



**Dr. Atma R. Sahu**  
**Prof. and Chair Mathematics and Computer Sc. Dept.,**  
**IEEE Senior Member**  
**Coppin State University, Baltimore, MD 21216, USA**  
**240-354-1268 | sahuatma@Yahoo.com**  
**Alt: asahu@coppin.edu**  
**<https://www.linkedin.com/in/dr-atma-sahu-ph-d-3922992/>**

---

#### **A. PROFESSIONAL PREPARATION: Higher Education and Training**

- **Ph. D. Applied Mathematics**, Indian Institute of Technology (Univ of Roorkee), 1973, India. *Dissertation Topic: On Some Vibrations Problems of Rotating and Pre-twisted Elastic Beams.*
- **Ph. D. Mathematics Ed**, GPA 3.87/ 4.0, *University of Maryland College Park*, 1984, USA.
- **M. S. Applied Mathematics**, Indian Institute of Technology (Univ of Roorkee), 1971, India.
- **B. S, Mathematics, Chemistry & Physics**, Meerut University, India, 1969.
- **CSMN Computer Systems Management, Graduate Certificate, University of MD Global Campus (formerly UMUC)**, GPA 3.5/4.0, 1999
- **MIT Cybersecurity Certificate, April 2021**
- **HARVARD Designing and Implementing AI Solutions for Health Care Certificate** (June 24, 2021)

#### **BIOGRAPHY**

Dr. Atma Sahu has served for over 30 years at Coppin State University (CSU) in a wide range of positions, including faculty, researcher, team leader, mathematics and computer science department chairperson, and liaison to K-12 mathematics education. Currently serving as Professor and Chair mathematics and Computer Science department at Coppin State University, Baltimore MD. He has been consistently instrumental in developing the vision for the department's curriculum, pedagogical, and curricula changes. He has taught effectively courses ranging from college algebra to Linear Algebra and Differential Equations, on-ground as well as online. Dr. Sahu has been influential in working collaboratively with colleagues in activities related to Science, Technologies, Engineering, and Mathematics (STEM) research, grant writing, and serving on grant proposal review panels of federal agencies in the United States. He has published numerous research papers in US domestic and international refereed journals in his areas of expertise. He continuously has inspired doctoral research students by serving on their doctoral research committees as well as serving as a Ph.D. dissertation examiner. He has delivered numerous research papers-presentations and has delivered keynote addresses in numerous domestic and international professional meetings. In addition to serving as Chair of the Curriculum, Standards, and Policy Committee, Dr. Sahu also serves the Division of Academic Affairs, College, and the Department at CSU on multiple broader service committees, including chairing the curriculum and standards university committee, chairing the faculty Recognition Committee, Faculty appeals committee, and Students Scholarships committees are just a few. In grants and projects, Dr. Sahu has worked with numerous research co-workers in the USA as well as in India. Dr. Sahu successfully wrote NSF-DST supported workshop grant to increase multi-faculty research capacity involving international collaboration on the Elastic Vibrations, Smart Structures, and Their Solution Technologies, and hosted jointly by IIT Roorkee (University of Roorkee). He has also been awarded a \$300,000.00 NSA Cybersecurity Engineering capacity-building grant as a Co-PI. Dr. Sahu's excellence in project management and leading organizations and teams has no border. Also, Dr. Sahu is an Associate Editor of the *International Journal of Fuzzy Computation and Modelling*, and an Associate Editor of the *International Journal of Engineering, Applied Sciences, and Management*. Dr. Sahu has earned the 2021 Excellence in Mathematics Research faculty award, from Coppin State University. He serves as a university nominee on MHEC advisory council. Currently, he is

DR. ATMA R. SAHU

7704 Mystic River Terrace, Glendale MD 20769 | 240-354-1268 | asahu@coppin.edu

one of the board of directors of the Indian Institute of Technology Roorkee Foundation, Inc., based in VA, USA.

**B. EXPERTISE:** *Applied Mathematics* --Vibrations of elastic beams (Turbine Blades), Computational mathematics, and Mathematical modeling; and *Mathematics Education*—Microteaching, Pre-service and In-service STEM teacher training, Teacher Education, Problem-solving, Systems approach based educational research methods, and Online curriculum and instructional design in STEM areas. Own over 30 years of professional, technical, and executive hands own experience in leading strategic change.

**C. AWARDS AND HONORS: Most Recent Awards, Grants. Research and Digital Technology Pivot**

2022 Excellence in Mathematics Teaching faculty award, Coppin State University

2021 Excellence in Mathematics Research faculty award, Coppin State University

2020 NSA Cybersecurity Engineering Capacity Building grant award as a PI (\$300,000)

2020, June 8-11: Online Learning Design Camp, Certificate of Completion-digital badge

2020, June 24: Certified Microsoft Innovative Educator

2020 July 7-21, Applying the QM Rubric (USM sponsored) Certificate

2019 Summer: Army Research Lab, Aerosol Research Faculty Fellow, USA

1998 – 2000 Summer; HBCU/MIE Faculty Fellow, Department of Defense, USA.

