spring 2018), School of Engineering and Technology, Central Michigan University, Mt. Pleasant, MI, 48859 USA
Clinical Assistant Professor (September 2011–August 2013), Department of Mechanical Engineering, University of Texas at El Paso, El Paso, TX, USA
Visiting Fellow (December 2009–August 2011), CANMET-MTL, NRCan, Hamilton, ON, Canada
Research Assistant (September 2003- August 2009), Department of Mechanical Engineering, Carleton University, Ottawa, ON, Canada
Teaching Assistant (September 2003- August 2009), Department of Mechanical Engineering, Carleton University, Ottawa, ON, Canada
Visiting Graduate Student (March 2005 - August 2005), NRC-Institute of Aerospace Research, Ottawa, ON, Canada
Lecturer (August 2001 – August 2003), BUET, Dhaka, Bangladesh

Journal Publications (14 after joining CMU):

1. A. Jabed, M. M. Khan, J. Camiller, M. Greenlee-Wacker, W. Haider, **I. Shabib**, Property optimization of Zr-Ti-X (X= Ag, Al) metallic glass via combinatorial development aimed at prospective biomedical application, *Surface Coatings and Technology*:372 (2019) pp. 278-287. (**impact factor 3.192**)
2. A. Jabed, M. M. Khan, Zia ur Rahman, W. Haider, **I. Shabib**, Combinatorial development and in-vitro characterization of the quaternary Zr-Ti-X-Y (X-Y=Cu-Ag/Co-Ni) metallic glass for prospective bio-implants, Accepted for publication at Advanced Engineering materials, 2019. (**impact factor 2.906**)
3. U. Riaz, **I. Shabib**, W. Haider, "The current trends of Mg alloys in biomedical applications – A review", *Journal of Biomedical Materials Research Part B: Applied Biomaterials*: 107, 6 (2019), pp. 1970-1996.

