Salim Azzouz, Ph.D.

Professor of Mechanical Engineering
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Education

Doctor of Philosophy in Engineering Mechanics: Department of Aerospace Engineering, Old Dominion University, Norfolk, Virginia, USA, December 2005. Dissertation Advisor: Professor Chuh Mei.

Bachelor and Master of Science in Mechanical Engineering: École Polytechnique Fédérale de Lausanne (Swiss Federal Institute of Technology), Lausanne, Switzerland, Europe, December 1990. Advisor: Professor Jean Claude Gianola.

License of Mechanics, Louis Pasteur University, Strasbourg, France, June 1986.

General Academic Study Degree in Physics and Chemistry, University Joseph Fourier, Grenoble, France, June 1982.

Academic and Professional Experiences

1) **Fall 2019 – Present:** Professor, McCoy School of Engineering, Midwestern State University, Wichita Falls, TX, USA.
2) **Fall 2015 – Spring 2019:** Associate Professor, McCoy School of Engineering, Midwestern State University, Wichita Falls, TX, USA.
3) **Fall 2014 – Spring 2015:** Associate Professor and Interim Co-Chair, McCoy School of Engineering, Midwestern State University, Wichita Falls, TX, USA.
4) **Fall 2012 – Spring 2014:** Associate Professor, McCoy School of Engineering, Midwestern State University, Wichita Falls, TX, USA.
5) **Fall 2006 – Spring 2012:** Assistant Professor, McCoy School of Engineering, Midwestern State University, Wichita Falls, TX, USA.
6) **2005 – 2006:** Intern Engineer SIEMENS VDO, Newport News, VA**,** USA.
7) **2002 – 2005**: Adjunct Faculty, Aerospace Engineering department, Old Dominion University, Norfolk, VA, USA.
8) **1998 - 2002**: Research Assistant, Aerospace Engineering department, Old Dominion University, Norfolk, VA, USA.
9) **1990 – 1997**: Mechanical Engineer, Laiteries Reunies Group, Genève, Switzerland.

Courses Taught

Mechanical Engineering Courses Taught at Midwestern State University

1.	MENG 1101	Introduction to Engineering
2.	MENG 1132	Engineering Graphics
3.	MENG 1202	Solid Modeling
4.	MENG 2203	Thermodynamics
5.	MENG 2223	Mechanics of Solids
6.	MENG 3003	Independent Studies
7.	MENG 3104	Fluid Mechanics
8.	MENG 3114	Materials Science
9.	MENG 3123	Measurements & Instrumentations
10.	MENG 3212	Introduction to Engineering Design (pre - 2017)
11.	MENG 3212	Topics in Engineering Fundamentals (post - 2017)
12.	MENG 3233	Mechanisms
13.	MENG 3234	Heat Transfer
14.	MENG 3243	Computer Aided Engineering
15.	MENG 4134	Machine Dynamics (pre - 2017)
16.	MENG 4134	Machine Elements Design (post - 2017)
17.	MENG 4143	Senior Design I
18.	MENG 4243	Senior Design II

Manufacturing Engineering Technology Courses Taught at Midwestern State University

1.	MENT 3134	Materials Science
2.	MENT 4103	Strength of Materials
3.	MENT 4113	Basic instrumentation

Aerospace Engineering Courses Taught at Old Dominion University

1.	AE 640	Finite Elements Analysis I
2.	AE 641	Experimental Structural Dynamics
3.	AE 733/833	Nonlinear Systems in Aerospace Engineering

Aerospace Engineering Courses Taught as a Research Assistant at Old Dominion University

1.	AE 641	Experimental Structural Dynamics (Laboratory)
2.	AE 743/843	Experimental Modal Analysis (Laboratory)

Industrial Professional Experiences

- Laiteries Réunies Genève (Nutrilait SA), Engineer Manager, Worked as the engineer managing the energies production department. Also worked as an associate engineer for the dairy production, 1990 – 1997, full time.
- Siemens VDO, Engineer Intern, worked as a Manufacturing Engineer and conducted research work on a new laser drilling machine making orifice discs for cars fuel injectors, 2005 – 2006, full time.

Professional Development

- TLRC Workshop, " Workshop on Building Classroom Community and Belonging", November 16, 2023.
- Attended the International Mechanical Engineering Conference (IMECE 2023) held in New-Orleans, Louisiana, October 29-November 2, 2023. Served as a Chair of the Engineering Education Track, Served as a Topic Organizer for the "Teaching Laboratories, Machine Shop Experiences and Technology-Aided Learning" area.
- TLRC Workshop, "Exploring the Potential for AI in the Classroom", October 19, 2023.
- Attended a webinar organized by the Office of Sponsored Program entitled, "Research Management and Planning", OSPR Webinar Series, Dr. Warren Burggren, Global Proposal Solutions, September 27, 2023.
- TLRC Workshop, "Another Path to High-impact Practices: Embedding Undergraduate Research into your Courses", September 21, 2023.
- IT Training, Information Resources Use and Security Policy, September, 1,2023.
- Regular reviewer for the International Mechanical Engineering Congress and Exposition Conference and the Journal of Aerospace Engineering since 2008.
- TLRC Workshop, "Student Well-Being: Class Check-ins for Mental Health", March 23, 2023.
- TLRC Workshop, "Overcoming Student Disengagement", February 25, 2023.
- Participated in a webinar organized by the MSU Office of Sponsored Program entitled, "Writing Compelling and Effective Manuscripts", OSPR Webinar Series, Warren Burggren, Global Proposal Solutions, February 10, 2023.
- Participated in the International Mechanical Engineering Conference (IMECE 2022) held in Columbus, Ohio, October 30-November 2, 2022. Served as a Co-Chair of the Engineering Education Track, Served as a Topic Organizer for the "Teaching Laboratories, Machine Shop Experiences and Technology-Aided Learning" area.
- Title IX and Safety Training Policies, August 30, 2022.
- Chemical Safety Training (OSHA and employee specific and for all working in labs with chemicals), August 2021, September 6, 2022.

- Participated in a workshop organized by the Office of Sponsored Program entitled, “Partnership and Collaboration in Research”, OSPR Webinar Series, Richard Nader, Global Proposal Solutions, February, 22, 2022.
- International Mechanical Engineering Congress and Exposition (IMECE), “Session Chairs Training”, October 28, 2021.
- Participated in a workshop organized by the Office of Sponsored Program entitled, “Budgeting for Proposal Development”, OSPR Webinar Series, Richard Nader, Global Proposal Solutions, October, 28, 2021.
- Participated in a workshop organized by the Office of Sponsored Program entitled, “Private Foundations: Seeking Grant funding from Non-Public Sources”, OSPR Webinar Series, Richard Nader, Global Proposal Solutions, September, 17, 2021.
- Faculty D2L training, Midwestern State University, August 12, 2020
- Attended an ANSYS Finite Elements Course, “Introduction to ANSYS Mechanical”, DRD Technology Training Center, Dallas, Texas, February 12, 2020.
- Conducted Senior Design Projects with the industrial companies Tranter (2017, 2018, 2019, 2020, 2021), and Arconic Engines (Howmet Aerospace, 2017, 2018, 2019, 2020).
- Attended the International Mechanical Engineering Conference (IMECE 2019) held in Salt Lake City, Utah, November 11-14, 2019. Served as Track Co-organizer of the Engineering Education areas, Served as a Topic Organizer for the “Teaching Laboratories, Machine Shop Experiences and Technology-Aided Learning” area.
- Attended the International Mechanical Engineering Conference (IMECE) held in November 2018 in Pittsburg, Pennsylvania. Served as a topic organizer and a session chair for the Teaching Laboratories, Machine Shop Experiences and Technology-Aided Learning area.
- Attended the ABET Advanced Program Assessment Workshop in April 2019.

Research and Scholarly Activity

PUBLICATIONS

Refereed Journals

1. Wang, S., Tonge, E., Sekanyo, I., Portmann, E., Azzouz, S., “On the State-of-the-Art of Solar, Wind, and Other Green Energy Resources and Their Respective Storage Systems”, MDPI peer reviewed Eng. Journal, Eng. 2023, 4(1), 857-883; the article is a part of a special issue on Green Engineering for Sustainable Development. https://doi.org/10.3390/eng4010052.
2. Ghoman, S. S., and Azzouz, M. S., "Supersonic Aerothermoelastic Nonlinear Flutter Study of Curved Panels: Frequency Domain," Journal of Aircraft, Vol. 49, No. 4 (2012), pp. 1075-1090, https://doi.org/10.2514/1.C031575.
3. Ghoman, S. S., and Azzouz, M. S., “Supersonic Aerothermoelastic Nonlinear Flutter Study of Curved Panels: Time Domain,” American Institute of Aeronautics and Astronautics (AIAA) Journal of Aircraft (Vol. 49, No. 4, July-August 2012, https://doi.org/10.2514/1.C031615, Technical Note).

4. Przekop, A., Azzouz, M. S., Guo, X., Mei, C., Azrar, L., "Finite Element Multiple-Mode Approach to Non-linear Free Vibrations of Shallow Shells," AIAA Journal, Vol. 42, No. 11, November 2004, pp. 2373-2381.
5. Azzouz, M. S., Ro. J. J., "Control of Sound Radiation from an Active Constrained Layer Damping Treated Plate into an Acoustic Cavity Using Structural Intensity Approach," Journal of Vibration and Control, Vol. 8, September 2002, pp. 903 – 918.
6. Azzouz, M. S., Bevan J., Ro. J. J., Mei, C., "Finite Element Modeling of MFC/AFC Actuators and Performance of MFC" Journal of Intelligent Material Systems and Structures, Vol. 12, September 2001, pp. 601 – 612.

MSU Faculty papers

Azzouz, M. S., "Non-linear Flutter Response of Curved Composite Panels under Yawed Supersonic Flow," Faculty Papers of Midwestern State University, Series 3, Vol. XVII, 2006-2009.

Works in progress

1. Azzouz, M. S., and G. Bernard, "New Mathematical Model for Supersonic Panel Flutter" This work is still an ongoing research collaboration with Dr. Guy Bernard from the Mathematic Department at Midwestern State University. A report paper is currently being written on the achieved goals of the proposed work. More work needs to be achieved for the validation of the developed method for publication.
2. J. Brink, Azzouz, M. S., "Continuous Improvements of Senior Design Projects," Ongoing research with Dr. J. Brink from the McCoy School of Engineering at Midwestern State University.

Conference Proceedings

1. J. Traslosheros, C. Lim, N. Joseph, S. Azzouz, "Measurements of the Dynamic Forces Produced by a Damaged Ball Bearing Using Load Cells", IMECE2025-166126, International Mechanical Engineering Congress and Exposition (IMECE), Memphis, TN, in November 16-20, 2025.
2. Stanley, D., Kimani, P., Ranbhise, S., Azzouz, S., "Dynamic Forces Measurements Along an Egg-Shaped Damaged Ball Bearing", IMECE-2024-145384, International Mechanical Engineering Congress and Exposition (IMECE), Portland, OR, in November 17-21, 2024.
3. Achord, G., Hackett, K., Burton, C., and Azzouz, S.," Electric and Pneumatic Regulation of a Dual Planetary Gearing System Using a Programmable Logic Controller", IMECE-2023-112679, International Mechanical Engineering Congress and Exposition (IMECE), New Orleans, LS, October 29, 2023.
4. Fadow, O., Leonard, S., and Azzouz, S., "Automation of a Dual Planetary Gearing Transmission Using Control Mechanisms and a Programmable Logic Controller", IMECE-2022- 95173, International Mechanical Engineering Congress and Exposition (IMECE), Columbus, Ohio, November 3, 2022.
5. Cann, M., Speed, R., Moreno, A., and Azzouz, S., "Design of a Clutching and Braking System to Automate a Chain-Coupled Dual Planetary Gearing Transmission", IMECE-2022- 95227,

