CURRICULUM VITAE

Amit Shukla, Ph.D.

Professor
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Seattle University
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EDUCATIONAL BACKGROUND

Ph.D. Mechanical Engineering, University of Cincinnati, 2002.
M.S. Mechanical Engineering, University of Cincinnati, 1998.
B.E. Mechanical Engineering, Motilal Nehru Regional Engineering College, India, 1996.

ACADEMIC EXPERIENCE

July 2022 to June 2025	Howard Wright Dean and Professor, College of Science and Engineering, Seattle University
Aug 2018 to July 2022	Department Chair and Professor, Mechanical and Manufacturing Engineering, Miami University
July 2015 to July 2019	Founding Director, Miami University Center for Assistive Technology, Miami University
Aug 2018 to July 2019	Member MI Lead, Miami University
Sept 2017 to Aug 2018	Provost Fellow, Miami University
July 2014 to July 2022	Professor, Mechanical and Manufacturing Engineering, Miami University
July 2008 to July 2014	Associate Professor, Mechanical and Manufacturing Engineering, Miami University
Aug 2002 to July 2008	Assistant Professor, Mechanical and Manufacturing Engineering, Miami University
Aug 2002 to Aug 2022	Faculty Associate, Doctoral Program in Ecology, Evolution and Environmental Biology Program at Miami University
Aug 1999 to Aug 2000	Ohio Board of Regents Fellow, University of Cincinnati, Ohio

INDUSTRIAL AND RESEARCH EXPERIENCE

Jan 2010 - Dec 2014	Consultant, Ethicon Endo-Surgery (JNJ Company), Harmonic Devices Group, Blue Ash, Ohio
Jan 2010 - Dec 2010	Research Scientist, Structural Sciences Center, US Air Force Research Laboratory, WPAFB, Ohio

2006 – 2011 (May-August)	Summer Faculty Fellow, Structural Sciences Center, US Air Force Research Laboratory, WPAFB, Ohio
May 2005 - Aug 2005	Visiting Faculty, Eindhoven Technological University, The Netherlands
Aug 1998 - Aug 2002	Graduate Research Assistant, Structural Dynamics Research Laboratory, Department of Mechanical, Industrial and Nuclear Engineering, University of Cincinnati.
May 1996 - Aug 1996	Design Engineer, Larsen and Toubro India Ltd., India

LEADERSHIP EXPERIENCE

July 2022 to June 2025 **Decanal Leadership of the College of Science and Engineering (CSE) at Seattle University**

Strategic and Fiscal Leadership

Oversaw Seattle University's fastest-growing college, comprising 8 departments, 124 faculty, 27 staff, and 1,700+ students.

Managed an annual operating budget of ~$18.7M, with $2.38M in recurring endowment income and $1.5M in annual research awards.

Led the development and implementation of the *CSE Strategic Plan: Growth 2030* (launched Jan 2025), aligning academic and fiscal priorities for long-term sustainability.

Achieved 21% enrollment growth (Fall 2022–Fall 2025) through strategic collaboration with enrollment management and student success units.

Partnered with the Provost's Office to improve academic budgeting, streamline program portfolios, and reallocate resources to high-impact areas.

With senior leadership, implementing strategies and contingencies to address financial challenges and navigating associated challenges with the shifting higher ed landscape.

Academic Innovation and Program Development

Reimagined the college's academic identity through curricular renewal focused on innovation, industry alignment, and experiential learning.

Launched two fully online master's programs: MS in Artificial Intelligence and MS in Data Science.

Launched graduate certificates in Data Science and Artificial Intelligence

Introduced new undergraduate minors in Robotics, Humanitarian Engineering, and Geographic Information Systems (GIS); initiated planning for a BS in Neuroscience.

Established interdisciplinary initiatives including *Innovators-in-Residence* and *CSE Innovation Fellows* to enhance workforce readiness and applied learning.

Expanded undergraduate research and project center activities to support student engagement and career preparation.

Fundraising and External Engagement

Secured ~$3.5M in philanthropic support for strategic priorities, including undergraduate research and AI-focused programs.

Initiated a college-specific fundraising campaign aligned with the university-wide campaign to support Growth 2030.

Expanded the Dean's External Leadership Council to strengthen industry, government, and community partnerships.

Launched CSE student-alumni mentoring program to enhance career readiness of our students.

