

- Department of Energy (DOE), **PI**, “A small volume, property measurement-based, pre-screening approach for sustainable aviation fuels enabled by functional relationship development using multi-fidelity machine learning algorithms” – September 2022 (\$1.14M, ; My share: \$310,000).
- Office of Naval Research (ONR), **PI**, “Molten particle adhesion study in a multiphase turbine test rig” – June 2022 (\$60,724).
- LaSPACE, Research Enhancement Program (REA)**PI**, “Investigation of high-speed particle-laden jets simulating rocket plume impingement” – September 2020 (\$33,500).
- LaSPACE, Graduate Student Research Assistance (GSRA)**PI**, ”Development of a shock tube apparatus for fuel spray breakup studies” –August 2020. (\$8,000).
- LaSPACE, Graduate Student Research Assistance (GSRA)**PI**, “Development of a hardware-in-the-loop test platform for hybrid aircraft powertrains” – August 2019 (\$8,000).
- Louisiana NASA EPSCoR, Research Awards Program (RAP)**PI**, “Development of a distributed airblast-atomized liquid fuel injection system for low-emission aircraft gas turbine engines” – January 2019 (\$40,000).
- Department of Air Force - Research Laboratory (AFRL) **Co-PI**, “Investigation of hybrid powertrains for small unmanned aircraft systems” – August 2018 (\$310,000; My share: \$103,000).
- LSU Discover, Undergraduate student research **PI**, “A distributed liquid fuel injection system to achieve low emission gas turbine engines for aircraft propulsion” – January 2018 (\$1,000).
- LaSPACE, Graduate Student Research Assistance (GSRA)**PI**, “Water spray characterization for cooling rocket engine exhaust plumes” – October 2017 (\$8,000).
- LaSPACE, Research Enhancement Program (REA)**PI**, “Tunable laser diode based temperature measurements in a rocket engine exhaust plume” – July 2017 (\$32,875).
- NSF EPSCoR sponsored Travel Grants for Emerging Faculty (TGEF) – June 2017 (\$1,200).
- Department of Energy (DOE), Co-optimization of Fuels and Engines (Co-Optima), **Co-PI**, “Micro-Liter Fuel Characterization and Property Prediction” – March 2017 (\$1.6M; My share: \$300,000).
- Louisiana NASA EPSCoR, Research Awards Program (RAP)**PI**, “An experimental investigation of cooling water spray on a rocket exhaust plume” – January 2017 (\$40,000).

HONORS AND AWARDS

- NSF CAREER award, 2022
- Worley Professor of Excellence Award, 2023
- CEFRC postdoctoral research fellowship: Two-year postdoctoral fellowship, USC and Princeton, 2013-2015.
- Member of rotorcraft design team that won **2nd** prize at the annual AHS graduate student design competition
- Ratan and JRD Tata scholarships for academic merit (VJTI, Mumbai).

BOOK CHAPTER

1. S. Menon and C.Cadou, “Small Scale Reciprocating Engines”, in Microscale Combustion and Power Generation(2014), edited by C. Cadou, Y. Ju, and K. Maruta, Momentum Press.