International Mechanical Engineering Congress and Exposition (IMECE), Columbus, Ohio, November 3, 2022.
6. Azzouz, S., Blevins, J., Thomas, T., Anih, N. C., Ronoh, M., Tonge, E., Semper, C., "Data Collection and Analysis Using a Wind Turbine and a Photovoltaic Solar Panel," International Mechanical Engineering Congress and Exposition Conference, Paper IMECE2019-11751, Salt Lake City, Utah, November 11-14, 2019.
7. Azzouz, S., and Bernard, G., "A Gear-Chain Based Transmission for the Machine Elements Design Laboratory," International Mechanical Engineering Congress and Exposition Conference, Paper IMECE2017-71753, Pittsburg Convention Center, Pittsburg, Pennsylvania, November 11-15, 2018.
8. Brown, J., Scheffe, B., de Alwis, D., Azzouz, S., "Increasing the Pressure Tolerance Limit of A plate Heat Exchanger," Presented at the Southwest Emerging Technology Symposium, El Paso, April 14, 2018.
9. Elsharafi, M., Chancellor, C., Duckworth, C., Arshad, M., Denwe, R., Lafleur, O., Mao, Z., Azzouz, M. S., Wang, S., "Heat Transfer Technology to Convert Plastic Trash to Oil," Proceedings of the 2017 ASME International Mechanical Engineering Congress and Exposition, Volume 8: Heat Transfer and Thermal Engineering, Paper No. IMECE2017-70953, pp. V008T10A050; 11 pages doi:10.1115/IMECE2017-70953, Tampa, Florida, November 3-9, 2017.
10. Azzouz, M. S., Brink, J., "Twists and Turns of a Senior Design Project," Proceedings of the 2016 ASME International Mechanical Engineering Congress and Exposition, IMECE 2016-66194, Phoenix, Arizona, November 11-17, 2016.
11. Goodey, D., Fidlar, A., Denawakage Don, V., Hudnell, D., Pemberton, R., Azzouz, M. S., and Brink, J., "A Pneumatic Multi-Dome Active Energy Harvesting System," Proceedings of the 2016 ASME International Mechanical Engineering Congress and Exposition, IMECE 2016-66162, Phoenix, Arizona, November 11-17, 2016.
12. Duke, K., Wilson, D., Ressel, K., Nwoke, J., Soto, M., Azzouz, M. S., "Quasi-Continuous Variable Transmission for Wind Turbines," Proceedings of the 2014 ASME International Mechanical Engineering Congress and Exposition, IMECE 2015-50683, Houston, Texas, November 13-21, 2015.
13. Coffey, M., Dalke, D., Sutton, D., Williams, R., Brink, J., Weller, J. M., and Azzouz, M. S., "Active Road Rumble Energy Harvesting System," Proceedings of the 2015 ASME International Mechanical Engineering Congress and Exposition, IMECE 2015-52171, Houston, Texas, November 13-21, 2015.
14. Azzouz, M. S., Chatterjee, A., Rorabaugh, R., Venegas, C., Duke, K., Smith, C., Weller, J. M., "Active Road Rumble Energy Harvesting Panels," Proceedings of the 2013 ASME International Mechanical Engineering Congress and Exposition, IMECE 2013-64483, San Diego, California, November 15-21, 2013.
15. Azzouz, M. S., Fagbe, A., Evetts, Z., and Rosales, R. "Active Conical and Planetary Gearing System for Wind Turbines," IMECE 2012-86430, presented at the ASME 2013 International Mechanical Engineering Congress and Exposition conference, Houston, Texas, November 9-15, 2012.

16. Azzouz, M. S., Daniel McMullan, Anh Dao, Daniel Brooking, Mark Weller "Active Gearing System for Wind Turbines," to the ASME 2011 International Mechanical Engineering Congress and Exposition, Denver, Colorado, November 11-17, 2011.
17. Brink, J., Azzouz, M. S., McDonald, D., Wang, S., Azouz, I., "An Interdisciplinary Engineering Education Model," 2011 American Society for Engineering Education (ASEE) Gulf Southwest Annual Conference, Houston, TX, March 9-11, 2011.
18. Azzouz, M. S. and Smith, J., "Reduced-Order Nonlinear Stiffness Matrices in Panel Flutter," AIAA 2011-1994, 52nd AIAA/ASME/ASCE/AHS Structures, Structural Dynamics, and Materials Conference, Denver, CO, 2011.
19. Azzouz, M. S. and Hall, C., "Nonlinear Finite Element Analysis of a Rotating MFC Actuator," AIAA 2011-2547, 51st AIAA/ASME/ASCE/AHS Structures, Structural Dynamics, and Materials Conference, Orlando, FL, 2010.
20. Azzouz, M. S. "Flow Angle Effects on Supersonic Flutter of Clamped Curved Panels," AIAA-2009-2595, 50th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Palm Springs, CA, 2009.
21. Ghoman, S., Azzouz, M. S., and Mei, C. "Time Domain Method for Nonlinear Flutter of Curved Panels under Yawed Supersonic Flow at Elevated Temperature," AIAA-2009-2598, 50th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Palm Springs, CA, 2009.
22. Azzouz, M. S., "Pre-Flutter Modes Analysis of Curved Panels Using Nonlinear Finite Elements," AIAA-2008-2314, 49th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Schaumburg, IL, 2008.
23. Ghoman, S., Mei, C., and Azzouz, M. S. "Frequency Domain Method for Flutter of Curved Panels under Yawed Supersonic Flow at Elevated Temperatures," AIAA-2008-2312, 49th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Schaumburg, IL, 2008.
24. Azzouz, M. S., and Mei, C. "Finite Element Time Domain - Modal Formulation for Nonlinear Flutter of Composite Curved Panels," AIAA-2006-1732, 47th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Newport, RI, 2006.
25. Azzouz, M. S., and Mokhtar, M. "Fluid Structure Interaction - Nonlinear Flutter of Cylindrical Panels," AIAA-2006-693, 44th AIAA Aerospace Sciences Meeting and Exhibit, Reno, NV, 2006.
26. Azzouz, M. S., Mei, C.," Nonlinear Flutter of Cylindrical Panels Under Yawed Supersonic Flow Using Finite Elements," AIAA-2005-2373, 46th AIAA/ASME/ASCE/AHS Structures, Structural Dynamics, and Materials Conference, Austin, Texas, April 2005.
27. Azzouz, M. S., Guo, X., Przekop, A., Mei, C.," Supersonic Non-linear Panel Flutter of Cylindrical Shell Panels Using Finite Elements," AIAA-2004-2043, 45th AIAA/ASME/ASCE/AHS Structures, Structural Dynamics, and Materials Conference, Palm Spring, California, April 2004.
28. Przekop, A., Guo, X., Azzouz, M. S., Mei, C.," Reinvestigation of Non-linear Random Response of Shallow Shell Using Finite Element Modal Formulation," AIAA-2004-1553, 45th AIAA/ASME/ASCE/AHS Structures, Structural Dynamics, and Materials Conference, Palm Spring, California, April 2004.

29. Przekop, A., Azzouz, M. S., Guo, X., Mei, C., Azrar, L., "Non-linear Stiffness Estimation for Modal Finite Element Approach to Free Vibration of Shallow Shells," AIAA-2004-1615, 45th AIAA/ASME/ASCE/AHS Structures, Structural Dynamics, and Materials Conference, Palm Spring, California, April 2004.
30. Przekop, A., Guo, X., Azzouz, M. S., Mei, C.," Large Amplitude Response of Shallow Shells to Acoustic Excitation," 8th International Conference on Recent Advances in Structural Dynamics, Southampton, United Kingdom, July 2003.
31. Azzouz, M. S., Przekop, A., Mei, C., Azrar, L., "Finite Element Analysis of Rotating MFC/AFC Actuators," 6th Mechanics Congress, Tangier, Morocco, April 2003.
32. Azzouz, M. S., Guo, X., Przekop, A., Mei, C., "Non-Linear Flutter of Shallow Shell Under Yawed Supersonic Flow Using FEM," AIAA-2003-1516, 44th AIAA/ASME/ASCE/AHS Structures, Structural Dynamics, and Materials Conference, Norfolk, Virginia, April 2003.
33. Azzouz, M. S., Guo, X., Przekop, A., Mei, C., "Comparison of PDE/Galerkin and FEM for Non-Linear Aerospace Structure Analyses," AIAA-2003-1856, 44th AIAA/ASME/ASCE/AHS Structures, Structural Dynamics, and Materials Conference, Norfolk, Virginia, April 2003.
34. Przekop, A, Azzouz, M. S., Guo, X., Mei, C., Azrar, L., "Multimode Large Amplitude Free Vibrations of Shallow Shells Considering In-plane Inertia, AIAA-2003-1772, 44th AIAA/ASME/ASCE/AHS Structures, Structural Dynamics, and Materials Conference, Norfolk, Virginia, April 2003.
35. Przekop, A., Guo, X., Azzouz, M. S., Mei, C., "Nonlinear Response and Fatigue of Shallow Shells to Acoustic Excitation Using Finite Element," AIAA-2003-1710, 44th AIAA/ASME/ASCE/AHS Structures, Structural Dynamics, and Materials Conference, Norfolk, Virginia, April 2003.
36. Azzouz, M. S., Bevan J., Ro. J. J., Mei, C. "FE Modeling of MFC/AFC Actuators" SPIE 8th Annual International Symposium on Smart Structures and Materials, Newport Beach, California, March 2001.
37. Azzouz, M. S., Ro. J. J. "Control of Sound Radiation from an Active Constrained Layer Damping Treated Plate into an Acoustic Cavity Using Structural Intensity Approach" SPIE 7th Annual International Symposium on Smart Structures and Materials, Newport Beach, California, March 2000.

GRANTS

Grants (funded)

- A request for funding a Hot Wire Anemometer was submitted to the MCOSME Interim Dean and the OSPR office. It was needed to improve the wind speed reading on the McCoy Hall Wind Tunnel. Total fund request for the hotwire Anemometer, May 2024.
  M. S. Azzouz and P. Pokharel
  Amount $ 2,404.05.
- MSU Intramural Project: Study and Control of Localized Vortices to Enhance Wind Turbine Power Generation, January to August 2022.
  P. Pokharel (PI), M. S. Azzouz (Co-PI)

Amount: $ 2,868.

- MSU YES Camp, June 2022, the Howmet Aerospace Foundation funded the Young Engineers STEM (YES) Camp
  M. S. Azzouz (PI), Z. Ilhan (Co-PI), P. Pokharel (Co-PI).
  Amount: $20,000
- MSU YES Camp, June 2021, the Howmet Aerospace Foundation funded the Young Engineers STEM (YES) Camp.
  M. S. Azzouz (PI), Z. Ilhan (Co-PI), P. Pokharel (Co-PI).
  Amount: $26,000
- MSU YES Camp, June 2019, Camp funded by the Arconic Company (Howmet Aerospace)
  M. S. Azzouz (PI).
  Amount $ 40,000.
- MSU Faculty Research Grant, 2017
  Innovation in Biological Instrumentation Through Design and Engineering, Part I, Thermal Chamber
  Jeong Tae Ok (PI), C. M. Watson (Co-PI), M. S. Azzouz (Co-PI), Yu Guo (Co-PI)
  Amount: $5,545.43.
- MSU Faculty Research Grant, 2017
  New Mathematical Model for Supersonic Panel Flutter
  M. S. Azzouz (PI), G. Bernard (Co-PI)
  Amount: $5,569.71.
- American Society of Radiologic Technologist, (Co-PI), 2015
  Compression Device for Medical Imaging
  J. Johnston (PI), D. McDonald (Co-PI), M. S. Azzouz (Co-PI)
  Total Amount: $9874.30
- MSU Faculty Research Grant, 2009
  Finite Element Modeling of Curved Piezo-ceramic & MFC Actuators
  M. S. Azzouz (PI)
  Total Amount: $2,526.49
- MSU Faculty Research Grant, 2009
  A Conical Gearing System for Wind Turbine
  M. S. Azzouz (PI)
  Total Amount: $3,219
- MSU Faculty Research Grant, 2007
  Nonlinear Flutter Response of Curved Composite Panels under Yawed Supersonic Flow
  M. S. Azzouz (PI)
  Total amount: $4974.80

Grants (not funded)

- NSF Grant, Proposal: 1833770, "GEARS: Growing Engineers and Researchers Scholarships," PI: Salim Azzouz, Co-PI(s): Raj Desai, Guy Bernard, Mark Farris, $675,166, 03/27/2018.
- Participated as Co-PI for a proposal titled: "One Interdisciplinary Engineering Education Model," Submitted by Dr. J. Brink, PI, Dr. Sheldon Wang, Co-PI, Dr. I. Azouz, Co-PI, Dr. McDonald, Co-PI, to the National Science Foundation (NSF) to fund the development of new course materials used in a new Interdisciplinary Engineering (IEGR) degree.
- Wrote with my Advisor Dr. Chuh Mei (PI) a White Paper Proposal titled: Non-linear Flutter Response and Fatigue Analysis of Curved Composite Panels under Yawed Supersonic Flow to the Air Force Office of Scientific Research (AFOSR), August 2004.