Built relationships with CSE alumni and friends, industry, research entities, city/state government, community colleges, and broader community to establish impactful partnerships.

Organizational Development and Inclusive Excellence

Reorganized the college leadership team to align with strategic goals, including new roles for faculty affairs, graduate education, and undergraduate programs.

Advanced inclusive excellence through targeted faculty recruitment, development, and retention strategies.

Fostered a collaborative and inclusive culture through new communication platforms, cross-departmental initiatives, and recognition programs.

Formalized operational processes to improve efficiency, accountability, and performance management.

Aug 2018 to July 2022 **Department Chair of Mechanical and Manufacturing Engineering at Miami University.**

Strategic Leadership and Departmental Growth

Led a department of 21 tenured/tenure-track faculty, 6 teaching faculty (including 2 Henon Wilken's Fellows), 3 staff, and 550 undergraduate and graduate students.

Recruited 5 tenure-track faculty, 1 teaching faculty, and 2 visiting professors, with a focus on strategic areas such as additive manufacturing, smart manufacturing, robotics, and automation.

Increased faculty diversity by hiring women and Latino faculty, contributing to a more inclusive academic environment.

Faculty Development and Mentorship

Successfully guided 9 faculty through tenure and/or promotion processes, including:

2 to Full Professor

5 to Associate Professor with tenure

2 to Associate Teaching Professor

Provided ongoing mentorship to faculty and staff, supporting professional growth and leadership development.

Student Success and Academic Innovation

Transformed departmental approach to student success through targeted recruitment, proactive advising, and policy refinement.

Achieved significant improvements in student retention (89%) and persistence (82%) metrics.

Collaborated with college leadership to develop and launch a new **Robotics Engineering** program.

Fiscal Management and Resource Development

Managed a departmental operating budget of ~$3.0M, including salary planning, operational support, and strategic initiatives.

Diversified departmental revenue through industry and government workshops and workforce training programs in advanced materials and manufacturing.

Secured ~$1.2M in active research grants, contributing to a growing research profile.

Accreditation and Continuous Improvement

Led all departmental efforts in support of **ABET accreditation**, including refinement of assessment processes and continuous improvement strategies.

Advancement and External Engagement

Partnered with University Advancement to develop strategic fundraising plans and cultivate relationships with donors, corporations, and foundations.

Successfully doubled the department's total endowment and established new endowed scholarships for students.

Crisis Leadership and Operational Continuity

Developed and implemented operational protocols during the COVID-19 pandemic to ensure safety and continuity of instruction and research.

Maintained 50% in-person instruction during Spring 2021, balancing educational quality with public health considerations.

July 2015-July 2019 **Founding Director, Miami University Center for Assistive Technology**

Strategic Vision and Center Establishment

Conceptualized, developed, and launched the first multidisciplinary research center within the College of Engineering and Computing, generating over **$800K in annual research funding**.

Established the center as a hub for inclusive, collaborative research, welcoming participants across identities, disciplines, and abilities to address complex societal challenges.

Faculty and Research Collaboration

Recruited **17 faculty members** from all academic units to engage in interdisciplinary research initiatives.

Fostered collaborative research in engineering applications for healthcare and medicine, integrating expertise from engineering, computing, and health sciences.

Student Engagement and Research Mentorship

Supervised over **70 undergraduate students**, **12 graduate students**, and **1 postdoctoral researcher** across diverse research projects.

Created opportunities for students to work on interdisciplinary problems at the intersection of **Assistive Technology**, **Engineering Design**, **Gerontology**, and **Social Entrepreneurship**.

External Partnerships and Innovation Initiatives

Developed strategic partnerships with **CincyTech**, a leading Midwest seed fund, to support entrepreneurial ventures and translational research.

Led research collaborations with the **Air Force Research Laboratory** and multiple industry partners to expand the center's impact and funding base.

Hosted an **annual research symposium** in partnership with healthcare industry leaders and medical researchers to showcase innovations and foster collaboration.

Launched an **annual Design Innovation Challenge** to promote student entrepreneurship and cross-disciplinary problem-solving.

Sept 2017 – July 2018 **Provost Fellow for Faculty Development**
Developed a concept/white paper for multi-tier, university wide, holistic faculty development program to enhance faculty engagement, growth and retention.