JOURNAL PUBLICATIONS

1. Leung, J., Gurunadhan, M., Menon, S., Single and two-phase fluid droplet breakup in impulsively generated high-speed flow. *Shock Waves*, Vol. 33, 385–399, 2023. <https://doi.org/10.1007/s00193-023-01145-2>
2. Viswamithra, V., Gurunadhan, M., Menon, S., Expanding swirl combustor operability on methane-ammonia-air mixtures using a distributed fuel injection technique and inlet air preheating. *International Journal of Hydrogen Energy*, Vol. 48(3), 1189-1201, 2023. <https://doi.org/10.1016/j.ijhydene.2022.09.243>
3. Noël, A., Ashbrook, D. G., Xu, F., Cormier, S. A., Lu, L., O’Callaghan, J. P., Menon, S., Zhao, W., Penn, A. L., Jones, B. C., Genomic Basis for Individual Differences in Susceptibility to the Neurotoxic Effects of Diesel Exhaust. *International Journal of Molecular Sciences*, Vol. 23(20), 12461, 2022. <https://doi.org/10.3390/ijms232012461>
4. Menon, S., Gurunadhan, M., Droplet behavior in overexpanded supersonic two-phase jets. *International Journal of Multiphase Flow*, 2022. <https://doi.org/10.1016/j.ijmultiphaseflow.2022.104076>
5. Viswamithra, V., Menon, S., A Distributed Fuel Injection Approach to Suppress Lean Blow-Out and NOx Emissions in a Methane-Ammonia-Fueled Premixed Swirl Combustor. *Journal of Engineering for Gas Turbines and Power*, 2022. <https://doi.org/10.1115/1.4054105>
6. Dang, W., Gurunadhan, M., Ard, W., Schoegl, I., Menon, S., Droplet Evaporation-Based Approach for Microliter Fuel Property Measurements. *International Journal of Thermophysics*, Vol. 43(4), 1-27, 2022. <https://doi.org/10.1007/s10765-022-02987-1>
7. Dang, W., Gurunadhan, M., Schoegl, I., Menon, S., Temperature effects on droplet oscillation with application to fuel property measurement. *Atomization and Sprays*, Vol. 31(10), 2021. <https://doi.org/10.1615/AtomizSpr.2021039068>
8. Dehesa, D., Menon, S., Dynamic analysis of a series hybrid-electric powertrain for an unmanned aerial vehicle. *Journal of Propulsion and Power*, 2022, Vol. 38(1), 84-96. <https://doi.org/10.2514/1.B38261>
9. Dang, W., Zhao, W., Schoegl, I., Menon, S., A small-volume, high-throughput approach for surface tension and viscosity measurements of liquid fuels. *Measurement Science and Technology*, Vol. 31(9), 2020. <https://doi.org/10.1088/1361-6501/ab8b23>
10. Jones, H., Menon, S., Liquid jet penetration and breakup in a free supersonic gas jet. *Experiments in Fluids*, Vol. 60(161), 2019. <https://doi.org/10.1007/s00348-019-2812-4>
11. Menon, S., Ganti, H., Niemeyer, K., and Hagen, C., Effects of oil and water contamination on natural gas engine combustion processes. *Journal of Natural Gas Science and Engineering*, Vol. 41, 30-39 2017. <https://doi.org/10.1016/j.jngse.2017.02.038>
12. Deng, Y., Menon, S., Lavrich, Z., Wang, H., and Hagen, C., Design, simulation, and testing of a novel micro-channel heat exchanger for natural gas cooling in automotive applications. *Applied Thermal Engineering*, Vol. 110, 327-334, 2017. <http://dx.doi.org/10.1016/j.applthermaleng.2016.08.193>
13. Menon, S., Boettcher, P.A., Ventura, B., and Blanquart, G., Hot surface ignition of n-hexane in air. *Combustion and Flame*, Vol. 163, 42-53, 2016. <http://dx.doi.org/10.1016/j.combustflame.2015.08.011>