FACULTY FORUM SERIES

- A Discussion about Future Engineering Challenges, 2017
- Energy: Past, Present, and Future, 2011
- Flutter of Curved Panels under Yawed Supersonic Flow, Presented in partnership with Dr. I. Azouz, 2007.

PRESENTATIONS

1. Walmer, C., Sinyangwe, N., Stubblefield, N., and Azzouz, S., "Wind Tunnel Testing of a Dual-Venturi Vertical Axis Wind Turbine,", Undergraduate Research and Creative Activity Forum, Fall 2024 (November 21, 2024)/Spring 2024 (April 24, 2025), and the 28th North Texas Student Area Conference NTASC 2025 (April 26, 2025).
2. Walmer, C., Sinyangwe, N., Stubblefield, N., and Azzouz, S., "Experimental Performance Analysis of a Venturi Based Dual Rotor Vertical Axis Wind Turbine," IMECE2025-166547, International Mechanical Engineering Congress and Exposition (IMECE) in Memphis, TN, on November 16–20, 2025.
3. Traslosheros, J., Lim, C., Joseph, N., Azzouz, S., "Generation of Dynamic Forces Along an Egg-Shaped Bearing Race," 23rd/24th Undergraduate Research and Creative Activity Forum presentation, Fall 2024 (November 21, 2024)/Spring 2025 (April 24, 2025) and the 28th North Texas Student Area Conference NTASC 2025 (April 26, 2025).
4. Walmer, C., Sinyangwe, N., Stubblefield, N., and Azzouz, S., "Experimental Performance Analysis of a Venturi Based Dual Rotor Vertical Axis Wind Turbine,", 23rd/24th Undergraduate Research and Creative Activity Forum presentation, Fall 2024 (November 21, 2024)/Spring 2025 (April 24, 2025) and the 28th North Texas Student Area Conference NTASC 2025 (April 26, 2025).
5. Stanley, D., Kimani, P., Ranbhise, S., and Azzouz, S., "Generation of Dynamic Force along an Egg-Shaped Geometry", PowerPoint presentation at the 28th North Texas Student Area Conference NTASC 2024, April 20, 2024.

6. Horn, E., Egwim, D., Rhodes, J., and Azzouz, S., “Vortex Based Vertical Axis Wind Turbine”, PowerPoint presentation at the 28th North Texas Student Area Conference NTASC 2024, April 20, 2024.
7. Stanley, D., Kimani, P., Ranbhise, S., and Azzouz, S., “Generation of Dynamic Force along an Egg-Shaped Geometry”, PowerPoint presentation at the 22nd Undergraduate Research and Creative Activity Forum presentation, April 18, 2024.
8. Horn, E., Egwim, D., Rhodes, J., and Azzouz, S., “Vortex Based Vertical Axis Wind Turbine”, PowerPoint presentation at the 22nd Undergraduate Research and Creative Activity Forum, April 18, 2024.,
9. Stanley, d., Kimani, P., Ranbhise, S., and Azzouz, S., “Generation of Dynamic Force along an Egg-Shaped Geometry”, PowerPoint presentation at the 21st Undergraduate Research and Creative Activity Forum presentation, November 16, 2023.
10. Horn, E., Egwim, D., Rhodes, J., and Azzouz, S., “Vortex Based Vertical Axis Wind Turbine”, PowerPoint presentation at the 21st Undergraduate Research and Creative Activity Forum, November 16, 2023, (won 1st place).
11. Achord, G., Hackett, K., Burton, C., and Azzouz, S.,” Electric and Pneumatic Regulation of a Dual Planetary Gearing System Using a Programmable Logic Controller", IMECE-2023-112679, International Mechanical Engineering Congress and Exposition (IMECE), New Orleans, Louisiana, October 29, 2023.
12. Pokharel, P., and all MSU Engineering Faculty, “Young Engineers Summer Camp for K-12 Students: Stem Experiences and Lessons Learned”, IMECE2023-109837, International Mechanical Engineering Congress and Exposition (IMECE). New Orleans, Louisiana, 2023, October 29, 2023.
13. Achord, G., Hackett, K., Burlton, C. and Azzouz, S., “Automation of a Dual Planetary Gearing Transmission Using Control Mechanisms and a Programmable Logic Controller”, PowerPoint presentation, 20th Undergraduate and Creative Activity Forum, Midwestern State University, April 20, 2023.
14. Achord, G., Hackett, K., Burlton, C., and Azzouz, S., “Automation of a Dual Planetary Gearing Transmission Using Control Mechanisms and a Programmable Logic Controller”, PowerPoint presentation, 26th North Texas Area Student Conference, Midwestern State University, April 15, 2023.
15. Carlisle, R., Ling, G., Horn, E., and Azzouz, S., “Construction and Wind Tunnel Testing of a Vortex Based Vertical Axis Wind Turbine”, PowerPoint presentation at the 20th Undergraduate Research and Creative Activity Forum, April 20, 2023.
16. Carlisle, R., Ling, G., and Azzouz, S., “Construction and Wind Tunnel Testing of a Vortex Based Vertical Axis Wind Turbine”, PowerPoint presentation at the 26th the North Texas Student Area Conference, April 15, 2023.
17. Carlisle, R., Ling, G., Horn, E., Seward, A., and Azzouz, S., “Construction and Wind Tunnel Testing of a Vortex Based Vertical Axis Wind Turbine”, PowerPoint presentation at the 19th Undergraduate Research and Creative Activity Forum, November 17, 2022 (won 1st place).

18. Achord, G., Hackett, K., Burlton, C. and Azzouz, S., “Automation of a Dual Planetary Gearing Transmission Using Control Mechanisms and a Programmable Logic Controller”, PowerPoint presentation, 19th Undergraduate and Creative Activity Forum, Midwestern State University, November 17, 2022.
19. Azzouz, S., Fadow, O., and Leonard, S., “Automation of a Dual Planetary Gearing Transmission Using Control Mechanisms and a Programmable Logic Controller”, IMECE-2022-95173, International Mechanical Engineering Congress and Exposition (IMECE), Columbus, Ohio, November 3, 2022.
20. Azzouz, S., Cann, M., Speed, R., and Moreno, A., “Design of a Clutching and Braking System to Automate a Chain-Coupled Dual Planetary Gearing Transmission”, IMECE-2022-95227, International Mechanical Engineering Congress and Exposition (IMECE), Columbus, Ohio, November 3, 2022.
21. Azzouz, s., “Odyssey of the Mind, A STEM Competition”, YES CAMP Workshop, June 22, 2022.
22. Azzouz, s., “Biomimicry, Innovation from Imitation”, YES CAMP Workshop, June 22, 2022.
23. Speed, R., Cann, M., Moreno, A., and Azzouz, S. “Automation of a Double Planetary Gear Transmission with Chain Coupling”, PowerPoint presentation, 25th Annual North Texas Area Student Conference, April 23, 2022.
24. Fadow, O., Leonard, S., and Azzouz, S., “Automation of a Dual Planetary Gearing Transmission Using Control Mechanisms & a Programmable Logic Controller”, PowerPoint presentation, 25th Annual North Texas Area Student Conference, April 23, 2022.
25. Pokharel, P., and Azzouz, S., “Investigation of the Power Generated by Small-Scale Wind Turbines Using a Wind Tunnel”, PowerPoint presentation, , 2022 Celebration of Scholarship & Undergraduate Research and Creative Activity Forum, April 21, 2022.
26. Fadow, O., Leonard, S., and Azzouz, S., “Automation of a Dual Planetary Gearing Transmission Using Control Mechanisms and a Programmable Logic Controller”, PowerPoint presentation, , 2022 Celebration of Scholarship & Undergraduate Research and Creative Activity Forum, April 21, 2022.
27. Cykelle, S., Tonge, E., Azzouz, S. , and Pokharel, P., “Investigation of a Dual Vortex Stabilizing Obstacle with Built-in Vertical Wind Turbines”, PowerPoint presentation, , 2022 Celebration of Scholarship & Undergraduate Research and Creative Activity Forum, April 21, 2022, (First Place).
28. Cann, M., Moreno, A., Speed, R., and Azzouz, S., “Automation of a Chain Coupled Double Planetary Gear Transmission”, PowerPoint presentation, , 2022 Celebration of Scholarship & Undergraduate Research and Creative Activity Forum, April 21, 2022.
29. Tonge, E., and Azzouz, S., “Desalination Concept Using the Kelvin Dropper Apparatus”, PowerPoint presentation, , 2022 Celebration of Scholarship & Undergraduate Research and Creative Activity Forum, April 21, 2022.
30. Azzouz, S., “Discovering the Thermodynamics of a Sterling Engine”, UGROW 2022 presentation, February 25, 2022.

31. Burton, S., Tonge, E., Azzouz, S., “Performance Analysis of a Maximum Power Point Tracking Solar Charge Controller”, PowerPoint presentation, 17th Undergraduate and Creative Activity Forum, Midwestern State University, November 18, 2021.
32. Moreno, A., Cann, M., Speed, R., and Azzouz, S., “Automation of a Chain Coupled Double Planetary Gear Transmission”, PowerPoint presentation, 17th Undergraduate and Creative Activity Forum, Midwestern State University, November 18, 2021.
33. Fadow, O., Leonard, S., and Azzouz, S., “Automation of a Dual Planetary Gearing Transmission through the use of Mechanical Systems and Programmable Logic Controller”, PowerPoint presentation, 17th Undergraduate and Creative Activity Forum, Midwestern State University, November 18, 2021.
34. Tonge, E., Burton Sharome, and Azzouz, S. “Harvesting Electrical Energy from Solar Panels and a Wind Turbine Using Charge Controllers”, Midwest Regional Undergraduate Research, Scholarly, and Creative Activity (URSCA) Conference/COPLAC (Virtual), November 13, 2021.
35. Pokharel, P., and Azzouz, S., Gebel, T., “Investigation of the Power Generated by a 3D-Printed Wind Turbines Using a Wind Tunnel”, PowerPoint presentation, International Mechanical Engineering Congress and Exposition, Virtual Conference, November 1-5, 2021.
36. Tonge E., Azzouz, S., “Performance Analysis of Maximum Power Point Tracking Solar Charge Controller, International Mechanical Engineering Congress and Exposition, Virtual Conference, November 1-5, 2021.
37. Burton S., Tonge E., Azzouz, S., “Performance Analysis of Maximum Power Point Tracking Solar Charge Controller”. UGROW 2021 presentation’s competition, July 1, 2021.
38. Azzouz, S., “Determining Resonance Frequencies in Beams”, YES CAMP Workshop, June 24, 2021.
39. Azzouz, S. “Is Electricity the Energy of the Future”, faculty workshop for the selected UGROW 2021 students, May 25, 2021.
40. Criblez, E., Paul, S., Turner, K., and Azzouz, S., “Improve 3D-Printed HX Design and Build Functional Prototype”, North Texas Area Student Conference, Midwestern State University, April 17, 2021.
41. Schafer, M. Graves, I. Jaiteh, A., and Azzouz, S., “Automation of a Dual Planetary Gear Transmission using a Programmable Logic Controller”, North Texas Area Student Conference, Midwestern State University, April 17, 2021.
42. Graves, I., Jaiteh, A., Schafer M., and Azzouz, S., “Automation of a Dual Planetary Gearing Transmission Using a Programmable Logic Controller”, Undergraduate Research and Creative Activity Forum, April 7-9, 2021, on Forager virtual platform.
43. Criblez, E., Paul S., Turner K., and Azzouz, S., “Design and Testing of an HX Heat Exchanger”, Undergraduate Research and Creative Activity Forum, April 7-9, 2021, on Forager virtual platform.
44. Azzouz, S., “Harvesting Electrical Energy from a Solar Panel Using a Charge Controller”, UGROW 2021 presentation, February 11, 2021.