4. M. Khan, **I. Shabib**, W. Haider**,** A combinatorially developed Zr-Ti-Fe-Al metallic glass with outstanding corrosion resistance for implantable devices, *Scripta Materialia*, Volume 162 (2019) pp. 223-229. (**impact factor 3.747**)
5. U. Riaz, L. Rakesh, **I. Shabib**, W. Haider, Effect of dissolution of magnesium alloy AZ31 on the rheological properties of Phosphate Buffer Saline, J. Mech. Behav. Biomed mater. 85, 201-208, DOI: 10.1016/j.jmbbm.2018.06.002 (**Impact factor 3.239**)
6. U. Riaz, Z. Ur Rahman, H. Asgar, U. Shah, **I. Shabib**, W. Haider, An insight into the effect of buffer layer on the electrochemical performance of MgF_2 coated magnesium alloy ZK60, Surface and Coating Technology, 344, 514-521, 2018. DOI: 10.1016/j.surfcoat.2018.03.081 **(Impact factor 2.906)**
7. M. Abu-Shams, **I. Shabib**, Primary radiation damage of Fe-10%Cr models under uniaxial, biaxial, and hydrostatic pressure using MD Simulation, J. of Nuclear Material, 509, 335-342, 2018 DOI: 10.1016/j.jnucmat.2018.07.016 **(Impact factor 2.453)**
8. Quazi Sultana, Md Hassan, Sakib Iqbal, **Ishraq Shabib**, Aniruddha Mitra, Mujibur Khan, Investigation of Mechanical Properties and Morphology of Multi walled Carbon Nanotubes (MWCNTs) Reinforced Cellulose Acetate *Fibers*. 5(42), 2017, doi:10.3390/fib5040042
9. Mohammad Abu-Shams, **Ishraq Shabib**, Effects of Voids on Nanoindentation Response of Fe-10%Cr alloys using MD Simulation." *Materials Express*. 7 (5), 329-340, 2017. doi:10.1166/mex.2017.1384. **(Impact Factor: 2.062)**
10. U.H. Shah, Z. Rahman, K.M. Deen, H. Asgar, **I. Shabib**, W. Haider, Investigation of the formation mechanism of titanium oxide nanotubes and its electrochemical evaluation, *J. Appl. Electrochem*. 47(10), 1147-1159, 2017. doi: 10.1007/s10800-017-1102-1. **(Impact Factor: 2.262)**
11. Mohammad Abu-Shams, Waseem Haider, and **Ishraq Shabib**, "Evolution of displacement cascades in Fe-Cr structures with different [001] tilt grain boundaries". *Radiation Effects and Defects in Solids*. 172 (5-6), 364-378, 2017. DOI:10.1080/10420150.2017.1278760 **(Impact Factor: 0.526)**
12. Nathaniel Everest, Mujibur R Khan, and **Ishraq Shabib**, "Effects of Grain Boundary and Temperature on Thermal conductivity of Fe-10%Cr Alloys with [001] Tilt Boundaries: An Atomistic Study", *Journal of Computational and Theoretical Nanoscience*, 14(4), 1758-1765(8), 2017. DOI: https://doi.org/10.1166/jctn.2017.6500 **(SJR H index: 38)**
13. Zia ur Rahman, **Ishraq Shabib**, Waseem Haider, "Surface characterization and cytotoxicity analysis of plasma sprayed coatings on titanium alloys. *Materials Science and Engineering C*, 67, 675-683, 2016. DOI: http://dx.doi.org/10.1016/j.msec.2016.05.070 **(Impact Factor: 5.08)**
14. **Ishraq Shabib**, Mohammad Abu-Shams, and Mujibur Rahman Khan. "Nanoindentation response of Fe-10%Cr bi-crystal structures with Σ5<001> and Σ3<110>tilt boundaries: An atomistic study". International Journal of Computational Materials Science and Engineering, *Int. J. Comp. Mat. Sci. Eng.* 04 (4), 1550022, 2015. DOI: http://dx.doi.org/10.1142/S2047684115500220
15. M. R. Khan, H. Mahfuz , A. Adnan, **I. Shabib**, and T. Leventouri, Elastic Properties of UHMWPE-SWCNT Nanocomposites' Fiber: An Experimental, Theoretic, and Molecular Dynamics Evaluation, *Journal of Materials Engineering and Performance*, 2012, DOI: 10.1007/s11665-013-0471-9.
16. **I. Shabib**, R. E. Miller, "Deformation characteristics and stress-strain response of nanotwinned Cu*", Acta Materialia*, 57: 4364–4373, 2009. **(Impact Factor: 5.30)**
17. **I. Shabib**, R. E. Miller, "Molecular Dynamics Study of Twin Width, Grain Size, and Temperature Effects on the Toughness of Nanotwinned Copper", *Modeling and Simulation of Materials Science and Engineering*, 17, 055009, 2009. **(Impact Factor: 1.89)**

Under review

18. A. Jabed, W. Haider, I. Shabib, "Distinctive features and fabrication routes of metallic glass systems aimed for different engineering application".

Conference Publications and Presentations (6 after joining CMU):