2006, May 25, Outstanding Leadership in Technology and Learning *faculty award*, Coppin State Univ.

Multiple Years: Quality Matters/Sloan-C online /University of Phoenix online faculty certifications awards

**D. PROFESSIONAL APPOINTMENTS AND ACTIVITIES: DoD Fellow, and Experience, Knowledge, Skills, and Performing the Duties Timeline**

- **Professor of Mathematics**, Coppin State University, Baltimore MD, USA; August 1990 to present. (**Chair** August 1990 to Jan 1992, **Chair** August 2021 to Continued.)
- **Mathematics Specialist**, University of Maryland College Park, USA January 1988 to August 1990.
- **Assistant Professor of Mathematics**, Univ. of MD Eastern Shore, USA, Sept. 1984-Dec.1988.
- **Mathematics Graduate Assistant**, Univ. of MD at College Park, USA Aug. 1980-Sep.1984.
- **Lecturer in Mathematics**, NCERT, New Delhi, and Bhopal University. India; Oct 1975 to Aug1980.
- **Computer Programmer**, Water Resources Development Training Center, Indian Institute of Technology, Roorkee, formerly University of Roorkee, India; March 1972 to October 1975
- **Faculty Fellowship of the Department of Defense, United States of America**  
DoD, The Office of the Assistant Secretary of Defense, summers of 1994 to 2000.
- **Faculty Fellowship Army Research Lab, Maryland, Summer 2019**

**E. COMMITTEES SERVICE, COPPIN STATE UNIVERSITY: Leading Organization and teams**

2020-Present MHEC Faculty Advisory Council, Member (CSU Nominee)

2020- Present Council of University System Faculty (CUSF), member ( CSU Nominee)

2020 - Present Faculty Appeals Committee, Member (2020-Present), Chair (2012-2016)

2020- 2022 Cyber Security Engineering Program/NSA-CDIE \$300,000 Grant Co-PI

2007 - Present University Faculty Recognition Committee, Member (2007-2013), Chair (2013 - Present)

1990 – Present India Continental Scholarship Committee, Member ( 1990-2011), Chair (2012-Present)

2012 - Present MCS\* Math Major Committee, Member (\* MCS = Dept of Math and Computer Science)

2016 - 2020 University Curriculum Standards & Policy Committee, Chair,

DR. ATMA R. SAHU

7704 Mystic River Terrace, Glendale MD 20769 | 240-354-1268 | asahu@coppin.edu

2016 – 2017 MCS Post Tenure Review (Peers) Committee, Member  
2009 - 2016 University Sabbatical Leave Committee, Chair (2009-2013), and Member (2013 -2016)  
2010 - 2018 MCS Department Online Teaching & Learning Committee, Chair  
1990 - 2014 MCS Department Coordinator, Department Text Book Order  
2016 - 2019 CASE STEM Scholarship Committee, Member  
2019 - 2020 MCS Department Math Program Review Committee, Member  
2005 - 2009 University Faculty Review Committee ( Merit, Tenure and Promotion), Chair  
2008 - 2019 MCS Department Secondary Mathematics Committee, Chair  
2010 - 2018 MCS Department College Algebra Program Coordinator/Chair  
2015 - 2017 University Center of Excellence in Teaching and Learning, Member  
2011 - 2017 University Policy Committee, Member/Co-Chair/Chair  
2014 - 2015 University Academic Affairs Strategic Committee, Member  
2014 - 2015 University Faculty Merit Pay Committee, Member  
2012 - 2013 University Budget Advisory Committee, Member  
2007 - 2010 Institutional Research Board, Member  
2007 - 2010 MCS Department Peer Review (Merit, Tenure, Promotion) Committee, Member  
2007 - 2009 School of Education, Teacher Education Council, Member  
2007 - 2009 School of Education Collaborative Committee, Member  
1990 – 2000 Coordinator, Freshman Mathematics Program and Freshman Math Committee-Chair.