Aug 2014 – Aug 2018 **Chair, Miami University Senate's Fiscal Priorities and Budget Planning Committee (member 2011-2018).**

Led the University Senate's representation in the financial management of the University, in the process of setting fiscal priorities and in budget planning, and also to offer on-going advice to the senior administration of the University, namely the President, the Provost, and the Vice President for Finance and Business Services.

Developed a process for and conducted a holistic review of the University's Budget Model (RCM 2.0).

Developed a proposal for Administrative Program Review.

Developed a proposal for University's Tuition Promise.

June 2015 – Aug 2016 **Co-Chair, Institutional Council/Task Force on Affordability and Efficiency at Miami University.**

This task force was established, in response to State of Ohio mandates on Affordability and Efficiency and 5% reduction in the cost of education. As co-chair (with Dean Makaroff), led a team of university wide partners in developing Miami's response and recommendations to the Board of Trustees, to the mandates for university wide issues.

July 2012 – Aug 2014 **Co-Chair, Faculty Assembly Steering Committee at Miami University.**

Led the development of agenda and enhanced engagement of faculty and issues related to faculty.

Identified system wide equity issues of interest to teaching, clinical, professional and licensed faculty resulting in new policies for retention, promotion and support.

ENTREPRENEURIAL AND FUNDRAISING EXPERIENCE

2018 to 2022 Active solicitation of corporate partners, foundations and governmental agencies to fund faculty research and student scholarships.

Enhanced the Tom Peyton / Morrow Foundation (to $650K) and Swagelok Scholarship funds ($2K each for up to 20 students).

Obtained Dassault Foundation support for women in engineering.

Enhanced the Kettering Foundation support of capstone projects.

	Expanded Ohio Space Grant Consortium Scholarships and Fellowships for students.
2019 to present	Mentored student projects to support engineering entrepreneurship activities in collaboration with Ohio Development Services Agency (Third Frontier Projects).
2014 - 2019	Initiated fundraising and friend raising for Miami University Center for Assistive Technology. Developed public-private partnerships for supporting research in the center.

HONORS and AWARDS

Induction to Alpha Sigma Nu -Jesuit Honor Society	2023
Miami University, Inclusive Excellence Award	2021
Miami University, Presidential Proclamation, Safe Return to Campus	2020
State of Ohio, Senate Proclamation, Return to Campus	2020
Miami University Interdisciplinary Round Table Research Group Award	2014
Best Paper Award, ASME Dynamics Systems and Control Conference, Stanford, CA.	2013
Miami University, Outstanding Researcher Award in School of Engineering and Applied Science	2012
Miami University, Research Incentive Grant Award	2011
Miami University Associated Student Government's Honored Professor Award for Excellence in Undergraduate Teaching and Advising	2005
Miami University Shoupp Award for Applied Research	2003
Ohio Board of Regents Fellowship, University of Cincinnati	1999
President's Gold Medal for first rank in the graduating class, Motilal Nehru Regional Engineering College, India	1996

PROFESSIONAL AFFILIATIONS

Member, American Society of Engineering Education (ASEE).

Member, American Society of Mechanical Engineers (ASME).

Member, American Institute of Aeronautics and Astronautics (AIAA).

Executive Member, Mechanical Engineering Department Heads Committee of American Society of Mechanical Engineers (ASME).

SELECTED PROFESSIONAL SERVICE – National and International

ASEE Engineering Dean's Council- Executive Board Member	2022-Present
Executive Member, ASME's Mechanical Engineering Department Heads Committee (Elected Secretary, for 2022-23 term)	2020-2022
Associate Editor, ASME Journal of Verification, Validation and Uncertainty Quantification	2016 - 2023
Member, Organizing Committee for ASME International Design Engineering Technical Conference, Student Activities Co-Chair, Cleveland Ohio	2017
Member, Advisory Board, SV College of Engineering, Indore, India	2008 - 2019
Member, ASME's Technical committee on Vibration and Sound	2006-2015
Symposium organizer for ASME Design Engineering Technical Conference	2008, 2012, 2013
Symposium organizer for 4th Canadian Conference on Nonlinear Solid Mechanics	2013
Guest Editorship of Journal Nonlinear Dynamics, In 2006, special issue on discontinuous dynamical systems and in 2010: special issue on stability of structures for this journal	2011, 2006
Panelist, National Science Foundation	2004, 2007, 2010, 2021
Symposium organizer, ASME 6th International Conference on Multibody Systems, Nonlinear Dynamics and Control, Las Vegas	2007
Symposium organizer and technical session chair, on damage prognostics at SPIE's Smart Structures and NDE Conference	2004 - 2007
Session Chair, ASME Congress	2004, 2005
Member, Organization committee of SPIE's smart structures and NDE conference	2003-2006
Reviewer for: Journal of Vibration and Acoustics, Journal of Sound and Vibration, Nonlinear Dynamics, Journal of Computational and Nonlinear	2002 - present