14. Chatelain, K., Mevel, R., Menon, S., Blanquart, G., and Shepherd, J., Ignition and chemical kinetics of acrolein-oxygen-argon mixtures behind reflected shock waves. *Fuel*, Vol. 135, 498-508, 2014. <http://dx.doi.org/10.1016/j.fuel.2014.07.004>
15. Boettcher, P.A., Menon, S., Blanquart, G., and Shepherd, J., Cyclic flame propagation in premixed combustion. *Journal of Fluid Mechanics*, Vol. 735, 176-202, 2013. <http://dx.doi.org/10.1017/jfm.2013.495>
16. Menon, S., and Cadou, C., Investigation of combustion processes in miniature internal combustion (IC) engines. *Combustion Science and Technology*, Vol. 185(11), 1667-1695, 2013. <http://dx.doi.org/10.1080/00102202.2013.829720>
17. Menon, S., Boettcher, P.A., and Blanquart, G., Enthalpy based modeling of hot-surface ignition and flame propagation. *Combustion and Flame*, Vol. 160(7), 1242-1253, 2013. <http://dx.doi.org/10.1016/j.combustflame.2013.02.008>
18. Menon, S., and Cadou, C., Scaling of miniature piston engine performance –Part II: Engine loss mechanisms. *AIAA Journal of Propulsion and Power*, Vol. 29(4), 788-799, 2013. <http://dx.doi.org/10.2514/1.B34639>
19. Menon, S., and Cadou, C., Scaling of miniature piston engine performance -Part I: Overall engine performance. *AIAA Journal of Propulsion and Power*, Vol. 29(4), 774-787, 2013. <http://dx.doi.org/10.2514/1.B34638>
20. Menon, S., Moulton, N., and Cadou, C., Development of a dynamometer for measuring small internal-combustion engine performance. *AIAA Journal of Propulsion and Power*, Vol. 23(1), 194-202, 2007. <http://dx.doi.org/10.2514/1.19825>

REFEREED
CONFERENCE
PAPERS

1. J. Leung, M. Gurunadhan, S. Menon, “Investigation of Droplet Aerobreakup Using Non-Intrusive Diagnostics and Numerical Simulations”, *AIAA Scitech Forum*, January 23-27, 2023, National Harbor, MD, USA.
2. C. Becnel, M. Gurunadhan, S. Menon, “Small-Scale Hybrid Rocket Combustor Temperature and Water Concentration Measurements using Near-Infrared Tunable Diode Laser Absorption Spectroscopy ”, *AIAA Scitech Forum*, January 23-27, 2023, National Harbor, MD, USA.
3. V. Viswamithra, M. Gurunadhan, S. Menon, “A distributed fuel injection enabled approach for two-zone combustion of methane-ammonia-air mixtures”, *AIAA Scitech Forum*, January 23-27, 2023, National Harbor, MD, USA.
4. M. Gurunadhan, V. Viswamithra, K. Gonthier, A. Baran, S. Menon, “A numerical investigation of melt layer effects on hybrid combustion of liquefying fuels”, 2022 Spring Technical Meeting of the Eastern States Section of the Combustion Institute, March 6-9, 2022, Orlando, FL, USA.
5. J. Leung, M. Gurunadhan, S. Menon, “Experimental and computational study of droplet-shockwave interaction for pure fluids and nanofluids”, 2022 Spring Technical Meeting of the Eastern States Section of the Combustion Institute, March 6-9, 2022, Orlando, FL, USA.
6. V. Viswamithra, M. Gurunadhan, S. Menon, “A study on the impact of elevated air temperatures on flame stability and NOx emissions of methane-ammonia-air mixtures in a premixed swirl combustor”, 2022 Spring Technical Meeting of the Eastern States Section of the Combustion Institute, March 6-9, 2022, Orlando, FL, USA.