#### **F. EXTERNAL COMMUNITY SERVICES: Broader Impact**

2020 - Present: President and Board of Directors, IIT Roorkee Foundation, Inc (501c-3 Non-profit)  
(<https://www.iitroundation.org/board>)

2014 - Present: Associate Editor, International Journal of Fuzzy Computation and Modelling  
(<https://www.inderscience.com/jhome.php?jcode=ijfcm>)

2021—Present Editorial Board, American Journal of Applied Mathematics  
([www.sciencepublishinggroup.com/journal/editorialboard?journalid=148](http://www.sciencepublishinggroup.com/journal/editorialboard?journalid=148))

#### **G. RESEARCH PUBLICATIONS (Peer Reviewed)**

##### **a) Applied Mathematics**

**1. Sahu Atma et al (2022); AI-Based Recipient Blood Type Matching Blood Transfusion Medical Device Design System, accepted for publication and presented in IEEE ISEC'22 conference.**

**2.** Bodempudi, S.T., Sharma, S, **Sahu, A**, Agrawal, R. (2019), "Human-Centric Situational Awareness and Big Data Visualization", Proceeding of ISCA 28th International Conference on Software Engineering and Data Engineering (SEDE 2019) in San Diego, CA, USA, vol 64, pages 51--60, 2019. <https://easychair.org/publications/paper/kwnj>

**3.** Kumar A., Goel P., Garg D., **Sahu A.** (2018) System Behavior Analysis in the Urea Fertilizer Industry. In: Panda B., Sharma S., Roy N. (eds) Data Science and Analytics. REDSET 2017. Communications in Computer and Information Science, vol 799, p3-16. Springer, Singapore. [https://doi.org/10.1007/978-981-10-8527-7\\_1](https://doi.org/10.1007/978-981-10-8527-7_1); Print ISBN 978-981-10-8526-0. Also appears in Proceedings International Conf. on Recent trends in OR and Statistics, December 28-30, 2017 IIT Roorkee, India, Springers publications, New Delhi.

**4.** Sarita Devi, **Atma Sahu**, Deepika Garg (Oct 12-14, 2017); Redundancy optimization problem via comparative analysis of H-PSOCOA. IEEE International Conference on Computing and Communication Technologies for Smart Nation-IC3TSN 2017, pp 18-23, 978-1-5386-0627-8/17; 2017 IEEE Publication.  
<https://ieeexplore.ieee.org/document/8284443>

**5.** Rajeev Sarika, Sharad Sharma, and **Atma Sahu** (October 2-4, 2017), Game Theme Based Instructional Module to Teach Binary Trees Data Structure, 26th International Conference on Software Engineering and Data Engineering; Hilton San Diego / Harbor Island, San Diego, California; 978-1-943436-09-5 / copyright ISCA, SEDE 2017, International Society for Computers and their Applications, Proceedings is indexed in Scopus, EI, INSPEC, and

DBLP for indexing.

- 6. Sahu A., Chakravarty S. (2016)** Regression-Based Neural Network Simulation for Vibration Frequencies of the Rotating Blade. *Modern Mathematical Methods and High Performance Computing in Science and Technology*, pp 17-24, PROMS, volume 171, 07 August 2016.  
[https://link.springer.com/chapter/10.1007/978-981-10-1454-3\\_2](https://link.springer.com/chapter/10.1007/978-981-10-1454-3_2). Also published in the Proceedings Paper ID : M074; 2011; 3rd International Conference on Mechanical and Electrical Technology (ICMET 2011), Dalian, China, August 26-27, 2011, ASME, ISBN: 978-0-7918-5981-0 (<http://www.icmet.ac.cn>).
- 7. Atma Sahu (2014)**; Proceedings of 5<sup>th</sup> Annual International Conference, Computer Science Education: Innovation & Technology, pages 8-13; 22-23<sup>rd</sup> September 2014, Singapore; ISSN 2251-2136 and 2251-2195.
- 8. S Chakraverty, Atma Sahu, C K Keong, and S M Hassam (2011)**; Recent Trends of Computational Methods in Vibration Problems, Editorial. *Advances in Acoustics and Vibration*, Volume 2012, Article ID 645981, 2 pages, doi:10.1155/2012/645981
- 9. Atma Sahu (2001)**: Theoretical Frequency Equation of Bending Vibrations of an Exponentially Tapered Beam Under Rotation. *Journal of Vibration and Control*, Vol. 7. Also, published in ICES'97 proceedings: *Advances in Computational Engineering Science*, Atluri Satya, & Yagawa Genki (Editors). Tech. Science Press pp. 70-78; ISBN: 0 96 570001 0 0. (<https://journals.sagepub.com/doi/10.1177/107754630100700601>)
- 10. Atma Sahu (2001)**: Effect of small change in depth on frequencies of torsional vibrations of a pre-twisted beam of rectangular cross-section. *Far East Journal of Applied Mathematics*. ISBN 0972-0960.
- 11. Atma Sahu (2001)**: A perturbation procedure analysis to determine the change in bending frequencies of a turbine blade due to a small change in its cross-section. *Far East Journal of Applied Mathematics*. ISBN 0972-0960. Also published in *Modeling and Simulation-Based Engineering*, Tech Science Press, Palmdale CA pp.1176-1182, ISBN 09657001; ICES'98 October 6-9, 1998.
- 12. Atma Sahu (1998)**: Determination of the Change in Bending Frequencies of a Wedge Shape Turbine Blade Due to a Small Change in the Radius of Rotating Disc. *Modeling and Simulation-Based Engineering*, Atluri, S.N. and O'Donoghue (Editors). Tech Science Press, Palmdale CA pp.1170-1175, ISBN 09657001; ICES'98.
- 13. Atma Sahu (1995)**: The Effects of Resisting Media and other Rotating Beam Parameter Changes on the Fundamental Frequency of Bending Vibrations. *Computational Mechanics '95 Vol.1*, Atluri, S.N.; Yagawa, G. and Cruse, T.A. (Editors.). Springer-Verlag Berlin Publications, NY. pp. 1274-1278, ISBN 3-540-59114-1; ICES'95. ([https://link.springer.com/chapter/10.1007/978-3-642-79654-8\\_206](https://link.springer.com/chapter/10.1007/978-3-642-79654-8_206)).
- 14. J.S.Tomar and A.R.Sahu (1977)**: Bending Vibrations of an Exponential Beam in a Centrifugal Force Field. *The Journal of the Aeronautical Society of India*, February-May, Vol. 29, No.1-2.
- 15. Atma Sahu (1975)**: Conical Design of a Blade of Turbomachinery and the Effects of Various Blades Parameters on its Vibration Characteristics, *Journal of Structural Engineering*, April, Vol. 3, No.1, pp.37-46.
- 16. Atma Sahu and J.S. Tomar (1975)**: Torsional Vibrations of a Pre-Twisted Cantilever Beam. *Indian Journal of Pure & Applied Mathematics*. Vol.6, No.2, February, pp.151-157.
- 17. J.S.Tomar and A.R.Sahu (1975)**: Bending Vibrations of Wedge Shape Beam in a Centrifugal Force Field. *Journal of Aeronautical Society of India*, August, Vol. 27, No.3, pp.125-132.