Dynamics, IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, International Journal of Fluid Power, Journal of Intelligent Material Systems and Structures, and Chaos, Solitons and Fractals.

Reviewer for the following conference proceedings: ASME Design Engineering Technical Conference, IEEE/ASME Dynamic Systems and Control Conference, American Control Conference, and ASEE Annual Conference. 2002 - present

SELECTED SERVICE AND STRATEGIC ROLES - Miami University

Member, Search Committee for the Associate Provost for Faculty Affairs 2021

Member, Search Committee for the Vice President for Institutional Diversity, Equity and Inclusion, Miami University 2021

Member, President's Safe Return to Campus Planning Committee, Miami University May 2020 – Dec 2021

Member, College of Engineering and Computing Dean Search Committee, Miami University 2019 - 2020

Member, Provost Search Committee, Miami University 2018 - 2019

Member, University Senate, Miami University 2017 - 2018

Member, Steering Committee of Institute for Miami Leadership Development, Miami University 2012 - 2015

Member, Steering Committee for Center for Advancement of Computational Research, Miami University 2004 - 2008

Member, Socially Engaged Engineering and Computing Initiatives, Miami University 2016 - 2020

Member, Humanitarian Engineering and Computing Minor Steering Committee, Miami University 2015 - 2020

Member, College of Engineering and Computing Curriculum Committee 2014 - 2016

Member Graduate Program Committee (MS in Computational Science and Engineering, MS in Mechanical Engineering), Miami University 2008 - 2015

Member, College of Engineering and Computing Governance Committee 2005 - 2006

SELECTED SERVICE AND STRATEGIC ROLES – Mechanical and Manufacturing Engineering Dept.

Member, Promotion &Tenure Committee (Chair 2013-2015) 2013 - 2018

Chair, Department Program Review Committee	2017
Member, Lecturer Search Committee	2016 - 2017
Chair, Faculty Search Committee (2015-2016), successfully recruited three faculty members	2015 - 2016
Department Assessment Plan Leader	2014 - 2018
Member, MME Chair Search Committee	2006, 2010
Chair, Ad-Hoc Committee on Future Directions of department	2009 - 2010
Chair, Undergraduate research thread	2011 - 2012
Chair, Computational methods thread	2004 - 2009

TEACHING AND ADVISING

Courses taught at Miami University

- EAS 102: Problem Solving and Design (3 Cr. Hrs., first year course, required for all engineering majors, lecture and laboratory instruction)
- MME 211: Engineering Statics (3 Cr. Hrs., sophomore course, required for mechanical and manufacturing engineering majors, lecture instruction, inverted classroom).
- MME 213: Computational Methods for Engineers (3 Cr. Hrs., sophomore course, required for mechanical and manufacturing engineering majors, lecture and laboratory instruction).
- MME 312: Mechanics of Materials (3 Cr. Hrs., junior course, required for mechanical and manufacturing engineering majors, lecture instruction).
- MME 315: Mechanical Vibrations (3 Cr. Hrs., junior/senior course, required for mechanical engineering majors, lecture instruction).
- MME 411: Machine and Tool Design (4 Cr. Hrs, senior course, required for mechanical and manufacturing engineering majors, lecture and laboratory instruction).
- MME 412/512: Advanced Mechanics of Materials (3 Cr. Hrs., senior/graduate course, required for mechanical engineering majors, lecture instruction).
- MME 495/595: Applied Nonlinear Dynamics (3 Cr. Hrs., senior/graduate course, technical elective for engineering, sciences and mathematics majors, lecture instruction).
- MME 448/449: Senior Capstone Design Project (2 Cr. Hrs., senior course, required for all mechanical and manufacturing engineering majors, small group instruction).
- MME/CPB 612:Engineering Analysis (3 Cr. Hrs., Graduate Course)
- MME 615: Advanced Vibrations (3 Cr. Hrs., Graduate Course)