1. Kumar Yelamarthi, Brian P DeJong, Tolga Kaya, Ahmed Abdelgawad and **Ishraq Shabib**. "Research Experiences for School Teachers and Community College Instructors in Smart-Vehicles: Initial Implementation and Assessment", 2017 ASEE Annual Conference and Exposition. Columbus, OH, June 2017.
2. Mohammad Abu-Shams and **Ishraq Shabib**, "Irradiation induced damage of Fe-10%Cr under uniaxial pressure." Published in vol: 9, Mechanics of Solids, Structures and Fluids, proceeding of the ASME 2015 International Mechanical Engineering Congress & Exposition held on November 13-19, 2015 at Houston, TX. (oral presentation by M. Abu-Shams).
3. Remington Wright, James Deacon, Adam Lenk, Michael Prekop, Taylor Franzen, and **Ishraq Shabib**, "Portable Assisted Mobility Device", published in the proceedings of ASEE-NCS conference held at University of Cincinnati in April 2015. (oral presentation by R. Wright)
4. Aaron Johnson, Julie Alexander, Libby Salmeto, and **Ishraq Shabib**, "Understanding Materials behavior at the nanoscale using atomistic simulations," published in the proceedings of ASEE-NCS conference held at University of Cincinnati in April 2015. (oral presentation by A. Johnson)
5. **Ishraq Shabib**, Mohammad Abu-Shams, and Mujibur Rahman Khan, "Lattice thermal conductivity of Fe-Cr alloys with <001> tilt Boundaries: an atomistic study," published in the proceedings of the ASME IMECE 2014 conference, November 14-20, 2014 Montreal, (Oral Presentation by I. Shabib).
6. Mohammad Abu-Shams, and **Ishraq Shabib, "**Deformation characteristics and stress-strain response of Fe-Cr structure with <001> tilt grain boundary using MD simulation", Published in the proceeding of 17th U.S. National Congress on Theoretical and Applied Mechanics,15-20 June 2014, Michigan State University, MI. (Oral Presentation by M. Abu-Shams)
7. K. P. Boyle and **I. Shabib**, "Temperature Dependence of Defect Production Efficiency in α-Fe", published in the 5th International Symposium on Supercritical Water-Cooled Reactors Proceedings, March 13-16, 2011. Vancouver, Canada. (Oral presentation by K.P. Boyle)
8. **I. Shabib**, R. E. Miller, "Deformation characteristics and stress-strain response of copper nanotwinned structure", published in the CSME (The Canadian Society for Mechanical Engineering) Forum 2008 Conference proceedings, June5-June8, 2008, Ottawa, ON **[Student paper award]** (Oral Presentation by I. Shabib).
9. **I. Shabib**, K. Chen, R. Miller, and L.R. Zhao, "Multi-scale Modeling of the Indentation of Nickel-Aluminum nano-layers", published in the 20th CANCAM (*Canadian Congress of Applied Mechanics*) conference proceedings, pp. 131-132, May 30-June2, 2005, Montreal, QC, (Oral Presentation by I. Shabib).

Published Abstract & Presentations (5 after joining CMU):

1. Akib Jabed, **Ishraq Shabib**, Waseem Haider, Characterization and properties study of Cu and Ag inclusion in Zr-Ti matrix for biomedical application, Abstract accepted for presentation at 2019 TMS Annual Meeting & Exhibition, Houston, TX.
2. Akib Jabed, Waseem Haider, **Ishraq Shabib**, Effects of silver and aluminum addition in the Zirconium based thin film metallic glass, Abstract accepted for presentation at Materials Science & Technology 2018 conference, Columbus, OH.
3. Usman Riaz, Leela Rakesh, Hassnain Asgar, **Ishraq Shabib**, Waseem Haider. Effect of dissolution of Magnesium alloy AZ31 on the rheological properties of Phosphate Buffer Saline (PBS)", Abstract accepted in the 44th Annual Conference of NATAS, Newark, Delaware, August 7-10, 2017 (oral presentation by Usman Riaz)
4. Mohammad Abu-Shams, and Ishraq Shabib, "Nanoindentation response of Fe-10%Cr structures with voids: An atomistic study", Abstract accepted in the 2017 TMS annual meeting and exhibition, held on Feb 26 to March 2, 2017, San Diego, CA, USA. (poster presentation by Abu-Shams)
5. Mohammad Abu-Shams, Waseem Haider and **Ishraq Shabib**, "Point defects production in collision cascades of Fe-Cr structures with different grain boundaries using molecular dynamics

(MD) simulation", Abstract accepted in the Materials Science & Technology 2015 conference held on October 4-8, 2015 at Columbus, OH (oral presentation by Abu-Shams).