7. C. Becnel, M. Gurunadhan, S. Menon, "Temperature measurements in the reaction zone of a small scale hybrid rocket combustor using near-infrared tunable diode laser absorption spectroscopy", 2022 Spring Technical Meeting of the Eastern States Section of the Combustion Institute, March 6-9, 2022, Orlando, FL, USA.
8. D. Dehesa, M. Monju, S. Menon, "Modeling and Testing of Control Logic Approaches for Series Hybrid-Electric Powertrains for Unmanned Aerial Systems", AIAA Propulsion and Energy Forum, August 24-26, 2020, New Orleans, LA, USA.
9. V. Viswamithra, S. Menon, "Development of an additively manufactured liquid swirl combustor with ammonia addition for soot reduction", AIAA Propulsion and Energy Forum, August 24-26, 2020, New Orleans, LA, USA.
10. J. Leung, M. Gurunadhan, S. Menon, "Design and Test of a Shock Tube Facility to Investigate Droplet Aerobreakup", AIAA Propulsion and Energy Forum, August 24-26, 2020, New Orleans, LA, USA.
11. W. Dang, S. Menon, "Determination of heat of vaporization and vapor pressure by micro-liter fuel droplet vaporization", AIAA Propulsion and Energy Forum, August 24-26, 2020, New Orleans, LA, USA.
12. M. Gurunadhan, S. Menon, A. Baran, "Numerical Simulation of Combustion in a Hybrid Rocket with Liquefying Fuels", AIAA Propulsion and Energy Forum, August 19-22, 2019, Indianapolis, IN, USA.
13. D. Dehesa, S. Menon, "Modeling of Hybrid-Electric Powertrain for Unmanned Aerial Systems", AIAA Propulsion and Energy Forum, August 19-22, 2019, Indianapolis, IN, USA.
14. S. Menon, H. Jones, J. Leung, W. Zhao, "Characterization of spray structures formed during water injection into a free supersonic air jet", AIAA Propulsion and Energy Forum, August 19-22, 2019, Indianapolis, IN, USA.
15. W. Dang, S. Menon, "Small-volume, High-throughput Techniques for Fuel Physical Property Measurements", AIAA Propulsion and Energy Forum, August 19-22, 2019, Indianapolis, IN, USA.
16. H. Jones, S. Menon, "Investigation of water jet breakup behavior in crossflow with a supersonic air jet", ICLASS 2018: 14th International conference on liquid atomization & spray systems, July 22-26, 2018, Chicago, USA.
17. W. Dang, W. Zhao, S. Menon, "Evaporation of single droplets of multicomponent liquid fuel blends at elevated temperatures", ICLASS 2018: 14th International conference on liquid atomization & spray systems, July 22-26, 2018, Chicago, USA.
18. H. Jones, V. Rajora, S. Menon, "Investigation of water jet breakup by supersonic rocket exhaust", AIAA Propulsion and Energy Forum, July 9-11, 2018, Cincinnati, OH, USA.
19. Z. Lavrich, Z. Taie, S. Menon, S. Daly, D. Halliday, C. Hagen, "Internal Combustion Engines as Fluidized Bed Reactors", ASME 2017 Internal Combustion Engine Division Fall Technical Conference, Seattle, Washington, USA, October 15-18, 2017.
20. S. Menon, Z. Taie, C. Hagen, "Internal combustion engines as chemical reactors: Issues and challenges", 2016 Spring technical meeting, Western states section of the combustion institute, University of Washington, Seattle, WA, Mar. 20-22, 2016.
21. S. Menon, K. Weyer, D. Pedersen, C. Hagen, "Self-regulating system for natural gas cooling in a bimodal internal combustion engine", Proceedings of the ASME