45. Graves, I., Jaiteh, A., Schafer, M., and Azzouz, S., “Automation of a Dual Planetary Gearing Transmission Using a Programmable Logic Controller”, Undergraduate Research and Creative Activity Forum, November 18, 2020.
46. Criblez, E., Paul S., Turner K., and Azzouz, S., “Design and Testing of an HX Heat Exchanger”, Undergraduate Research and Creative Activity Forum, November 18, 2020.
47. Junkere, G., Sean Aleman, Azzouz, S., “Desalination Process Using an Electric Field Across a Seawater Channel”, COPLAC, West URSCA Conference, November 11, 2020.
48. Junkere, G., Aleman, S., Azzouz, S., “Desalination Process Using an Electric Field Across a Sea Water Channel”, UGROW Symposium, Midwestern State University, July 1, 2020 (Ranked First).
49. Azzouz, S., “Desalination and Energy”, UGROW Workshop, May 27, 2020.
50. Kambabi, P. Y., Hargis, C., Kidwell, K., Jenkins, J., and Azzouz, S., “Howmet Aerospace - Universal Sprue Fixture with Powered Multi-Axis Rotating Synchronous Parallel Gripper for the AW Bell Cutoff Saw”, Undergraduate Research and Creative Activity Forum, Spring 2020.
51. Major, T., and Azzouz, S., “A Continuously Variable Gear Ratio Multistage Gearbox for Wind Turbines”, Undergraduate Research and Creative Activity Forum, Spring 2020.
52. Telemacque, K., Major, T., Hendrix, H., Hunter, G., and Azzouz, S., “Additive Manufacturing Applied to a Tranter 3D MaxChanger Heat Exchanger”, Undergraduate Research and Creative Activity Forum, Spring 2020.
53. Kambabi, P. Y., Hargis, C., Kidwell, K., Jenkins, J., and Azzouz, S., “Arconic Engines – Universal Sprue Fixture with Powered Multi-Axis Rotating Synchronous Parallel Gripper for the AW Bell Cutoff Saw”, Undergraduate Research and Creative Activity Forum, Fall 2019.
54. Major, T., and Azzouz, S., “A Multi-Stage Gearing System to Control Wind Turbine’s Rotor Speed”, Undergraduate Research and Creative Activity Forum, Fall 2019.
55. Telemacque, K., Major, T., Hendrix, H., Hunter, G., and Azzouz, S., “Additive Manufacturing Applied to a Tranter 3D MaxChanger Heat Exchanger”, Undergraduate Research and Creative Activity Forum, Fall 2019.
56. Azzouz, S. “Space Exploration”, EURECA Workshop, October 25, 2019.
57. Major, T., Selsor, C., S. Azzouz, “A Multi-Stage Gearing System to control Wind Turbine’s Rotor Speed”, UGROW Symposium, Midwestern State university, July 1, 2019.
58. Azzouz, S., “Energies of the Future”, Yes Camp Workshop, June 24, 2019.
59. Azzouz, S., “Introduction to Matlab”, Yes Camp Workshop, June 25, 2019.
60. Azzouz, S., “Applications of the Finite Elements Method”, Yes Camp Workshop, June 26, 2019.
61. Azzouz, S., “The Future of Transportation”, Yes Camp Workshop, June 26, 2019.
62. Azzouz, S., “Space Exploration”, Yes Camp Workshop, June 28, 2019.
63. Azzouz, S., “Energies of the Future and the Storage Issues”, UGROW Workshop, Thursday May 30, 2019.
64. Goolsby, H., Goforth, J., Mendez, W., Tran, K., and Azzouz, S., “Arconic Engines - Dip Seal Mechanism”, Undergraduate Research and Creative Activity Forum, Spring 2019.
65. Sukume, C., Blair, B., Xiao, C., Munholland, J., and Azzouz, S., “Study of Deflection in Gasketed Plate Heat Exchanger Products under High Hydro-Static Pressure”, Undergraduate Research and Creative Activity Forum, Spring 2019.

66. Azzouz, S., “Future Energies”, EURECA Mentor Workshop, March 29, 2019
67. Azzouz, S., “A Multi-Stage Gearing System to Control Wind Turbines Rotor Speed”, UGROW Presentation, February 13, 2019.
68. Goolsby, H., Goforth, J., Mendez, W., Tran, K., and Azzouz, S., “Arconic Engines - Dip Seal”, Undergraduate Research and Creative Activity Forum, Fall 2018.
69. Sukume, C., Blair, B., Xiao, C., Munholland, J., and Azzouz, S., “Study of Deflection in GPHE Products under High Hydro-Static Pressure”, Undergraduate Research and Creative Activity Forum, Fall 2018.
70. Azzouz, S., “Future Energy Challenges”, SPE MSU Chapter, November 06, 2018.
71. Azzouz, S., “New Disruptive Technologies”, EURECA Workshop, October 5, 2018.
72. Blair, B., Grantley, S., Azzouz, S., “Building an Experiment Set-Up to Analyze Different Types of Materials Using a Portable Spectrometer”, UGROW Symposium, Midwestern State university, July 5, 2018.
73. Azzouz, S., “Spectroscopy & Quantum Mechanics”, UGROW Workshop, Midwestern State University, May 29, 2018.
74. Azzouz, S., “New Disruptive Technologies”, Yes Camp Workshop, June 27, 2018.
75. Ivey, J., Orozco, J., Witherspoon, S., Munoz, J., Azzouz, S., “Automation of a Gear/Chain Transmission, “Senior Design Presentation, McCoy School of Engineering, Midwestern State University, May 2, 2018
76. Brown, J., Scheffe, B., De Alwis, D., Azzouz, S., “Increasing the Pressure Tolerance Limit of a Plate Heat Exchanger, “Senior Design Presentation, McCoy School of Engineering, Midwestern State University, May 2, 2018
77. Moss, K., Nyikayaramba, V., Azzouz, S., “Studying the Separation of Salt Ions when Exposed to an Electric Field, “Senior Design Presentation, McCoy School of Engineering, Midwestern State University, May 2, 2018
78. Brown, J., Scheffe, B., De Alwis, D., Azzouz, S., “Increasing the Pressure Tolerance Limit of a Plate Heat Exchanger,” Undergraduate Research and Creative Activity Forum, April 25, 2018, Midwestern State University.
79. Moss, K., Nyikayaramba, V., Azzouz, S., “Studying the Separation of Salt Ions when Exposed to an Electric Field,” Undergraduate Research and Creative Activity Forum, April 25, 2018, Midwestern State University.
80. Ivey, J., Orozco, J., Witherspoon, S., Munoz, J., Azzouz, S., “Automation of a Gear/Chain Transmission,” 22nd North Texas Student Area Conference, April 21, 2018, Midwestern State University.
81. Brown, J., Scheffe, B., De Alwis, D., Azzouz, S., “Increasing the Pressure Tolerance Limit of a Plate Heat Exchanger,” 22nd North Texas Student Area Conference, April 21, 2018, Midwestern State University.
82. Moss, K., Nyikayaramba, V., Azzouz, S., “Studying the Separation of Salt Ions when Exposed to an Electric Field,” 22nd North Texas Student Area Conference, April 21, 2018, Midwestern State University.

83. Brown, J., Scheffe, B., De Alwis, D., Azzouz, S., "Increasing the Pressure Tolerance Limit of A plate Heat Exchanger," Presented at the Southwest Emerging Technology Symposium, El Paso, April 14, 2018
84. Juan Orozco, Seth Witherspoon, Joshua Munoz, and James Ivey, "Automation of a Gear/Chain Transmission," National Council of Undergraduate Research, (NCUR 2018), University of Central Oklahoma, Edmond, OK, April 5, 2018.
85. Ivey, J., Orozco, J., Witherspoon, S., Munoz, J., Azzouz, S., "Automation of a Gear/Chain Transmission, "Senior Design Presentation, McCoy School of Engineering, Midwestern State University, December 6, 2017
86. Brown, J., Scheffe, B., De Alwis, D., Azzouz, S., "Increasing the Pressure Tolerance Limit of a Plate Heat Exchanger, "Senior Design Presentation, McCoy School of Engineering, Midwestern State University, December 6, 2017
87. Moss, K., Nyikayaramba, V., Azzouz, S., "Studying the Separation of Salt Ions when Exposed to an Electric Field, "Senior Design Presentation, McCoy School of Engineering, Midwestern State University, December 6, 2017
88. Azzouz, S, Baer, D, Garcia, E., Henry, L., Perera, C., Shed, D. R., Taylor, T., "A Planetary Gear Control System for a Wind Turbine Transmission," Renewable Energy, Structural Health Monitoring, and Distributed Structural Systems session at the ASME 2017 International Mechanical Engineering Congress and Exposition, Tampa, Florida, November 9, 2017.
89. Shawver, N., Aleman, S., Nyikayaramba, V., Azzouz, S., "Salt Ions Separation Study when Exposed to an Electric Field". UGROW Symposium, Midwestern State University, July 6, 2017.
90. Azzouz, S., "Sustainable Energy Systems", Yes Camp Workshop, Midwestern State University, June 19, 2017.
91. Azzouz, S., "Water & Energy," UGROW WORKSHOP, Midwestern State University, May 31, 2017.
92. Bhandari, S., Perera, C., "Desalination," IdeaMSU 2017 organized by Dr. Scott Manley director of the Munir Abdul Lalani Center for Entrepreneurship and Free Enterprise, Dillard College of Business. The students ranked second in the competition and received collectively a $1000 stipend. They also won the IdeaMSU People's Choice contest and won $250 additional stipend. Midwestern State University, May 12, 2017
93. Garcia, E., Shed, D. R., Taylor, T., Perera, C., Henry, L., Baer, D., Azzouz, S., "Planetary Gear Control Based System for a Wind Turbine," Senior Design Presentation, McCoy School of Engineering, Midwestern State University, May 3, 2017.
94. Albakhurji, A., Atemenwan, E., Clampitt, G., Love, J., Selzer, H., Stanley, M., Azzouz, S., "Multi-Chain Based Continuously Variable Transmission for Wind Turbines," Senior Design Presentation, McCoy School of Engineering, Midwestern State University, May 3, 2017
95. Bhandari, S., Gordon, k., Ezeodum, I., Azzouz, S., "Large Deflection Non-linear Coefficients of a Free Vibrating Laminated Composite Shallow Shell Panel," 21st North Texas Student Area Conference, Midwestern State University, April 29, 2017.

96. Albakhurji, A., Atemenwan, E., Clampitt, G., Love, J., Selzer, H., Stanley, M., Azzouz, S., "Multi-Chain Based Continuously Variable Transmission for Wind Turbines," 21th North Texas Area Student Conference, Midwestern State University, April 29, 2017.
97. Garcia, E., Shed, D. R., Taylor, T., Perera, C., Henry, L., Baer, D., Azzouz, S., "Planetary Gear Control Based System for a Wind Turbine," 21th North Texas Area Student Conference, Midwestern State University, April 29, 2017.
98. Albakhurji, A., Atemenwan, E., Clampitt, G., Love, J., Selzer, H., Stanley, M., Azzouz, S., "Multi-Chain Based Continuously Variable Transmission for Wind Turbines," Undergraduate Research and Creative Activity Forum, Midwestern State University, April 27, 2017.
99. Whyms, C. Jr., Sweeting, M., Fruechtl, V., Hewakuruppu, G., Franke, Y., Azzouz, S., "A Study of the Factors Triggering the Idea of Sustainability: The German and U.S. Experiences," Celebration of Scholarship Forum, Midwestern State University, April 27, 2017.
100. Garcia, E., Shed, D. R., Taylor, T., Perera, C., Henry, L., Baer, D., Azzouz, S., "Planetary Gear Control Based System for a Wind Turbine," Undergraduate Research and Creative Activity Forum, Midwestern State University, April 27, 2017.
101. Garcia, E., Shed, D. R., Taylor, T., Perera, C., Henry, L., Baer, D., Azzouz, S., "Planetary Gear Control Based System for a Wind Turbine," Senior Design Proposal Presentation, McCoy School of Engineering, Midwestern State University, December 7, 2016.
102. Albakhurji, A., Atemenwan, E., Clampitt, G., Love, J., Selzer, H., Stanley, M., Azzouz, S., "Multi-Chain Based Continuously Variable Transmission for Wind Turbines," Senior Design Proposal Presentation, McCoy School of Engineering, Midwestern State University, December 7, 2016.
103. Azzouz, S., and Brink, J., "Twists and Turns of a Senior Design Project," ASME International Mechanical Engineering Congress and Exposition, IMECE 2016-66194, Phoenix, Arizona, November 11-17, 2016
104. Goodey, G., Fidlar, A., Denawakage Don, V., Hudnell, D., Pemberton, R., Azzouz, S., and Brink, J., "A Pneumatic Multi-Dome Active Energy Harvesting System," ASME International Mechanical Engineering Congress and Exposition, IMECE 2016-66162, Phoenix, Arizona, November 11-17, 2016.
105. Perera, C., Azzouz, S., "Searching for Mechanical Forms and Patterns in Living Creatures," UGROW 2016 Symposium, July 5, 2016.
106. Azzouz, S., "Sustainable Energy System," Yes Camp, June 23, 2016.
107. Moore, W., Lovelace, P., Galbraith, N., Perera, A. N., Mombo, L., Azzouz, S., "Counter Rotating Dual Rotor Multi-Generator Wind Turbine," Senior Design Presentation, McCoy School of Engineering, Midwestern State University, May 4, 2016.
108. Goodey, G., Fidlar, A., Denawakage Don, V., Hudnell, D., Pemberton, R., Azzouz, S., and Brink, J., "A Multi-Dome Active Road Rumble Energy Harvesting System," Senior Design Presentation, McCoy School of Engineering, Midwestern State University, May 4, 2016.
109. Peralta, S., Krawietz, J., Virgin, j., McKenzie, A., Vincent, W., Azzouz, S., "Bevel Gear Based Quasi-Continuous Variable Transmission for Cars and Trucks," Senior Design Presentation, McCoy School of Engineering, Midwestern State University, May 4, 2016.