A. Doctoral and Post-Doctoral Teaching and Advising

- *Nonlinear dynamics of rehabilitation robotics using smart materials and novel manufacturing techniques, (Miami University), Dr. Lokesh Saharan, 2018-2019.*

- *Effect of dopaminergic medication on postural sway in advanced Parkinson's disease. Ph.D. Dissertation (University of Cincinnati, College of Medicine, co-Advised with Dr. Amit Bhattachraya), Ashutosh Mani, May 2014.*
- *Nonlinear dynamics of controlled slipping clutches.* Ph.D. Dissertation (University of Cincinnati, co-Advised with Dr. David Thompson), Firoz Jafri, May 2007.

B. Master's Student Teaching and Advising

1. *Machine learning for nonlinear dynamics in robotics,* (Master's in Mechanical Engineering), Kushal Neopane, (expected) Dec 2022.
2. *Computing Floquet multipliers for discontinuous, time delay systems*, Berkers, Has, Thesis/Internship Report (Master's in Mechanical Engineering), Eindhoven Technological University, June 2018.
3. *Electrical equivalent circuit models for Piezo driven, geometrically nonlinear rods under loading*, Thesis (Master's in Mechanical Engineering), Rob Sutliff, Aug 2018.
4. *Transient dynamics of nonlinear beams under piezo excitation*, Thesis (Master's in Mechanical Engineering), Heshan Unamboowe, Aug 2018.
5. *Validation of shoe inserts for predicting falls*, Thesis (Master's in Mechanical Engineering), Price, Ted, Aug 2018 , Co-Advised with Dr. James Chagdes.
6. *Reduced order models of structures for aero-thermal loading*, M.S. Thesis (Computational Mechanical Engineering), Laymon, Alex, May 2018.
7. *Deep learning for fall risk detection*, Thesis (Master's in Mechanical Engineering), Chen Yang, May 2018.
8. *Numerical bifurcation studies of piecewise delay systems*, Thesis/Internship Report (Master's in Mechanical Engineering), Nard Strijbosch, Eindhoven Technological University, June 2017.
9. *Risk of falls in older adults: a social and technological evaluation*, Stanley, Ryan, Aug 2016, Co-advised with Dr. J. Kinney.
10. *Nonlinear dynamics for design of buckled beams under piezo excitation*, M.S. Thesis (Computational Mechanical Engineering), Wilson, James, Aug 2015.
11. *Nonlinear dynamics of aero-elastic structures*. M.S. Thesis (Computational Science and Engineering), Fellows, Mark, July 2014, Co-Advised with Dr.K.V. Singh.
12. *Human balance and posture control during quiet stance, M*.S. Thesis, (exchange student from Eindhoven Technological University), Hoogeboom, F.N., May 2014.
13. *Nonlinear dynamics of aero-structures under thermal and mechanical loading*. M.S. thesis (Computational Science and Engineering), Ling Yu, July 2012.
14. *Nonlinear dynamics of curved beams: effect of friction in boundary conditions*. Johan van Hoof (exchange student from Eindhoven Technological University), April 2012.
15. *Nonlinear dynamics of human posture*. M.S. thesis (Computational Science and Engineering), Carson Willey, July 2011.
16. *Nonlinear dynamics of beams under stochastic loading*. M.S. thesis (Mathematics), Holly Soper, May 2010.
17. *Nonlinear dynamics of friction assisted motion*. Internship report, Bram Hunnkens (exchange student from Eindhoven Technological University), Dec 2009.

18. *Transient dynamics of backlash*. Internship report, Stein Boere (exchange student from Eindhoven Technological University), May 2008.
19. *Prediction of snap-through motion of buckled, flat beam.* M.S. thesis (Mathematics), Steve Goley, May 2008.
20. *Experimental analysis of snap-through response.* M.S. thesis (Mathematics), Brian Zappia, May 2008.
21. *Discontinuous systems analysis.* M.S. thesis (Computer Science), Dave Roberts, Dec 2007
22. *Multiple objective optimization.* M.S. thesis (Mathematics, co-advised with Dr. Olga Brezhneva), Casey Trail, Aug 2007.
23. *Periodic orbits in systems with backlash.* Internship report, Bart Besselink (exchange student from Eindhoven Technological University), Dec 2006.
24. *Optimal sensor placement for structural health monitoring.* M.S. thesis (Mathematics, co advised with Dr. Olga Brezhneva), Josh Beal, May 2006.