6. K. P. Boyle, **I. Shabib**, R. E. Miller, "The Influence of Stress on Primary Defect Damage by Displacement Cascades in BCC Iron", presented by K.P. Boyle in the 10th International Conference on Computer Simulations of Radiation Effects in Solids held on July 19-23, 2010, Krakow, Poland, (Oral presentation by K.P. Boyle)
7. **I. Shabib**, R. E. Miller, "Effects of Twin Width, Grain Size and Temperature on the Properties of Copper Nanotwinned Structures", presented by **I.Shabib** in the 12th International Conference on Fracture held on July12-17, 2009, Ottawa, ON, (Oral Presentation by I. Shabib).
8. **I. Shabib**, R. E. Miller, "*Molecular dynamics simulations of deformation characteristics of copper nano-twins under the influence of bi-axial load"* ", presented by **I. Shabib** in the 19th CMSC (Canadian Materials Science Conference) held on June 20-22, 2007, McMaster University, ON, (oral presentation by I. Shabib).

Other Conference/Poster Presentations:

1. "Effects of Voids on Nanoindentation Response of Fe-10%Cr Alloys using MD Simulation". Mohammad Abu-Shams, **Ishraq Shabib**. The poster presentation was made by Mohammad Abu-Shams at the Student Research and Creative Endeavors Exhibition (SRCEE), Central Michigan University, Mount Pleasant, MI, 2017.
2. "Evolution of Displacement Cascades of Fe-10%Cr Structures Under Uniaxial Pressure: An Atomistic Study", Mohammad Abu-Shams, Ishraq Shabib. The poster presentation was made by Mohammad Abu-Shams at the Student Research and Creative Endeavors Exhibit (SRCEE) held at CMU on April 20, 2016
3. "Defect production in displacement cascades of Fe-Cr alloys using molecular dynamics (MD) simulation," Mohammad Abu-Shams and **Ishraq Shabib**. The presentation was made by Mohammad Abu-Shams at the Midwest Graduate Research Symposium held at University of Toledo on April 9, 2015.
4. "Molecular Dynamic Simulation of Displacement Cascades in Fe-Cr alloys," Mohammad Abu-Shams and **Ishraq Shabib**. The poster presentation made by Mohammad Abu-Shams at the Student Research and Creative Endeavors Exhibition (SRCEE) held at Central Michigan University April 22, 2015
5. "Atomistic Simulation of Nanoindentation Response of Fe-10%Cr Bi-crystal Alloys with <001> and <110> tilt Grain Boundaries." Mohammad Abu-Shams and **Ishraq Shabib**. The poster presentation made by Mohammad Abu-Shams at the Student Research and Creative Endeavors Exhibition (SRCEE) held at Central Michigan University on April 22, 2015
6. "Tensile behavior of Fe-Cr alloy with <001> tilt grain boundary", poster presentation by Mohammad Abu-Shams at the Spring 2014 SRCEE poster presentation session at Central Michigan University.
7. "Understanding Materials Behavior at the Nano-Scale", poster presentation by Aaron Johnson at the RET 2014 poster presentation session at Central Michigan University.
8. "Multiscale modeling of the indentation of nickel-aluminum nano-layers", poster presentation by **I. Shabib** in a poster competition organized by ASM Ottawa Valley Chapter on February 8, 2005, University of Ottawa, Ottawa, ON. **[Student poster award]**
9. "Multiscale modeling of the indentation of nano-layers", poster presentation by **I. Shabib** in the 16th CMSC (Canadian Materials Science Conference) held on June 5-8, 2004, Carleton University, Ottawa, ON.

Teaching Experiences:

CMU

- Solid Mechanics Laboratory (undergraduate) 3.0 credit hours, Fall 2018
- Computer Aided Problem Solving for Engineers (Undergraduate), 3.0 credit hours, Fall 2016, Fall 2017