110. Gustave, J. C., Tucker, B., Sissel, J., Philip, N., Azzouz, S., "Chain based Planetary Gear Transmission," Senior Design Presentation, McCoy School of Engineering, Midwestern State University, May 4, 2016.
111. Gustave, J. C., Philip, N., Azzouz, S., "SD3 Transmission," IdeaMSU contest organized by the Dillard Business College. April 28, 2016, Midwestern State University, Wichita Falls, TX, Ranked Second.
112. Gustave, J. C., Tucker, B., Sissel, J., Philip, N., Azzouz, S., "Chain Based Dual Planetary Gear Transmission," Undergraduate Research and Creative Activity Forum, Midwestern State University, April 28, 2016.
113. Gustave, J. C., Tucker, B., Sissel, J., Philip, N., Azzouz, S., "Chain Based Dual Planetary Gear Transmission," 20th North Texas Area Student Conference, Midwestern State University, April 16, 2016.
114. Moore, W., Lovelace, P., Galbraith, N., Perera, A. N., Mombo, L., Azzouz, S., "Dual Rotors Wind Turbine with Tower Integrated Electricity Generator," Undergraduate Research and Creative Activity Forum, Midwestern State University April 28, 2016.
115. Moore, W., Lovelace, P., Galbraith, N., Perera, A. N., Mombo, L., Azzouz, S., "Dual Rotors Wind Turbine with Tower Integrated Electricity Generator," 20th North Texas Area Student Conference, Midwestern State University, April 16, 2016.
116. Peralta, S., Krawietz, J., Virgin, j., McKenzie, A., Vincent, W., Azzouz, S., "Bevel Gear Based Quasi-Continuous Powertrain Transmission," Undergraduate Research and Creative Activity Forum, Midwestern State University, April 28, 2016.
117. Peralta, S., Krawietz, J., Virgin, j., McKenzie, A., Vincent, W., Azzouz, S., "Bevel Gear Based Quasi-Continuous Powertrain Transmission," 20th North Texas Area Student Conference, Midwestern State University, April 16, 2016.
118. Goodey, G., Fidlar, A., Denawakage Don, V., Hudnell, D., Pemberton, R., Azzouz, S., and Brink, J., "A Pneumatic Dome Shaped Active Road Rumble," Undergraduate Research and Creative Activity Forum, Midwestern State University, April 28, 2016.
119. Goodey, G., Fidlar, A., Denawakage Don, V., Hudnell, D., Pemberton, R., Azzouz, S., and Brink, J., "A Pneumatic Dome Shaped Active Road Rumble," 20th North Texas Area Student Conference, Midwestern State University, April 16, 2016.
120. Moore, W., Lovelace, P., Galbraith, N., Perera, A. N., Mombo, L., Azzouz, S., "Counter Rotating Dual Rotor Multi-Generator Wind Turbine," Senior Design Proposal Presentation, McCoy School of Engineering, Midwestern State University, December 2, 2015.
121. Goodey, G., Fidlar, A., Denawakage Don, V., Hudnell, D., Pemberton, R., Azzouz, S., and Brink, J., "A Multi-Dome Active Road Rumble Energy Harvesting System," Senior Design Proposal Presentation, McCoy School of Engineering, Midwestern State University, December 2, 2015.
122. Peralta, S., Krawietz, J., Virgin, j., McKenzie, A., Vincent, W., Azzouz, S., "Bevel Gear Based Quasi-Continuous Variable Transmission for Cars and Trucks," Senior Design Proposal Presentation, McCoy School of Engineering, Midwestern State University, December 2, 2015.

123. Gustave, J. C., Tucker, B., Sissel, J., Philip, N., Azzouz, S., "Chain based Planetary Gear Transmission," Senior Design Proposal Presentation, McCoy School of Engineering, Midwestern State University, December 2, 2015.
124. Goodey, G., Fidlar, A., Denawakage Don, V., Hudnell, D., Pemberton, R., Azzouz, S., and Brink, J., "A Pneumatic Dome Shaped Active Road Rumble," Undergraduate Research and Creative Activity Forum, Midwestern State University, November 19, 2015.
125. Gustave, J. C., Tucker, B., Sissel, J., Philip, N., Azzouz, S., "Chain Based Dual Planetary Gear Transmission," Undergraduate Research and Creative Activity Forum, Midwestern State University, November 19, 2015.
126. Moore, W., Lovelace, P., Galbraith, N., Perera, A. N., Mombo, L., Azzouz, S., "Dual Rotors Wind Turbine with Tower Integrated Electricity Generator," Undergraduate Research and Creative Activity Forum, Midwestern State University, November 19, 2015.
127. Peralta, S., Krawietz, J., Virgin, j., McKenzie, A., Vincent, W., Azzouz, S., "Bevel Gear Based Quasi-Continuous Powertrain Transmission," Undergraduate Research and Creative Activity Forum, Midwestern State University, November 19, 2015.
128. Azzouz, S., Brink, J., "Ups and Downs of a Senior Capstone Project," Society of Engineering Science 52nd Technical Meeting, Technology-Enabled Engineering Education Session, October 26- 28, 2015.
129. Azzouz, S., "Leadership in Being Creative & Inventive Understanding the Nature of Technology", Honor program, November 10, 2014.
130. Wilson, D., Duke, K., Ressel, K., Soto, M., Nwoke, J., Azzouz, S., "Gear Based Quasi-Continuous Variable Transmission," IdeaMSU contest organized by the Dillard Business College. Midwestern State University, May 9, 2014, Ranked third.
131. Coffey, C., Dalke, D., Sutton, S., Williams, R., Azzouz, S., "Active Pneumatic Road Rumble System," IdeaMSU contest organized by the Dillard Business College, Midwestern State University, May 9, 2014, Ranked third.
132. Davis, C., Goon, G., Rizan, R., Courtney, C., Azzouz, S., "Alpha Stirling Dish Engine for the Engineering Heat Transfer Lab" IdeaMSU contest organized by the Dillard Business College, Midwestern State University, May 9, 2014, Ranked third.
133. Davis, C., Goon, G., Rizan, R., Courtney, C., Azzouz, S., "Alpha Stirling Dish Engine for the Engineering Heat Transfer Lab" Undergraduate Research and Creative Activity Forum, Midwestern State University, April 25, 2014, Ranked first on the Spring 2014 Forum.
134. Coffey, C., Dalke, D., Sutton, S., Williams, R., Azzouz, S., "Active Pneumatic Road Rumble System," Undergraduate Research and Creative Activity Forum, Midwestern State University, April 25, 2014, Ranked third on the Spring 2014 Forum.
135. Wilson, D., Duke, K., Ressel, K., Soto, M., Nwoke, N., Azzouz, S., "Gear Based Quasi-Continuous Variable Transmission," Undergraduate Research and Creative Activity Forum, Midwestern State University, April 25, 2014.
136. Davis, C., Goon, G., Rizan, R., Courtney, C., Azzouz, S., "Alpha Stirling Dish Engine for the Engineering Heat Transfer Lab" 18th North Texas Area Student Conference, Midwestern State University, April 5, 2014.

137. Coffey, C., Dalke, D., Sutton, S., Williams, R., Azzouz, S., "Active Pneumatic Road Rumble System," 18th North Texas Area Student Conference, Midwestern State University, April 5, 2014.
138. Wilson, D., Duke, K., Ressel, K., Soto, M., Nwoke, N., Azzouz, S., "Gear Based Quasi-Continuous Variable Transmission," 18th North Texas Area Student Conference, Midwestern State University, April 5, 2014.
139. Azzouz, S. "Tunisia after the Revolution," Invited by Dr. Preda M. from Political Science department to lecture about the situation in Tunisia, Midwestern State University, April 3, 2014.
140. Dalke, R., Azzouz, S., "Active Pneumatic Road Rumble System" Presentation at the Texas Academy of Science (TAS 2014), Texas A. & M University at Galveston, Galveston Island, March 7 to 10, 2014.
141. Azzouz, S., "Finite Elements Analysis". UGROW Workshop, Midwestern State University, February 12, 2014.
142. Azzouz, S., "A Comparison between Analytical and Numerical Solutions in Determining Mechanical Part Stresses under Various Load Configurations" at the UGROW faculty presentation session, December 18, 2013.
143. Davis, C., Goon, G., Rizan, R., Courtney, C., Azzouz, S., "Alpha Stirling Dish Engine for the Engineering Heat Transfer Lab" Undergraduate Research and Creative Activity Forum, Midwestern State University, November 22, 2013.
144. Coffey, C., Dalke, D., Sutton, S., Williams, R., Azzouz, S., "Active Pneumatic Road Rumble System," Undergraduate Research and Creative Activity Forum, Midwestern State University, November 22, 2013.
145. Wilson, D., Duke, K., Ressel, K., Soto, M., Nwoke, N., Azzouz, S., "Gear Based Quasi-Continuous Variable Transmission," Undergraduate Research and Creative Activity Forum, Midwestern State University, November 22, 2013.
146. Azzouz, S., Chatterjee, A., Rorabaugh, R., Venegas, C., Duke, K., Smith, C., Weller, J.M. "Active Road Rumble Energy Harvesting Panels," Proceedings of the 2013 ASME International Mechanical Engineering Congress and Exposition, IMECE 2013-64483, San Diego, California, November 15-21, 2013.
147. Azzouz, S. "Tunisia after the Revolution," Invited by Dr. Narayanan S. from Political Science department to lecture about the situation in Tunisia, Midwestern State University, October 21, 2013.
148. Thomas, T., Courtney, W., Azzouz, S., "A New Concept of Capturing Asteroids," UGROW Symposium, Midwestern State University, July 5, 2013.
149. Azzouz, S., "An Introduction to the Laws of Astrodynamics and the Challenges of Space Exploration," UGROW Workshop, Midwestern State University, May 31, 2013.
150. Bates, C., Harasimo, J., Wynn, D., Azzouz, S. "Ion Separation Machine" 17th North Texas Area Student Conference, Midwestern State University, April 13, 2013.
151. Chatterjee, A., Venegas, C., Rorabaugh, R., "Active Road Rumbles Energy Harvesting Machine" 17th North Texas Area Student Conference, Midwestern State University, April 13, 2013.
152. Azzouz, S., "Orbital Mechanics of Space Objects," UGROW Retreat Session, Midwestern State University, March 27, 2013.