C. Undergraduate Research Projects (Independent Studies)

1. Human Machine Interface, Edith L. Joseph, 2019
2. Using EEG data for fall prediction, George Shebek, May 2018.
3. Natural frequency variation due to additive manufacturing, Will Parker, May 2015.
4. Variability in composite structures: effect of boundary conditions, Ryan Ettenhofer, May 2015.
5. Kinect for human postural evaluation, Guanjiu Zhang, May 2015.
6. Data collection and analysis for falls prediction, Jordan Moran, Dec 2014.
7. Co-simulation of curved structures, Ryan Ettenhofer, May 2013.
8. Fluid structure interaction in curved structures. Alex Cozier, May 2012
9. Nonlinear dynamics of composite skin panel, Qichen Wang, May 2012.
10. Nonlinear dynamics of curved beams. Steve Lai, May 2012.
11. Dynamics of biomedical devices. Reilly Bates, December 2011.
12. *Postural control: effect of aging*. Zhuo Chen, May 2011.
13. *Nonlinear dynamics of cardiac tissue*. Greg Shendel, Dec 2009.
14. *Dynamics of curved plate*. Brendan Buholzer, December 2007.
15. *Snap*-through in aircraft structures. Robert Gardner, December 2007.
16. *Dynamics of discontinuous systems*. Neal Birchfield, Dec 2006.
17. *Dynamics and control of hybrid transmission*. Henry Tran, May 2006.
18. *Smart damage detection and prognosis*. Paloma Meijia, December 2004.
19. *Smart damage prognosis: a distance to bifurcation based methodology*. Amanda Frederick, May 2004.
20. *Seismic excitation of civil structures*. Cole Snider, August 2003.

D. Small Group Design Project for Senior Capstone

- Design of Auto Belay Insertion System 2.0, Spring 2020- Fall 2020.
- Design of Energy Harvesting System for Bagpacking, Fall 2019-Spring 2020.
- Design of Auto Belay Insertion System, Fall 2018-Spring 2019.

- Redesign of EpiPen using 3-D printing. Fall 2017-Spring 2018.
- Redesign of a walker for older adults. Fall 2016-Spring 2017.
- Redesign of human postural balance system. Spring 2015-Fall 2015.
- Experimental estimation of damping in Titanium at high strain. Fall 2011-Spring 2012 (Sponsored by Ethicon Endo Surgery, JNJ Co.)
- GE Vision based gripper design. Fall 2008-Spring 2009 (Sponsored by General Electric Co.)
- GE Generic Vane Fixture Design for Quality Control. Fall 2007-Spring 2008 (Sponsored by General Electric Co.)
- GE Generic Blade Fixture Design for Quality Control. Fall 2006-Spring 2007 (Sponsored by General Electric Co.)
- Global seismometer project with Palcky University, Fall 2005-Spring 2006 (Sponsored by Palcky University)
- Redesign of palm protector device, Fall 2004-2005
- Design of mechanics studio, Fall 2004-2005
- Design and development of road vibrations simulator, Fall 2003-Spring 2004,
- Design of smart window system for noise control of an automobile, Spring 2004- Fall 2004

RESEARCH AND SCHOLARSHIP

A. Research Expertise and Interests

Nonlinear dynamics of engineered and natural systems

Adaptation and control of human posture – effect of Parkinson's disease and aging

Discontinuous dynamical systems and control

Prediction and control of nonlinear dynamics in ultrasonic cutting tools

Grants and Contracts Awarded

External Awards

1. Shukla, A. (PI) and Peter Rowan, "Collaborative Research: EPIIC: Increasing our Innovation SCOREs: Symbiotic Collaboration of Regional Ecosystems", Sept 2023-Sept 2026, $799,959.
2. Shukla, A.(PI) and Jessica Sparks, "Mentoring and Research in Industry Context for JEDI Scholars in STEM", Dassault Systemes US Foundation Grant, July 2022-July2024, $156,000.
3. Shukla, A. (PI) and Blue, J., "Choose Ohio First-JEDI Scholars in STEM at Miami University", Ohio Department of Higher Education Grant, April 2022-July 2027, $912,000.
4. Shukla, A.(PI), Zhou, Q., Bal, M., "Post-Secondary Workforce Development for Increased Use of Robotics and Additive Manufacturing in Healthcare Industry", Ohio Department of Higher Education RAPIDS 5 Grant, Sept 2021-July 2022, $308,751.
5. Shukla, A., "Miami University Hands-on student project experience", Kettering Foundation, Jan 2019- Dec 2021, $29,000.