- Internal Combustion Engine Division Fall Technical Conference, ICEF2015, November 8-11, 2015, Houston, Texas, USA.
22. S. Brown, S. Menon, C. Hagen, "Investigation of scaling laws for combustion engine performance", Western States Section of the Combustion Institute, Fall 2015 Meeting, Provo, UT, Oct. 5-6, 2015.
 23. S. Menon, R. Zhao, J. Jayachandran, F.N. Egolfopoulos, "Effects of flamelet configuration on chemistry tabulation", Western States Section of the Combustion Institute, Fall 2015 Meeting, Provo, UT, Oct. 5-6, 2015.
 24. S. Menon, H. Ganti, C. Hagen, "Development and analysis of micro-channel heat exchangers for natural gas cooling", 13th International Conference on Nanochannels, Microchannels, and Minichannels, ICNMM2015, July 6-9, 2015, San Francisco, California, USA.
 25. S. Menon, H. Ganti, K. Niemeier, C. Hagen, "Effect of natural gas conditions on combustion characteristics and overall performance of a novel bimodal internal combustion engine", 9th U.S Combustion institute meeting, Cincinnati, OH, May 17-20, 2015.
 26. K. Souflas, S. Menon, G. Paterakis, E. Dogkas, P. Koutmos, V. Gururajan, F.N. Egolfopoulos, "Determination of Laminar Flame Speeds Using Axisymmetric Bunsen Flames: Intricacies and Accuracy", 9th Mediterranean Combustion Symposium, Jun. 7-11, 2015.
 27. S. Menon, R. Zhao, J. Jayachandran, F.N. Egolfopoulos, "Evaluating flamelet configuration for simulating stretched laminar flames", Western States Section of the Combustion Institute, Spring 2014 Meeting, Pasadena, CA, Mar. 24-25, 2014.
 28. S. Coronel, S. Menon, R. Mevel, G. Blanquart, J. Shepherd, "Ignition of Nitrogen Diluted Hexane-Oxygen Mixtures by Moving Heated Particles", 24th International Colloquium on the Dynamics of Explosions and Reactive Systems Taipei, Taiwan, July 28 - August 2, 2013.
 29. S. Menon, G. Blanquart, "Investigation of ignition dynamics in a mixing layer with a vortex", 8th U.S Combustion institute meeting, Park City, UT, May 19-23, 2013.
 30. S. Menon, P. Boettcher, B. Ventura, J. Shepherd, G. Blanquart, "A tabulated chemistry approach to predict transient ignition phenomena in flammable mixtures", 14th International conference on numerical combustion, San Antonio, TX, Apr. 8-10, 2013.
 31. S. Menon, P. Boettcher, B. Ventura, G. Blanquart, J. Shepherd, "Investigation of hot surface ignition of a flammable mixture", Western States Section of the Combustion Institute, Spring 2012 Meeting, Tempe, AZ, Mar. 18-19, 2012.
 32. P. Boettcher, J. Shepherd, S. Menon, G. Blanquart, B. Ventura, "Hot-surface ignition and flame propagation", Western States Section of the Combustion Institute, Fall 2011 Meeting, Riverside, CA, Oct. 16-18, 2011.
 33. S. Menon, P. Boettcher, G. Blanquart, "Enthalpy based modeling of hot-surface ignition and flame propagation", Western States Section of the Combustion Institute, Fall 2011 Meeting, Riverside, CA, Oct. 16-18, 2011.
 34. P. Boettcher, B. Ventura, J. Shepherd, S. Menon, G. Blanquart, "Experimental investigation of hot surface ignition of hydrocarbon-air mixtures", 7th U.S Combustion institute meeting, Atlanta, GA, Mar. 20-23, 2011.
 35. S. Menon, G. Blanquart, P. Boettcher, B. Ventura, J. Shepherd, "Modeling hot-surface ignition of hydrocarbon-air mixtures", 7th U.S Combustion institute meeting, Atlanta, GA, Mar. 20-23, 2011.

36. S. Menon, C. Cadou, "Investigation of combustion processes in miniature internal combustion (IC) engines", 7th U.S Combustion institute meeting, Atlanta, GA, Mar. 20-23, 2011.
37. S. Menon, C. Cadou, "Performance scaling in miniature internal combustion engines", Eastern states section meeting of the combustion institute, College Park, MD, Oct. 18-21, 2009.
38. S. Menon, C. Cadou, "Investigation of performance scaling in small internal combustion engines", Eastern states section meeting of the combustion institute, Charlottesville, VA, Oct. 21-24, 2007.
39. S. Menon, C. Cadou, "Experimental and computational investigation of small internal combustion engine performance", 5th U.S Combustion institute meeting, San Diego, CA, Mar. 25-28, 2007.
40. S. Menon, C. Cadou, "Scaling of losses in small IC aero engines with engine size", AIAA-2004-690, 42nd AIAA Aerospace Sciences Meeting and Exhibit, Reno, Nevada, Jan. 5-8, 2004.
41. S. Menon, N. Moulton, C. Cadou, "Performance measurement and scaling in small internal combustion engines", AIAA-2003-0671, 41st AIAA Aerospace Sciences Meeting and Exhibit, Reno, Nevada, Jan. 6-9, 2003.