153. Azzouz, S., Fagbe, A., Evetts, Z., Rosales, R. “Active Conical and Planetary Gearing System for Wind Turbines,” International Mechanical Engineering Congress and Exposition conference, November 9-15, 2012, Houston, TX.
154. Rorabaugh, R., Azzouz, S., “Energy Harvesting and Recycling,” UGROW Symposium, July 6, 2012. Midwestern State University, Wichita Falls, TX.
155. Azzouz, S., “Energy Harvesting and Recycling,” UGROW Workshop, May 23, 2012. Midwestern State University, Wichita Falls, TX.
156. Alexander, D., Ryan, J., Azzouz, S. “Fire Extinguishing Sapphire System,” IdeaMSU 2012 Contest, Dr. Jeff Stambaugh, Lalani Center for Entrepreneurship and Free Enterprise, May 11, 2012, Midwestern State University, Wichita Falls, TX.
157. Milne, A., Duke, J., Alleyne, A., Azzouz, S.,” Saltwater Desalination Using Ions Concentration Mapping” Senior Design Capstone Project Presentation, May 9, 2012, Midwestern State University, Wichita Falls,
158. Fagbe, A., Evetts, Z., Rosales, R., “Active Conical and Planetary Gearing System for Wind Turbines” Senior Design Capstone Project Presentation, May 9, 2012, Midwestern State University, Wichita Falls,
159. Alexander, D., Ryan, J., Nnorodim, S., Azzouz, S., “Sapphire Fire Suppression System for SAFB” Senior Design Capstone Project Presentation, May 9, 2012, Midwestern State University, Wichita Falls,
160. Milne, A., Duke, J., Alleyne, A., Azzouz, S.,” Saltwater Desalination Using Ions Concentration Mapping” 16th North Texas Area Student Conference, March 31, 2012, Midwestern State University, Wichita Falls,
161. Fagbe, A., Evetts, Z., Rosales, R., “Active Conical and Planetary Gearing System for Wind Turbines” 16th North Texas Area Student Conference, March 31, 2012, Midwestern State University, Wichita Falls,
162. Alexander, D., Ryan, J., Nnorodim, S., Azzouz, S., “Sapphire Fire Suppression System for SAFB” 16th North Texas Area Student Conference, March 31, 2012, Midwestern State University, Wichita Falls,
163. Chatterjee, A., Azzouz, S., “Harvesting Energy at Midwestern State University,” 16th North Texas Area Student Conference, March 31, 2012, Midwestern State University, Wichita Falls,
164. Azzouz, S., “Active Road Mechanisms for Harvesting Energy,” UGROW Retreat Session, February 27, 2012. Midwestern State University, Wichita Falls, TX.
165. Azzouz, S., “Research on Wind Turbines,” Presentation to Dr. Rogers (MSU President), Dr. Alisa White (MSU Provost), Mr. Jim McCoy (CEO Echometer), December 2011, Midwestern State University, Wichita Falls, TX.
166. Azzouz, S., McMullan, D., Dao, A., Brooking, D., Weller, M. “Active Gearing System for Wind Turbines,” International Mechanical Engineering Congress and Exposition (IMECE 2011) conference, November 11-17, 2011, Denver, Colorado.
167. Chatterjee, A., S., Azzouz, S., “Harvesting Energy at MSU,” UGROW Symposium, July 5, 2011. Midwestern State University, Wichita Falls, TX.

168. Azzouz, S., "Energy, Past, Present, and Future," UGROW Workshop, May 27, 2011. Midwestern State University, Wichita Falls, TX.
169. Azzouz, S., Smith, J., Mei, C. "Reduced-Order Nonlinear Stiffness Matrices in Panel Flutter," AIAA 2011-1994, 52nd AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference (International Conference on Structural Dynamics), April 4-7, 2011, Denver, Colorado.
170. Brink, J., Azzouz, S., McDonald, D., Wang, S., Azouz, I., "An Interdisciplinary Engineering Education Model," 2011 American Society for Engineering Education (ASEE) Gulf Southwest Annual Conference, March 9-11, Houston, TX.
171. Azzouz, S., "Energy Harvesting by High Pressure Shock Absorbers," UGROW Retreat Session, February 23, 2011. Midwestern State University, Wichita Falls, TX.
172. Azzouz, S., "Energy, Past, Present, and Future," Faculty Forum, February 16, 2011, Midwestern State University, Wichita Falls, TX.
173. Lawrence, B., Musong, S., Claiborne, P., Knight, C., Azzouz, S. "Educational Gear Train Apparatus," IdeaMSU 2011 Contest, Dr. Jeff Stambaugh, Lalani Center for Entrepreneurship and Free Enterprise (won 1st. place, $600), May 6, 2011, Midwestern State University, Wichita Falls, TX.
174. Dao, A., McMullan, D, Brooking, D., Azzouz, S. "Active Gearing System for Wind Turbine," Senior Design Capstone Project Presentation, May 4, 2011, Midwestern State University.
175. Lawrence, B., Musong, S., Claiborne, P., Knight, C., Azzouz, S. "Educational Gear Train Apparatus," Senior Design Capstone Project Presentation, May 4, 2011, Midwestern State University.
176. Dao, A., McMullan, D, Brooking, D., Azzouz, S. "Active Gearing System for Wind Turbine," 15th North Texas Area Student Conference, April 9, 2011, Midwestern State University.
177. Lawrence, B., Musong, S., Claiborne, P., Knight, C., Azzouz, S. "Educational Gear Train Apparatus," 15th North Texas Area Student Conference, April 9, 2011, Midwestern State University.
178. Musong, S., Azzouz, S. "A Comparison Between Analytical and Finite Element Methods in Determining Shaft Stresses under Various Load Configurations," 15th North Texas Area Student Conference, April 9, 2011, Midwestern State University, Wichita Falls, TX.
179. Azzouz, S., "Career Path for Engineers," Big Brothers Big Sisters/MSU Dream Big College Day, October 15, 2010, Southern Hills Elementary School, Wichita Falls, TX.
180. Nnorodim, S., Azzouz, S., "Energy Harvesting and the Concept of Recycling Energy," UGROW Symposium, July 1, 2010. Midwestern State University, Wichita Falls, TX.
181. Azzouz, S., "Harvesting and Recycling Energy," UGROW Workshop, June 4, 2010. Midwestern State University, Wichita Falls, TX.
182. Masuoka, J., McDonald, D., Azzouz, S., "Enrichment and Isolation of Methanogens from Local Sources & Maintaining Cultures for Use in Biogas Generation," UGROW Retreat Session, May 27, 2010, Midwestern State University, Wichita Falls, TX.
183. Azzouz, S., "Energy Harvesting and the Concept of Recycling Energy," UGROW Retreat Session, May 27, 2010, Midwestern State University, Wichita Falls, TX.

184. Hall, C., Azzouz, S., "Nonlinear Finite Element Analysis of a Rotating MFC Actuator," AIAA 2010-2547, 51st AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference (International Conference on Structural Dynamics), May 12, 2010, Orlando, Florida.
185. Hall, C., Azzouz, S. "Nonlinear Finite Element Analysis of a Rotating MFC Actuator," 14th North Texas Area Student Conference, April 10, 2010, Midwestern State University, Wichita Falls, TX.
186. Anto, K., Azzouz, S. "A Comparison Between Analytical and the Numerical Approach in Determining Stresses under Various Load Configurations," 14th North Texas Area Student Conference, April 10, 2010, Midwestern State University, Wichita Falls, TX.
187. Azzouz, S., "The History, Geography, Economy, and Political Landscape of Tunisia," Invited talk by the French Club (Dr. Stuart McClintock), March 26, 2010, Midwestern State University, Wichita Falls, TX.
188. Azzouz, S., "Energy," Presentation in Dr. Brink's Class Introduction to Engineering, October 5, 2009. Midwestern State University, Wichita Falls, TX.
189. Azzouz, S., "Renewable Energies," Camp BEYOND, ESC Region 9, June 15 and 18 2009, Midwestern State University, Wichita Falls, TX.
190. Azzouz, S.," Variable to Constant Motion Transforming Machines," UGROW Retreat Session, May 28, 2009, Midwestern State University, Wichita Falls, TX.
191. Azzouz, S., "Flow Angle Effects on Supersonic Flutter of Clamped Curved Panels," 50th International Conference on Structural Dynamics, May 4-8, 2009, Palm Springs, California.
192. Ghoman, S., Mei, S., Azzouz, S., "Time Domain Method for Nonlinear Flutter of Curved Panels under Yawed Supersonic Flow at Elevated Temperature," 50th International Conference on Structural Dynamics, May 4-8, 2009, Palm Springs, California.
193. Azzouz, S., "The History, Geography, Economy, and Political Landscape of Tunisia," Political Science Department, Government and Politics of the Middle East Course, Dr. Michael Preda, April 2009, Midwestern State University, Wichita Falls, TX.
194. Baker, N., Daniel, M., Azzouz, S. "Determination of Beams Natural Frequencies," Senior Design Capstone Project Presentation, May 2009, Midwestern State University, Wichita Falls, TX.
195. Cadette, C., Capps, M., Marrast, L., Whittle, L, Azzouz, S. "Solar Tracker System," Senior Design Capstone Project Presentation, May 2009, Midwestern State University, Wichita Falls, TX.
196. Austrie, R., Antoine, D., Franklin, B., Azzouz, S. "Variable Inertia Motion Control Flywheel/Shaft System," Senior Design Capstone Project Presentation, May 2009, Midwestern State University, Wichita Falls, TX.
197. Clemans, J., Davis, N., Noel, D., Taylor, C. A., Azzouz, S. "Variable to Constant Rotational Speed Motion Conversion Machine," Senior Design Capstone Project Presentation, May 2009, Midwestern State University, Wichita Falls, TX.
198. Eloi, D., Marshall, D., Symank, N., Thomas, G., Azzouz, S. "Experimental Refrigeration System," Senior Design Capstone Project Presentation, May 2009, Midwestern State University, Wichita Falls, TX.
199. Davenport, T, Lovelace, W, Pierre, P., Azzouz, S. "Torque Distributing Machine," Senior Design Capstone Project Presentation, May 2009, Midwestern State University, Wichita Falls, TX.

200. Baker, N., Daniel, M., Azzouz, S. "Determination of Beams Natural Frequencies," 13th North Texas Area Student Conference, April 4, 2009, Midwestern State University, Wichita Falls, TX.
201. Cadette, C., Capps, M., Marrast, L., Whittle, L, Azzouz, S. "Solar Tracker System," 13th North Texas Area Student Conference, April 4, 2009, Midwestern State University, Wichita Falls, TX.
202. Austrie, R., Antoine, D., Franklin, B., Azzouz, S. "Variable Inertia Motion Control Flywheel/Shaft System," 13th North Texas Area Student Conference, April 4, 2009, Midwestern State University, Wichita Falls, TX.
203. Clemans, J., Davis, N., Noel, D., Taylor, C. A., Azzouz, S. "Variable to Constant Rotational Speed Motion Conversion Machine," 13th North Texas Area Student Conference, April 4, 2009, Midwestern State University.
204. Eloi, D., Marshall, D., Symank, N., Thomas, G., Azzouz, S. "Experimental Refrigeration System," 13th North Texas Area Student Conference, April 4, 2009, Midwestern State University.
205. Davenport, T, Lovelace, W, Pierre, P., Azzouz, S. "Torque Distributing Machine," 13th North Texas Area Student Conference, April 4, 2009, Midwestern State University.
206. Bataller, C., Azzouz, S., "Wind Speed Control Using PLC's," 13th North Texas Area Student Conference, April 4, 2009, Midwestern State University.
207. Azzouz, S., Azouz, I, "Flow Angle Effects on Supersonic Flutter of Curved Panels," IAJC-NAIT-IJME Joint International Conference on Engineering and Technology, November 17-19, 2008, Nashville, Tennessee,
208. Azzouz, S., "Finite Elements Analysis and Control of Multifunctional Materials," Mechanical Engineering COSM Seminar, November 14, 2008, Midwestern State University.
209. Brink, J., Azzouz, S., "Integrated Mechanical/Manufacturing Engineering," Mechanical Engineering COSM Seminar, November 14, 2008, Midwestern State University.
210. Azzouz, S., "Presented the Senior Design Projects and a Machine Dynamics Lecture to the Visiting American Board of Engineering and Technology, ABET, Auditors," ABET Accreditation of the Mechanical Engineering Program, September 2008, Midwestern State University.
211. Paramo, D., Azzouz, S., "Finite Element Modeling of Multifunctional Materials," UGROW Symposium, July 7, 2008, Midwestern State University, Wichita Falls, TX.
212. Azzouz, S., "Finite Elements Analysis for Biological Systems," UGROW Workshop, June 4, 2008, Midwestern State University.
213. Azzouz, S., "Finite Elements Analysis and Control of Multifunctional Materials," UGROW Retreat Session, May 29, 2008, Midwestern State University, Wichita Falls, TX.
214. Gutierrez, J, Henslee, M, Pagdonsolan, M., Parillon, C., Azzouz, S., Crow, B., Percy, D., Rosella, C., Stradley, R., Williford, J., "X - Tool Project RO99 iTube eXtraction Tool," Project conducted in partnership with Saint-Gobain Vetrotex, America. Senior Design Capstone Project Presentation, May 2008, Midwestern State University.
215. Blackette, S., Meisel, J., Nakanishi, Y., Azzouz, S., "Rotational Speed/Displacement Motion Conversion Machine," Senior Design Capstone Project Presentation, May 2008, Midwestern State University.
216. Ferguson, Z., Holliday, B., John, R., Azzouz, S., "Galvanic Treatment Machine," Senior Design Capstone Project Presentation, May 2008, Midwestern State University.