6. Shukla, A., "Miami University 3D Design Experience Course Modules, Hackathon and Camp", Dassault Systemes US Foundation Grant Jan 2020-Dec 2021, $80,000.
7. Shukla, A., "Economic Validation of Miami's ABIS-Braking System", TVSF Grant, State of Ohio (UDRI), Aug 2019-Aug 2020, $42,000.
8. Shukla, A., "Modeling and Simulation of Gen11 Control Loops for Understanding Nonlinear Dynamical Phenomenon in Ultrasonic Cutting Tool", Ethicon Endo Surgery, JNJ Company, May 2016-May 2017, $24,000.
9. Shukla, A., "Essential nonlinearities in harmonic devices". Ethicon Endo Surgery, JNJ Company, Jan 2015-Aug 2015, $25,000.00.
10. Shukla, A., "Developing Optimization Algorithms for Blade Design". Ethicon Endo Surgery, JNJ Company, Jan 2015-Aug 2015, $17,649.
11. Shukla, A., "Developing Optimization Algorithms for Blade Tip Design". Ethicon Endo Surgery, JNJ Company, June-Dec 2014**,** $8,435.
12. Shukla, A., "Nonlinear Dynamics of Ultrasonic Cutting Tools: Phase 3". Ethicon Endo Surgery, JNJ Company, Jan-Dec 2014, $25,000**.**
13. Shukla, A., "Predictive modeling framework for nonlinear dynamical phenomenon in ultrasonic cutting tool-Phase2". Ethicon Endo Surgery, JNJ Company, May 2011-Aug 2012, $75,000.
14. Shukla, A., "Enabling robust and durable structures". AFOSR Summer Faculty Fellowship, May 2011-Aug 2011, $12,000.
15. Khan, F. (PI), Singh K.V., Shukla, A., and Moller, J, "TUES: Development and Integration of Synergistic Computational and Experimental Activities within the Mechanical and Manufacturing Engineering Curriculum, NSF, May 2011-May 2013, $199,462.
16. Shukla, A., "Nonlinear Dynamics of Postural Control: Effect of Aging". Department of Health and Human Services (NIOSH) (via University of Cincinnati), May 2010-May 2011 $6,365.
17. Shukla, A., "Experimental-Analytical Non-Linear Structural Response Prediction". Department of Defense, AFRL/UTC, Oct 2010-May 2011, $46,558.
18. Shukla, A., "Predictive modeling framework for nonlinear dynamical phenomenon in ultrasonic cutting tool". Ethicon Endo Surgery, JNJ Company, Sept 2010-May 2011, $17,445.
19. Shukla, A., "Enabling robust and durable structures". AFRL/RB Summer Faculty Fellowship, May 2010-Aug 2010, $21,420.
20. Shukla, A., "Maximum entropy formulation in curved structures". AFRL Travel Grant for collaborative research at Arizona State University, March 2010, $3,560.
21. Shukla, A. and Soper, H. "Nonlinear structural response prediction for combined environment aero-structures". DAGSI –Student/Faculty fellowship, May 2009-May 2010, $56,340.
22. Shukla, A. and Katona, P., "Nonlinear structural response prediction for combined environment aero-structures". DAGSI –Student/Faculty fellowship, May 2008-May 2009, $56,340.
23. Shukla, A., "Nonlinear structural response prediction for combined environment aero-structures". US DOD, US Air Force (AFRL), Sept 2007-May 2009, $14,459.
24. Shukla, A., "Fixture design for the GE vane". General Electric Quality Technology Center, Aug 2007-May 2008, $20,000.
25. Shukla, A. and Goley, George Steve "Nonlinear structural response prediction for combined environment aero-structures". DAGSI –Student/Faculty fellowship, May 2007-Aug 2008, $56,340.