NON-REFEREED
CONFERENCE
PRESENTATIONS

1. W. Dang, I. Schoegl, S. Menon, "Droplet-based fuel property measurement techniques", presented at ACS Fall Meeting 2021, August 22-26, 2021, Atlanta, GA, USA.
2. W. Dang, S. Menon, "Physical property measurement of primary reference fuels and blends using a droplet generator and high-speed imaging", 71st Annual Meeting of the APS Division of Fluid Dynamics, Atlanta, GA, Nov. 18-20, 2018.
3. H. Jones, S. Menon, "Water jet interaction with supersonic air jet", 71st Annual Meeting of the APS Division of Fluid Dynamics, Atlanta, GA, Nov. 18-20, 2018.
4. W. Dang, W. Zhao, S. Menon, "Investigation of a piezoelectric droplet delivery method for fuel injection and physical property evaluation", 70th Annual Meeting of the APS Division of Fluid Dynamics, Denver, CO, Nov.19-21, 2017.
5. H. Jones, C. Jeansonne, S. Menon, "Investigation of Cooling Water Injection into Supersonic Rocket Engine Exhaust", 70th Annual Meeting of the APS Division of Fluid Dynamics, Denver, CO, Nov. 19-21, 2017.
6. Z. Lavrich, Z. Taie, S. Menon, W. Beckwith, S. Daly, D. Halliday, C. Hagen, "Internal Combustion Engines as Fluidized Bed Reactors", 69th Annual Meeting of the APS Division of Fluid Dynamics, Volume 61, Number 20, Portland, Oregon, November 20-22, 2016.
7. S. Menon, G. Blanquart, "Investigation of ignition dynamics in a mixing layer with a vortex", 65th Annual Meeting of the APS Division of Fluid Dynamics, San Diego, CA, Nov. 20-22, 2012.
8. S. Menon, G. Blanquart, P. Boettcher, J. Shepherd, "Puffing flame instability - Part I: Numerical investigation and analysis", 64th Annual Meeting of the APS Division of Fluid Dynamics, Baltimore, MD, Nov. 20-22, 2011.
9. P. Boettcher, J. Shepherd, S. Menon, G. Blanquart, "Puffing flame instability - Part II: Predicting the onset and frequency", 64th Annual Meeting of the APS Division of Fluid Dynamics, Baltimore, MD, Nov. 20-22, 2011.

TEACHING
EXPERIENCE

Oregon State University

Thermodynamics (ME 312), Winter 2015

Introduction to Engineering Computing (ENGR112), Winter 2016

Louisiana State University

ME 7433 Advanced Heat Transfer- I –*Fall 2016*

Graduate core course, Lecture hall based, 6 students

ME 7443 Advanced Heat Transfer - II –*Spring 2024*

Graduate core course, Lecture hall based, 10 students

ME 4621 Thermal Systems Laboratory –*Spring 2017, Spring 2018*

Undergraduate core laboratory course, 12-15 students

ME 2543 Simulation Methods for Mechanical Engineers –*Fall 2017, Spring 2021, Fall 2022*

Undergraduate core course, Lecture hall based, 25-50 students

ME 4933 Aircraft Propulsion –*Spring 2018, Spring 2019*

Undergraduate aerospace technical elective course, Lecture hall based, 20-25 students

ME 4943 Rocket Propulsion –*Fall 2018, Fall 2019*

Undergraduate aerospace technical elective course, Lecture hall based, 20-25 students

ME 4943 Rotorcraft Aerodynamics –*Fall 2020, Fall 2021*

Undergraduate aerospace technical elective course, Lecture hall based, 13-15 students

ME 2334 Thermodynamics –*Spring 2020, Fall 2020, Fall 2021*

Undergraduate core course, Lecture hall based, 60-100 students

ME 4433 Heat Transfer – *Spring 2022*

Undergraduate core course, Lecture hall based, 41 students

ME 4943 Flight Mechanics – *Fall 2022, Fall 2023*

Undergraduate aerospace technical elective course, Lecture hall based, 15-20 students