217. Blackette, S., Meisel, J., Nakanishi, Y, "Rotational Speed/Displacement Motion Conversion Machine," 12th North Texas Area Student Conference, April 5, 2008, Midwestern State University.
218. Holliday, B., John, R., Ferguson, Z., "Flexible Galvanic Treatment Machine," 12th North Texas Area Student Conference, April 5, 2008, Midwestern State University.
219. Parillon, C., Gutierrez, J., Henslee, M., Pagdonsolan, M., "iTube Extraction with X-Tool Using CAE Software, 12th North Texas Area Student Conference, April 5, 2008, Midwestern State University.
220. Ghoman, Mei, C., Azzouz, S., "Frequency Domain Method for Nonlinear Flutter of Curved Panels under Yawed Supersonic Flow at Elevated Temperature," 49th International conference on Structural Dynamics, April 7-10, 2008, Schaumburg, IL.
221. Azzouz, S., "Pre-Flutter Analysis of Curved Panels Using Finite Elements," 49th International conference on Structural Dynamics, April 7-10, 2008, Schaumburg, IL.
222. Azzouz, S., McDonald, D., "Finite Elements Analysis and Control of Multifunctional Materials," Mechanical Engineering COSM Seminar, March 28, 2008, Midwestern State University.
223. Anto, K, Azzouz, S., "Biogas Generation from Organic Waste," UGROW Symposium, July 2007, Midwestern State University.
224. Azzouz, S., "Finite Elements Analysis for Biological Systems," UGROW Workshop, June 2007, Midwestern State University.
225. Azzouz, S. "Waste Management and Sustainable Agricultural Practices," UGROW Retreat Session, May 25, 2007, Midwestern State University.
226. Azzouz, S., Azouz, I., "Non-Linear Flutter of Curved Panels under Yawed Supersonic Flow Using Finite Elements," Faculty Forum, March 6, 2007, Midwestern State University, Wichita Falls, TX.

POSTERS

1. Walmer, C., and Azzouz, S., "Investigating the Combined Nonlinear Behavior of Structural Flat Panels when Subjected to Flutter," at the 23rd/24th Undergraduate Research and Creative Activity Forum presentation, Fall 2024 (November 21, 2024) and Spring 2025 (April 24, 2025).
2. Walmer, C., and Azzouz, S. "Investigating the Nonlinear Effect of Temperature on a Constrained Flat Plate", poster presentation at the Undergraduate Research and Creative Activity Forum, April 18, 2024.
3. Tonge, E., Azzouz, S., "Desalination Concept using Kelvin Dropper Apparatus", Poster presentation, 17th Undergraduate and Creative Activity Forum, Midwestern State University, November 18, 2021/April.
4. Aleman, S., Azzouz, S., "Desalination Process Using an Electric Field Across a Sea Water Channel", Undergraduate and Creative Activity Forum, Midwestern State University, April 7-9, 2021, on Forager virtual platform.
5. Scotland, P., Granger, J., "Salt Ions Removal from a Brine Solution", Undergraduate Research and Creative Activity Forum, Fall 2019.

6. Scotland, P., Granger, J., “Salt Ions Removal from a Brine Solution”, Undergraduate Research and Creative Activity Forum, Spring 2019.
7. Tonge, E., Semper, C., and Azzouz, S., “Data Collection and Analysis from a Wind Turbine and a Photovoltaic Solar Panel”, Undergraduate Research and Creative Activity Forum, Spring 2019.
8. Blair, B., Grantley, S., and Azzouz, S., “Building an Experiment Set-up to Analyze Different types of Materials Using a Portable Spectrometer”, Undergraduate Research and Creative Activity Forum, Fall 2018.
9. Ronoh, M., Anih, N. C., and Azzouz, S., “Data Collection and Analysis from a Wind Turbine and a Photovoltaic Solar Panel”, Undergraduate Research and Creative Activity Forum, Fall 2018.
10. Anih, N. C., Ronoh, M., “Data Collection and Analysis from a Wind Turbine and a Photovoltaic Solar Panel,” Undergraduate Research and Creative Activity (UGRCA) Forum, Spring 2018.
11. Ronoh, M, Hewakuruppu, G., Nyikayaramba, V., “Using the Fourth-Order Runge-Kutta Method to Determine the Dynamic Response of a Free Vibrating Laminated Composite Shallow Shell Panel,” Undergraduate Research and Creative Activity (UGRCA) Forum, Fall 2017.
12. Bhandari, S., Gordon, K., Ezeodum, I., “Large Deflection Non-linear Coefficients of a Free Vibrating Laminated Composite Shallow Shell Panel”, The students did a poster presentation of their research results spring 2017 EURECA project at the Celebration of Scholarship Forum, April 27, 2017, at Midwestern State University.
13. Bhandari, S., Perera, C., “Sodium and Chlorine Ions Concentration Mapping in Saltwater,” The students did a poster presentation of their continued research on the subject at the Celebration of Scholarship Forum, April 27, 2017, at Midwestern State University.
14. Bhandari, S., Gordon, K., Ezeodum, I., “Large Deflection Non-linear Coefficients of a Free Vibrating Isotropic Shallow Shell Panel,” Poster presented at the National Conference on Undergraduate Research (NCUR), University of Memphis, TN - April 6 to 8, 2017
15. Bhandari, S., Perera, C., “Sodium & Chloride Ions Mapping in Saltwater,” Poster presented at the National Conference on Undergraduate Research (NCUR), University of Memphis, TN – April 6 to 8, 2017
16. Perera, C., “Searching for Mechanical Forms and Patterns in Living Creatures”. Mr. Perera did a Poster presentation about his UGROW 2016 project at the Old Guard Technical Poster event at the ASME E-Fest West conference, University of Las Vegas, Las Vegas, Nevada, March 17-19, 2017. His poster was ranked second in the competition.
17. Bhandari, S., “Large Deflection Non-linear Coefficients of a Free Vibrating Laminated Composite Shallow Shell Panel”. Mr. Suman Bhandari did a Poster presentation on behalf of his EURECA teammates Kyle Gordon and Israel Ezeodum at the Old Guard Technical Poster event at the ASME E-Fest West, Las Vegas, Nevada, March 17-19, 2017.
18. Bhandari, S., Gordon, K., Ezeodum, I., “Large Deflection Non-linear Coefficients of a Free Vibrating Isotropic Shallow Shell Panel,” Poster presented at the Undergraduate Research and Creative Activity Forum, November 17, 2016, Midwestern State University.
19. Azzouz, S., UGROW PROGRAM COURSE, summer 2016. I created a poster titled: “Searching for Mechanical Forms and Patterns in Living Creatures” to advertise my UGROW project for the students.

20. Bhandari, S., Perera, C., EURECA spring 2016. Sodium and Chlorite Ion Concentration Mapping in Salt Water. Suman Bhandari and Chanuka Perera did a poster presentation in the UGRCA spring 2016 session.
21. Gustave, J. C., Philip, N., EURECA spring 2016, Large Deflection Non-linear Coefficients of a Free Vibrating Shallow Shell Panel. Jn. Claude Gustave and Nanette Philip did a poster presentation at the UGRCA spring 2016 session.
22. Goon, M., made a poster presentation at the Texas Academy of Science (TAS 2014). The poster title was "Alpha Stirling Dish Engine for the Engineering Heat Transfer Lab".
23. Wilson, D., made a poster presentation at the Texas Academy of Science. The poster title was "Gear Based Quasi-Continuous Variable Transmission".
24. Azzouz, S., presented a poster summarizing his research work on wind turbines titled: Designing a Continuous Variable Transmission for Wind Turbines at the Undergraduate Research and Creative Activity Forums, Spring 2014.
25. Bates, C., Harasimo, J., Wynn, D. presented a poster at the MSU Scholarship Colloquium 2013 about "Ion Separation Machine".
26. Chatterjee, A., Venegas, V., Rorabaugh, R., presented a poster at the MSU Scholarship Colloquium 2013 about "Active Road Rumbles Energy Harvesting Machine".
27. Tarebi, J., St. Hilaire, P., Bello, M., presented a poster at the MSU Scholarship Colloquium 2013 about "Active Conical Gearing System".
28. Fowler, C., Robertson, P., presented a poster at the MSU Scholarship Colloquium 2013 about "Hot Wire Anemometry".
29. Hazel, R., Vincent, D., Martin, R., presented a poster at the MSU Scholarship Colloquium 2013 about "Solar Stirling Engine".
30. Milne, A., Duke, J., Alleyne, D., presented a poster at the MSU Scholarship Colloquium 2012 about: "Saltwater Desalination Using Ions Concentration Mapping".
31. Fagbe, A., Evetts, Z., Rosales, E., presented a poster at the MSU Scholarship Colloquium 2012 about: "Active Conical and Planetary Gearing System for Wind Turbines".
32. Alexander, D., Ryan, J., Nnorodim, S., presented a poster at the MSU Scholarship Colloquium 2012 about: "Sapphire Fire Suppression System for SAFB".
33. Chatterjee, A., presented a poster at the MSU Scholarship Colloquium 2012 about: "Harvesting Energy at Midwestern State University".
34. Musong, S., presented a poster at the 2011 COSM Colloquium about: "Analytical and Numerical Approach Comparison in Determining Shaft Stresses".
35. Lawrence, L., Musong, S., Claiborne, P., Knight, C., presented a poster at the 2011 COSM Colloquium about: "Educational Gear Train Apparatus".
36. McMullan, D., Dao, A., Brooking, D., presented a poster at the 2011 COSM Colloquium about: "Active Gearing System for Wind Turbines".

APPLIED RESEARCH FIELDS (see above activities related to the listed below research fields)

- Water Desalination Research
- Vertical Axis Wind Turbine Design, Wind Turbine Gearboxes and Car Transmissions Design and Research
- Energy Harvesting in Transportation Systems Research

Professional Involvement

- I served as a chair (2023) and co-chair (2021, 2022, and 2024) of the **Engineering Education** Track for the **International Mechanical Engineering Congress and Exposition (IMECE) conference**. The locations where the conferences took place are the following: IMECE 2021: virtual conference due to COVID, IMECE 2022: Columbus, Ohio, IMECE 2023: New Orleans, Louisiana, IMECE 2024: Portland, Oregon. The positions of track chair or track co-chair is an IMECE leadership rotating position that requires a person to serve a maximum of four consecutive years. The track chair and track co-chairs are responsible for the abstracts, papers, presentations review process, and their acceptance or rejection. The whole review process is a peer review process done with the help of a team of topic organizers. The engineering Education Track receives on average a hundred submissions per year, only 60% to 70% on average make it to the conference proceedings.
- Organized the Engineering Education Plenary session at IMECE 2023. I invited Dr. Ting Wang the Director of Energy Conversion and Conservation Center (ECCC) and Matthey Endowed Chair for Energy Research of University of New Orleans (UNO). He is also a Professor at the UNO Department of Mechanical Engineering. Dr. Wang speech was: "Experience in Thermal-flow Science and Clean Energy/Power Engineering Research and Education". The attendance was more than 100 peoples, October 2023.
- Topics-Organizer and Session Chair: Chaired and co-chaired the two sessions of the 1) Applied Mechanics, Dynamic Systems, Experimental and Computational Methods, Advanced Materials and Testing, 2) Teaching Laboratories, Hands-on Experiences, Embedding Novel Manufacturing Concepts in ME Programs, and Technology-Aided Lecturing, October, November 2023.
- Organized the Engineering Education Plenary session at IMECE 2022. Dr. Gunjan Agarwal from the Department of Mechanical Engineering at the Ohio State University was the speaker. Her speech was: Bio-Engineering Pros and Cons of Navigating an Interdisciplinary Field, November 2022.
- Topics and session Organizer: chaired 1) Teaching Laboratories, Hands-on Experiences, Embedding Novel Manufacturing Concepts in ME Programs, and 2) Technology-Aided Lecturing, November 2022.
- Session Chairing: Chaired: 1) Distance/Online Engineering Education, Models and Enabling Technologies, 2) Teaching Laboratories, Hands-on Experiences, Embedding Novel Manufacturing Concepts in ME Programs, and Technology-Aided Lecturing. Co-

chaired: 1) STEM, Learning Factories, 2) Distance/Online Engineering Education, Models and Enabling Technologies, 3) Globalization of Engineering and Problem Solving in Engineering Education, November 2021.