- Finite Element Analysis (Undergraduate), 3.0 credit hours, Spring 2014, Spring 2015, Fall 2015, Spring 2016, Fall 2016, Spring 2017, Fall 2017, Spring 2018, Fall 2018
- Advanced Mechanics of Materials (Undergraduate/Graduate), 3.0 credit hours, Spring 2015, Spring 2016, Spring 2017, Spring 2018, Fall 2018
- Senior Design I & II (undergraduate), 3.0 + 3.0 credit hours, Fall 2014 & Spring 2015
- Engineering Materials Laboratory, 1.0 credit hours (Graduate), Spring 2015
- Engineering Materials (Undergraduate), 3.0 credit hours, Fall 2013, Fall 2014
- Machine Design II, (undergraduate), 3.0 credit hours, Spring 2014, Fall 2015, Spring 2016, Fall 2015, Spring 2016, Fall 2016, Spring 2017, Fall 2017, Spring 2018, Fall 2018
- Measurement and Instrumentation Laboratory (undergraduate), 3.0 credit hours, Fall 2013, Fall 2015

Other institution

- System Dynamics (Undergraduate), 3.0 credit hours, Spring 2012, Fall 2012, Spring 2013
- Finite Element Analysis (Undergraduate), 3.0 credit hours, Spring 2012, Spring 2013
- Principles of engineering Design (undergraduate), 3.0 credit hours, Spring 2013
- Dynamics (Undergraduate), 3.0 credit hours, Fall 2012.
- Mechanics of Materials (Undergraduate), 3.0 credit hours, Summer 2012.
- Materials and Manufacturing Processes (Undergraduate), 3.0 credit hours, Summer 2012.
- Engineering Analysis II (Undergraduate), 3.0 credit hours, Fall 2011, Summer 2012.
- Aerospace Structures (Graduate), 3.0 credit hours, Fall 2012.

Administrative Experiences:

- Coordinator of Master of Science in Engineering Committee of SET at CMU, 2017-2019
- ME faculty search committee member, 2017-2018
- SET Scholarship committee member, 2016-17
- Member of Active Learning Committee of CSE at CMU
- Conference Co-chair, ASEE-NCS 2016
- Member of the Research and Graduate Programs Committee of CSE at CMU
- Undergraduate student advisor at CMU
- ABET accreditation Process at UTEP (2012-13) and CMU (2013-14)
- Undergraduate Program Coordinator at UTEP
- Committee member: Curriculum development on nuclear engineering at UTEP
- Teaching laboratory development: Solid mechanics and thermo-fluids at UTEP

Research/Educational Grant Proposals:

External Grants (11 after joining CMU):

1. **Co-PI:** Development and Characterization of Ceramic Nanocomposite of Graphene Oxide with Multi Core-Shell structure Fe_3O_4-ZnO-TiO_2 Nanoparticles (G-MCSN), National Science Foundation, 2018, $430,781.00 (pending)
2. **Co-PI:** DMREF: Development of Magnetic-Photocatalytic Core-Shell Nanoparticles for Targeted Drug Delivery, National Science Foundation, 2017, $1,259,544 (not successful)
3. **Co-PI:** MRI: Acquisition of Surface Profilometer System for Advanced Material Characterization, National Science Foundation, 2017, $234,825 (not successful)
4. **Co-PI:** Development and Characterization of Ceramic Based Nanocomposite of Functionalized Graphene Oxide with Multi Core-Shell Fe_3O_4-ZnO-TiO_2 Nanoparticles (G-MCSN), National Science Foundation, 2017, $634,433.00 (not successful)
5. **Co-PI:** Development and Characterization of Multi-layered Flexible Piezoelectric Thin Film. Department of Defense (Army), 2017, $ 539,740 (pending)
6. **Co-PI:** MRI: Acquisition of Surface Profilometer System for Advanced Material Characterization", National Science Foundation, 2016, $155,750 (not successful).