ME 4843 Gas Dynamics – *Spring 2023, Spring 2024*

Undergraduate aerospace technical elective course, Lecture hall based, 14-22 students

GRADUATE
STUDENT
SUPERVISION

- Hansen Jones (M.S.) - *2018*; Propulsion engineer II at SpaceX, California
- Darren Dehesa (M.S.) - *2020*; Manufacturing engineer for Boeing at Michoud Assembly Facility
- Wanjun Dang (Ph.D.) - *2021*; Post-doctoral researcher at the National Renewable Energy Laboratory (NREL)
- Connor Becnel (Accelerated M.S.) - *2022*; Thermal Systems Engineer, Bascom Hunter
- Varun Viswamithra (Ph.D.) - *2023*; Post-doctoral researcher at University of California - Irvine
- Mohana Gurunadhan (Ph.D.) - *2024, minor advisor*; Ansys Fluent
- James Leung (Ph.D.) - *expected graduation 2024*
- Joshua Moore (Ph. D.) - *expected graduation 2027*
- Naga Chaitanya (Ph. D.) - *expected graduation 2027*

UNDERGRADUATE
STUDENT
SUPERVISION

Mentored over 20 undergraduate students in conducting independent research on a number of different research projects.

INVITED TALKS

- “Ammonia combustion research at Louisiana State University”, DOE NETL Ammonia combustion technology group meeting, July 11, 2023.
- “Energy and propulsion research at Louisiana State University”, NASA Glenn Research Center, Cleveland, OH, June 26, 2019.
- “Scaling of performance and losses in miniature internal combustion engines”, Air Force Research Laboratory, Dayton, OH, October 26, 2017.
- “Scaling of performance and losses in miniature internal combustion engines”, Aerospace and Mechanical engineering seminar, University of Arizona, Tucson, AZ, April 19, 2016.
- “Scaling of performance and losses in miniature internal combustion engines”, Faculty candidate seminar, Louisiana State University, Baton Rouge, LA, Feb. 15, 2016.
- “Performance measurement and scaling in small internal combustion engines”, Faculty candidate seminar, Marquette University, Jan. 22, 2016.
- “Numerical modeling of ignition and flame propagation phenomena for aircraft fuel tank safety”, AME department seminar, University of Southern California, Los Angeles, CA, Nov.18, 2014.
- “Computational strategies for modeling sustainable-energy approaches in transportation”, The 14th annual CALTECH alumni college, California Institute of Technology, Pasadena, CA, Sept. 16-17, 2011.

PEER REVIEW - JOURNALS

AIAA Journal of Propulsion and Power; AIAA Journal; Aerospace Science and Technology; Applied Thermal Engineering; Energy and Fuels; Elsevier E-Prime; SAE International Journal of Fuels and Lubricants; ASME Journal of Biomechanical Engineering; ASME Journal of Heat Transfer; Combustion Theory and Modeling; Combustion Science and Technology; Combustion and Flame; Energy Engineering; Fluids; Chemical Engineering Journal; Science China Technological Sciences

PEER REVIEW - CONFERENCES

- AIAA Propulsion and Energy Forum (2020,2021,2023)
- Symposium (International) on Combustion (2014, 2016, 2020, 2022)
- SAE World Congress (2016, 2017, 2018, 2019,2020)
- International Conference on Liquid Atomization Sprays and Systems (2018)
- International Powertrain Fluids and Lubricants meeting (2018)

BOOK REVIEW

- “Experimental design of aero engine combustor casing”, Sashi Kanta Panigrahi and Niranjana Sarang, Published June 9, 2017, CRC Press, Taylor and Francis Group.

PROPOSAL
REVIEW

- Department of Energy - Office of Science
- Department of Energy - EPSCoR
- National Science Foundation - Fluid Dynamics (CBET)
- National Science Foundation - CAREER

PROFESSIONAL
MEMBERSHIP

Member of American Institute of Aeronautics and Astronautics (AIAA), American Physical Society (APS), Combustion Institute, Society for Industrial and Applied Mathematics (SIAM), and Society of Automobile Engineers (SAE).