- IMECE Round Table Chairing, the subject treated at the round table is "How To Educate Mechanical Engineers in the Light of Increasing Automation and the Spread of Additive Manufacturing, November 2021.
- Supervised a master student, Project title: "Investigation of the Power Generation by Small-Scale Wind Turbines", Till Rune Gebel Master's Thesis 2021, Department of Mechanics and Maritime Sciences, Division of Fluid Dynamics, Chalmers University of Technology, Gothenburg, Sweden.
- Conducted Senior Design Projects with the industrial companies Saint Gobain (2008), Tranter (2017, 2018, 2019, 2020, 2021), and Arconic Engines (Howmet Aerospace, 2017, 2018, 2019, 2020).
- Involved in the organization of the International Mechanical Engineering Conference and Exposition (IMECE) since 2011. Served as Track chair and co-chair of the Engineering Education areas since 2021, topic organizer for the "Teaching Laboratories, Machine Shop Experiences and Technology-Aided Learning" area since 2016.
- International Mechanical Engineering Conference and Exposition (IMECE 2018), Pittsburg, Pennsylvania, November 9-15, 2018, Served as Topic and Session Organizer for the "Teaching Laboratories, Machine Shop Experiences and Technology-Aided Learning" area, Served as Session Co-Organizer for the "Curriculum Innovations, Pedagogy and Learning Methodologies- I" area.
- Served as Topic Organizer and Session Co-Chair for the "Applied Mechanics, Dynamic Systems and Control Engineering" Session at the International Mechanical Engineering Conference and Exposition (IMECE 2017), Tampa, Florida, November 3-9, 2017.
- Served as Topic Organizer for the "Propulsion Systems and Fuels" Session at the International Mechanical Engineering Conference and Exposition (IMECE 2017), Tampa, Florida, November 3-9, 2017.
- Served as Topic Organizer and Session Chair for the "Teaching Laboratories, Machine Shop Experiences, and Technology-Aided Lecturing" Session at the International Mechanical Engineering Conference and Exposition (IMECE 2016), Phoenix, Arizona, November 11-17, 2016.
- Served as Topic Organizer for the "Propulsion Systems and Fuels" Session at the International Mechanical Engineering Conference and Exposition (IMECE 2016), Phoenix, Arizona, November 11-17, 2016.
- Served as Topic Co-Organizer for the "Applied Mechanics, Dynamic Systems and Control Engineering" Session at the International Mechanical Engineering Conference and Exposition (IMECE 2016), Phoenix, Arizona, November 11-17, 2016.
- Served as Topic Organizer, and Session Chair of the Emerging Technologies in Transportation Industry Session for the International Mechanical Engineering Conference and Exposition (IMECE 2013), San Diego, California, November 15-21, 2013

- Served as Session Co-Chair of Teaching Laboratories, Machine Shop Experience, and Technology-Aided Lecturing-I Session for the International Mechanical, November 15-21, 2013.

Consultations

Actively worked in the framework of senior design with a local company Arconic Engines (2 projects):

- Universal Sprue Fixture with Powered Multi-Axis Rotating Synchronous Parallel Gripper for the AW Bell Cutoff Saw, Fall 2019, Spring 2020.
- Automation of the operations of a dip seal tank for investment casting parts, Fall 2018, Spring 2019.

Actively worked in the framework of senior design with a local company Tranter (4 projects):

- Improve 3D-Printed HX Design and Build Functional Prototype, Fall 2020, Spring 2021.
- Additive Manufacturing Applied to a Tranter 3D MaxChanger Heat Exchanger, Fall 2019, Spring 2020.
- Study of deflection in GPHE products under hydro-pressure, Fall 2018, Spring 2019.
- Study of Gasket Deformation in GPHE Products, Fall 2017, Spring 2018.

Actively worked in the framework of senior design with Sheppard Air Force Base (1 project):

- Built a fire training apparatus, Fall 2008, Spring 2009.

Actively worked in the framework of senior design with saint Gobain (1 projects):

- X – Tool Project RO99 iTube eXtraction Tool, Fall 2007, Spring 2008.

SERVICE

UNIVERSITY

- Member at Large of the American Society of Mechanical Engineers (ASME) Committee on Engineering Education (CEE)
- Member of the International Mechanical Engineering Congress and Exposition Conference, Engineering Education Track
- Active Students' Recruiter for the McCoy School of Engineering: Dallas ISD, Fort Worth ISD college nights.
- Member of the WFISD Engineering Advisory Committee
- Member of the MCOSME Tenure & Promotion Committee
- Member of the University Fringe Benefits Committee
- Member of the Undergraduate Research Opportunities and Summer Workshop (UGROW) Student Selection Committee
- Member of the ABET accreditation committee of the Mechanical Engineering program
- Member of the ABET Self-Study Writing and Revision Committee

- Member of the McCoy School of Engineering Hiring Committee
- Member of the Industrial Advisory Board of the MENG program at MSU
- Former Member of the MSU Provost Hiring Committee, 2023
- Former Member of the MSU MCOSME Dean Hiring Committee, 2024
- Former Member of the MCOSME Teaching Excellence Award Committee
- Former Member of the MCOSME Excellence in Scholarship Award Committee
- Former Member of the MCOSME Faculty Awards Nominee Committee
- Former Member of the EURECA Evaluation Rubric
- Former Member of the MCOSME Research Committee
- Former Member of the MSU Faculty Senate
- Former Director of the Young Engineer Summer Camp (2019, 2021, 2022 YES camp)
- Former Member Global Education Advisory Committee
- Former Member of the MSU Architect Selection Committee
- Former Secretary of the Teaching and Learning Resource Center Committee
- Former Member of the MSU Architect Selection Advisory Committee
- Former Member of the MSU Financial Aid Appeal Committee
- Former Member of the 14th Annual Student Awards Recognition Banquet Committee
- Former member of MSU Grievances Committee
- Former member of the American Democracy Project
- Former Senior Faculty Advisor of Mortar Board Honor Society, 2010
- Former Faculty Advisor of the African Student Association, 2009-present
- Former Faculty Advisor of the American Society of Mechanical Engineers, 2011/2012, 2014/2015
- Instructor at the Young Engineer Summer Camp (YES camp), 2011 to 2019, 2021, 2022.

PROFESSION

- Conducted Senior Design Projects with the industrial companies Tranter (2017, 2018, 2019, 2020), and Arconic Engines (Howmet Aerospace, 2017, 2018, 2019, 2020).
- International Mechanical Engineering Conference and Exposition (IMECE 2019), Salt Lake City, Utah, November 11-14, 2019.
  Served as Track Co-organizer of the Engineering Education areas, Topic Organizer for the "Teaching Laboratories, Machine Shop Experiences and Technology-Aided Learning" area.
- International Mechanical Engineering Conference and Exposition (IMECE 2018), Pittsburg, Pennsylvania, November 9-15, 2018
  Served as Topic and Session Organizer for the "Teaching Laboratories, Machine Shop Experiences and Technology-Aided Learning" area, Served as Session Co-Organizer for the "Curriculum Innovations, Pedagogy and Learning Methodologies- I" area.

- Served as Topic Organizer and Session Co-Chair for the “Applied Mechanics, Dynamic Systems and Control Engineering” Session at the International Mechanical Engineering Conference and Exposition (IMECE 2017), Tampa, Florida, November 3-9, 2017.
- Served as Topic Organizer for the “Propulsion Systems and Fuels” Session at the International Mechanical Engineering Conference and Exposition (IMECE 2017), Tampa, Florida, November 3-9, 2017.
- Served as Topic Organizer and Session Chair for the “Teaching Laboratories, Machine Shop Experiences, and Technology-Aided Lecturing” Session at the International Mechanical Engineering Conference and Exposition (IMECE 2016), Phoenix, Arizona, November 11-17, 2016.
- Served as Topic Organizer for the “Propulsion Systems and Fuels” Session at the International Mechanical Engineering Conference and Exposition (IMECE 2016), Phoenix, Arizona, November 11-17, 2016.
- Served as Topic Co-Organizer for the “Applied Mechanics, Dynamic Systems and Control Engineering” Session at the International Mechanical Engineering Conference and Exposition (IMECE 2016), Phoenix, Arizona, November 11-17, 2016.
- Served as Topic Organizer, and Session Chair of the Emerging Technologies in Transportation Industry Session for the International Mechanical Engineering Conference and Exposition (IMECE 2013), San Diego, California, November 15-21, 2013
- Served as Session Co-Chair of Teaching Laboratories, Machine Shop Experience, and Technology-Aided Lecturing-I Session for the International Mechanical, November 15-21, 2013.
- Conducted Senior Design Projects with the industrial companies Saint Gobain (2008).

Technical Society Membership

- ASMEAmerican Society of Mechanical Engineers
- AIAA American Institute of Aeronautics and Astronautics
- Texas Computer Education Association (TCEA)

Reviewer for the following Journals

- American Institute of Aeronautics and Astronautics (AIAA) Journal
- Aerospace Science & Technology Journal
- Recent Advances in Structural Dynamics Conference, RASD
- International Mechanical Engineering Congress & Exposition, IMECE
- International Association of Journal and Conference, IAJC

COMMUNITY

- Attending College Nights to recruit engineering students, Fort Worth ISD, Dallas ISD, Denton ISD, Arlington IDS, and Denison ISD.
- Advisor of the Engineers for Sustainable World Society.
- Former Advisor of the Sri Lankan Student Organization Chapter at MSU.
- Former Advisor of the American Society of Mechanical Engineers Student Organization Chapter at MSU.
- Former advisor of the African Student organization Chapter at MSU.
- Member of the Wichita Falls ISD Career and Technical Education Center Advisory Board.
- Former member of the Executive Board of North Texas TechPrep Consortium
  Tech Prep programs, 2009-2011.
- Keynote speaker at the Region 9 Math and Science Conference in Wichita Falls: "Future Engineering Challenges", June 2011.
- Presenter at Big Brothers Big Sisters/MSU Dream Big College day; "Career Path for Engineers", October 2010.
- Member of the organizing committee for the Technology Student Association (TSA), 2009-present
- Judge at the Texas Computer Education Association State Robotic Contest, 2008-2009
- Member of the committee organizing the Area 9 Robotic Contest, Texas Computer Education Association (TCEA) at Midwestern State University, 2008-present
- Judge at the Texas Computer Education Association Regional Robotic Contest, MSU, 2008-present
- Judge at the Red River Regional Science and Engineering Fair, 2009
- Judge at the Regional Junior Engineering Technical Society (JETS), 2009-2010

HONORS AND AWARDS:

- Named the Chair of the International Mechanical Engineering Congress and Exposition (IMECE) Engineering Education Track, 2023.
- Named Member at Large of the American Society of Mechanical Engineers (ASME) Committee on Engineering Education, 2022.
- Named 2017 Hardin Professor at Midwestern State University.
- Elected by the students as the best teaching faculty at the McCoy of Engineering, 2012, 2013, 2014, 2015, and 2017.
- Award of Appreciation plaque from the Senior Mechanical Engineering Students (2014 promotion).
- Recognition plaque from the African Student Organization, 2011
- Certificate of Appreciation, COSM, Midwestern State University, 2007
- Recognized by Mortar Board as exemplary professor, leader, and mentor, 2007

- Old Dominion Reward for Excellence for Graduate Assistants, 2004, Old Dominion University
- Old Dominion Faculty Award in Engineering Mechanics, 2002/2004, Old Dominion University
- Forty Dominion Scholars Scholarship Award, 2000, Old Dominion University