7. **Co-PI:** Acquisition of imaging X-Ray Photoelectron Spectroscopy System for Interdisciplinary Research and Education in Multi-Scale Materials at Central Michigan University", 2016, Army, Navy and Air force of Department of Defense. $498,379 (under review)
8. **Senior Personnel:** Collaborative Research: Enriching the Professional Development of School Teachers & Community College Faculty in Rural Michigan - An RET Site on Smart Vehicles, NSF, 2015, $561,793.00 (awarded)
9. **PI:** Collaborative research: Computational Modeling, Processing, and Characterization of Ultra-Tough Nanotwinned SiC/SiC-CNT Nanofiber Composite", 2015, National Science Foundation, $187,807 (not successful)
10. **Co-PI:** Acquisition of imaging X-Ray Photoelectron Spectroscopy System for Interdisciplinary Research and Education in Multi-Scale Materials at Central Michigan University", Department of Defense. 2015, $499,304 (not successful)
11. **PI:** A dual PECVD-sputtering system for research on advanced thin-films for multifunctionality, self-healing, environment sensing, health monitoring and energy harvesting. Department of Defense, November 2014, $491,500 (not successful)
12. **PI:** Development of Educational Courses on Nuclear Engineering Materials at the University of Texas at El Paso (UTEP). Nuclear Regulatory Commission, October 2012, $188,684 (Awarded to UTEP).
13. **PI:** Silicon carbide nanowire (SiCNW)–carbon nanotube (CNT) heterojunctions reinforced SiC nanocomposite with embedded nanotwins for fusion nuclear reactor applications. Agency: U.S. Department of Energy, December 2011, $429,041 (not successful).
14. **Co-PI:** Capacity Enhancement of Nuclear Engineering Materials Education in Graduate and Undergraduate Mechanical Engineering Programs at the University of Texas El Paso, Nuclear Regulatory Commission, October 2011, $165*,* 281 (not successful).

Internal Grants (5 after joining CMU):

1. **PI**: Microstructural design of Ferritic/Martensitic steel for Nuclear Applications, ORGS, Type A Research Grant, CMU, 2017, $3,456 (awarded).
2. **PI:** Point defects production in collision cascades of Fe-Cr structures with different grain boundaries using molecular dynamics (MD) simulation, ORGS, FRCE Premier Display Grant, CMU, $800 (Awarded).
3. **PI:** Understanding the atomistic mechanisms of Helium embrittlement of Ferritic/Martensitic Steel, Central Michigan University Early Career Grant, January 2015, $19,914 (not successful)
4. **PI:** New research initiatives on advanced nanocomposites thin-films for multifunctionality and self-healing, Central Michigan University New Research Initiative Grant, January 2015, $10,000 (not successful)
5. **PI:** Lattice thermal conductivity of Fe-Cr alloys with <001> tilt boundaries: An atomistic study. ORSP, FRCE Premier Display Grant, CMU, $1,000 (Awarded)
6. **PI:** Performance evaluation of Silicon Carbide with embedded nanotwins under extreme irradiation conditions using large scale computer simulation, University Research Institute, UTEP, August 2012, $5,000 (successful).

Student Supervision:

Graduate

1. Nahid Sultan Al-Mamun (advisor)
2. Akib Jabed (advisor)
3. Mohammad Abu-Shams (advisor)
4. Umair Shah (Co-advisor)
5. Hassnain Asgar (Co-advisor)
6. Usman Riaz (Co-advisor)
7. Zia ur Rahman (Co-advisor)
8. Muhammad Mudasser Khan (Co-advisor)

Undergraduate

9. Jeff Moran (Undergraduate Research Assistant, CMU), Fall 17-Spring 2018
10. Kawthar Khamis (Undergraduate Research Assistant, CMU), Spring 2017
11. Nathaniel Everest (Undergraduate Research Assistant, CMU), Spring 2015 – Spring 2016
12. Seth Mier (Undergraduate Research Assistant, CMU), Summer 2016
13. Senior Design I & II Project, Fall 2014 & Spring 2015 at CMU
14. Aaron Johnson (Undergraduate Research Assistant, CMU), Summer 2014
15. Sebastian de la Rosa (Undergraduate Research Assistant, UTEP), October 2012-May 2013

Thesis Committee Chair/Member:

1. Mohammad Abu Shams (SAM Ph.D & MS in Engineering): Committee chair
2. Akib Jabed (MS in Engineering): Committee chair
3. Usman Riaz (MS in Engineering): Thesis co-advisor and committee member
4. Muhammad Jahangir Khan Lodhi (MS in Engineering): Thesis committee member
5. Muhammad Mudasser Khan (MS in Engineering): Thesis co-advisor & committee member
6. Syed Nabeel Ahmed (MS in Engineering): Thesis committee member
7. Muhammad Muzamil Hussain (MS in Engineering): Thesis committee member
8. Md. Mahmudul Hasan (MS in Engineering): Thesis committee member
9. Jonathan Clapham (MS in Chemistry): Thesis committee member
10. Zia Ur Rahman (SAM Ph.D.) Dissertation committee member
11. Eshagh Farzaneh (SAM Ph.D.) Dissertation committee member
12. Umair Shah (MS Engineering), Thesis committee member
13. Hassnain Asgar (MS Engineering), Thesis committee member
14. Shadeeb Hossain (MS in Engineering), Thesis committee member
15. Ahmed Tashfin Iftekhar (MS in Engineering), Thesis Committee member
16. Nitish K. Vaja (MS in Engineering), Thesis committee member
17. Golam Mainuddin (SAM Ph.D., discontinued) Dissertation committee member

Review Experience:

- Book: Finite Element Analysis: Theory and Application with ANSYS. Saeed Moaveni, 4th Edition, Pearson. 2018
- Mitacs Proposal Review: Design and optimization of topography based customizable mini-scleral contact lenses. 2018
- Computational Materials Science Journal, 2018
- Crystals, 2017
- ICME, 2017 conference
- Journal of Polymer Composite, 2017
- Journal of Nanopharmaceutics and Drug Delivery, 2015
- Materials Research Innovation 2015
- ASME IMECE Conference proceeding, 2014
- SAE International, 2010-1011
- Canadian Journal of Physics, 2011

Academic awards & scholarships:

- **Visiting Fellowships in Canadian Government Laboratories,** 2009-2011
- "**Pratt & Whitney Canada – First prize 2008**" – the Canadian Society for Mechanical Engineering, 2008
- "**Student Poster Award- graduate category**"- the ASM Ottawa Valley Chapter, Canada, 2005
- **"Academic Excellence Scholarship'** - Carleton University, Canada, 2003-2009
- **"Departmental Scholarship"** - Dept. of Mech. and Aero. Eng, Carleton University, Canada, 2003-2008

- **"Dean List Award"** - Dept. of Mechanical Engineering, BUET, Bangladesh, 1996-1998
- **"University Merit List Award"** - Dept. of Mechanical Engineering, BUET, Bangladesh, 1994-1998

Professional Training:

- "Vacuum Technology". A one day short course offered by Kurt J lesker on September 6, 2017 at CMU
- "Writing & Designing NSF Proposals." An online workshop hosted by Grant Training Center on March 25, 2014.
- "The Nuts and Bolts of Proposal Submission and Processing at CMU." The workshop was hosted by ORSP and held on Friday, March 28 at CMU.
- "Getting Your Research, Scholarly and Creative Work Off the Ground." The workshop was hosted by ORSP and held on October 4, 2013 at CMU.
- "Complex Polymer and Hybrid Architectures" A short course offered by the 2014 Turner Alfrey Lecturer Professor Axel Muller of the University of Mainz at Michigan Molecular Institute on June 9-13, 2014.
- "Thin films for Energy Storage and Conversion Applications" – the 40th annual AVS-MI Chapter symposium took place on August 25, 2014 at the Michigan State University.
- WHIMS online training, 2008 and 2009, Carleton University, Canada
- Workshop on multiscale modeling package-CADD, 2004, Brown University, USA
- Teachers Training Workshop, 2001, BUET, Bangladesh
- Industrial training, 1999, Eastern Refinery Limited, Bangladesh

Membership:

- American Society for Mechanical Engineers (ASME)
- American Ceramic Society (ACerS)
- TMS- The Minerals, Metals & Materials Society
- ASM International

References:

Available upon request.