PROFESSIONAL
SERVICES

- *Committee Member*: AIAA Propellants and Combustion Technical Committee
- *Subcommittee Member*: AIAA Propellants and Combustion Publications
- *Panel discussion organizer*: Organized a panel discussion on Nuclear Thermal Propulsion for AIAA Scitech 2024 Meeting, Orlando, FL, USA, January 8–12.
- *Session Organizer*: 2018 SAE International Powertrains, Fuels and Lubricants (IPF&L) Meeting, San Antonio, TX, USA, September 17–20, Fuel Injection and Sprays.
- *Session Organizer & Session Chair*: 14th International conference on liquid atomization and spray systems, July 22–26, 2018, University of Illinois - Chicago, Chicago, IL, USA, July 22–26.
- *Session Organizer*: 2020 SAE World Congress, Detroit, Michigan, USA, April 4–6, Fuel Injection and Sprays.
- *Session Organizer*: 2019 SAE World Congress, Detroit, Michigan, USA, April 4–6, Fuel Injection and Sprays.
- *Session Organizer*: 2018 SAE World Congress, Detroit, Michigan, USA, April 4–6, Fuel Injection and Sprays.
- *Session Organizer*: 2017 SAE World Congress, Detroit, Michigan, USA, April 4–6, Fuel Injection and Sprays.

INSTITUTIONAL
SERVICES

- Undergraduate Studies Committee in the Mechanical engineering department (2016 - present)
- College Policy Committee (CPC), 11/2021 - present
- Diversity Scholarship Committee (2019 - 2020)
- College of Engineering Scholarship Committee (2022 - 2023)
- Seminar organizer in the MIE department (2018 - 2020)
- Faculty advisor: 2016 Shell Eco-Marathon team, 2017 Shell Eco-Marathon team, 2017, 2018 SAE Advanced Aero design team, 2018 Project Andromeda-3, 2019 Aerial drone competition, 2019 SAE Advanced Aero design team, 2021 SAE Aero Design (Regular Class), 2020 Aerial drone competition, 2022 SAE Advanced Aero, 2022 Andromeda-4 hybrid rocket, 2022 Aerial drone, 2023 Engine test stand, 2023 Gas rocket motor.

- Participant in the Graduate School Mentoring program at LSU
- Graduate committee member : Pranaya Pokharel (Ph.D, ME, LSU), Pawan Sharma (Ph.D., ME, LSU), Veerendra Naralasetti (M.S., ME, LSU), Susheel Singh (Ph.D., ME, LSU), David Akinpelu (M.S., ME, LSU), Domingo Elias (Ph.D., ME, LSU), Edison E Chukwuemeka (Ph.D., ME, LSU), Navid Roohani (Ph.D., ME, LSU), Robert Frazee (M.S., ME, LSU)
- Dean’s representative: David Kekejian (Physics, LSU), Narayan Bhusal (Physics, LSU), Karen Bichler (Physics, LSU), Amit Kumar (Mathematics, LSU), Golam Azom (Chemistry, LSU).
- Undergraduate honors thesis committee: Andrew Larpenter (ME, LSU), Lauren Baxter (ME, LSU)
- Student group faculty advisor:
 - Indian Students Association (2022 – present)
 - LSU AIAA (American Institute of Aeronautics and Astronautics) chapter (2023 – present)
- Judge at LSU Discover Day (2017, 2019)
- Participation in LSU summer camps: REHAMS (2018, 2019, 2020, 2021, 2022), XCITE (2018, 2019, 2020, 2021, 2022)
- Participant in High School Summer Research Program (HSSR). Mentored:
 - Alexis Harvey (St. Joseph’s Academy) in 2020, Alexis won the 2nd prize in the program overall and has been selected for Nationals based on LSU research.
 - Lailah Collins (Mckinley Senior High School) in 2021.
 - Nicole Lin (Baton Rouge Magnet High School) in 2022.