26. Shukla, A., "Nonlinear structural response prediction for combined environment aero-structures". AFRL/RB Summer Faculty Fellowship, May 2007-Aug 2007, $15,000.

27. Shukla, A., "Nonlinear structural response prediction for combined environment aero-structures". US DOD AFRL/RB, Aug 2007-Dec 2007, $13,487.

28. Shukla, A., "Nonlinear Dynamics of Structures Under Combined Extreme Environment". AFOSR Summer Faculty Fellowship, May 2006-Aug 2006, $11,200.

29. L.A. Actis, S.M. Cybulski, A. Shukla, R.D. Thomas, and S.E. Wright (PI), "Advancement of computational research at Miami University". Ohio Supercomputer Center Cluster Ohio Grant Program (Rev2) Equipment grant-in-kind. March 2003- March 2005, $192,000.

30. Shukla, A, "Development of the virtual engineering design laboratory for research and education". Sun Microsystems Academic Excellence Grant, Sept 2003-May 2004, $29,925.

Internal Miami University Grants

1. Amit Shukla (PI), Jennifer Kinney (Co-PI), Robert Applebaum, Carol Bashford, Mert Bal, "Predicting Risk of Falls in Older Adults" 2014 Interdisciplinary Round Table Group, Office of Advancement of Research and Scholarship, Miami University $25,000 May 1, 2014 - December 31, 2015. (This project contributes to the activities of MU Center for Assistive Technology)
2. Shukla, A. (PI), Sommers, A. , Caraballo, E. and Singh, K. *Nonlinear dynamics and control of aerostructures under combined loading*. Research Incentive Grant Award, May 2011-May 2012, $40,000.
3. Shukla, A., *Acquisition of feedback controller for vibrations shaker*. Technology Fee Proposal, May 2011-May 2012, $48,000.
4. Moller, J.C., and Shukla, A., *ICME: Integration of computational methods in engineering*, Assessment Grant, July 2009-June 2010, $4,900.
5. Shukla, A., Brezhneva, O.A., and Abramson, M.A., *Optimal design of morphing aircraft wings*, CACR Small Grants Program, , May 2006-May 2007, $3,255.
6. *Wright,S. (PI), Shukla,A., Paving the Way for Interdisciplinary and Computational Research at Miami*, Miami Presidential Academic Enrichment Award. May 2005-May 2007, $150,000.
7. Shukla, A., *Research collaboration on nonlinear dynamics and control of non-smooth systems*, Miami Hampton Fund Award., May 2004-Aug 2005, $5,000.
8. Shukla, A., *Smart damage detection and Prognosis for civil and mechanical structures, Miami Shoupp Award, May 2003-May 2004, $4,520.*

B. Publications

Editorship of Peer Reviewed Journal

ASME Journal of Verification, Validation and Uncertainty Quantification, Associate Editor, Aug 2016-2023

Nonlinear Dynamics, Guest Editor, Edited Special Issue Fey, R.H.B., Shukla. A., and Nijmeijer, H., Structural Stability, a special issue in Nonlinear Dynamics (complete with 12 articles), vol 66, No. 3 Nov 2011.

Nonlinear Dynamics, Guest Editor, Edited Special Issue Shukla, A., and Zhao, X., Discontinuous Dynamical Systems: Modeling, Analysis, and Control, a special issue in Nonlinear Dynamics (complete with 22 articles), vol. 50 No.7 November 2007.

Peer Reviewed Publications

1. Wilson, J., W. Olson, A, Shukla, "Exploiting nonlinear dynamics for design optimization of periodic response of harmonically excited, piezo-driven, buckled beams", Journal of Computational and Nonlinear Dynamics, Dec 2019.
2. J.A.J.M. van Hoof, R.H.B., Fey, A. Shukla and H. Nijmeijer, " Effect of hinge friction on the steady-state response of base excited shallow arches", *Journal of Vibration and Control*, Vol. 20(12), pp.1877-1894, September 2014.
3. Mani, A., K. Dunning, T. Larsh, C. Cox, A. Shukla, A Bhattacharya, and F. Revilla, Dynamic Fall-Risk Predictors in Parkinson's Disease, , Neurology , vol. 82 no. 10 April, 2014.
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