## **b) Mathematics Education**

- 18. Sahu Atma et al (2022)**; A Personality Types Research Study Based on Personal Values in an Ethics Course for the Engineering and Computer Sc. Undergraduates, accepted for publication and presented in IEEE ISEC'22 conference, #1570785195.
- 19. Atma Sahu (2012)**; Effectiveness of Technologies Interventions on Learning Outcomes of Online-College Algebra Students. E-Leader Conference, January 2-4, Manila, Philippines (October 17, 2012, the US Library of Congress approved ISSN 1935-4800);  
<https://www.g-casa.com/conferences/manila/papers/Sahu.pdf>
- 20. Atma Ram Sahu (1985)**; An Introduction of Microteaching: A Systems Approach; *International Journal of Mathematics Education in Science and Technology*, Vol. 16, No. 1, pp.25-31.
- 21. Atma Ram Sahu (1984)**; Microteaching: Some research Studies and Research Questions; *International Journal of Mathematics Education in Science and Technology*, Vol. 15, No. 6, pp.727-735.



22. *Atma Ram Sahu (1983)*; On Some Educational and Psychological Aspects of Problem Solving. *International Journal of Mathematics Education in Science and Technology*, Vol. 14, No. 5, pp.555-563.

### **H. SYNERGISTIC ACTIVITIES: Integration and Transfer of Knowledge for leading the change**

Over the period of last three decades, presented numerous research papers, served as chair of the conference programs, served on the board of directors on non-profit organizations, served co-editor of journals, review numerous research papers, served on the doctoral committees and many more core-professional activities which demonstrate the broader impact of my individual's professional and scholarly activities. The paragraphs below will outline my experience, knowledge, skills, and ability to lead the activities suitable to a research and teaching organization's requirements, weighing the needs and trends in current research and education related to overall strategic planning, policy setting, and instructions designing for effective implementations of the organization's programs.

#### **a. EDITORIAL BOARD OF JOURNALS: Professional Services Demonstrating Broader Impact**

- 1) *International Journal of Fuzzy Computation and Modelling*, *Associate Editor*. ([www.inderscience.com/jhome.php?jcode=ijfcm](http://www.inderscience.com/jhome.php?jcode=ijfcm))
- 2) *International Journal of Engineering, Applied Sciences and Management* (<https://ieasma.com/#menu3>). Scroll down and click on *Editorial Board Tab, Associate Editor*
- 3) *Journal of Advances in Acoustics and Vibration*, *Recent Trends of Computational Methods in Vibration Problems*, *Guest Editor/Co-Editor*. ([www.hindawi.com/journals/aav/si/121348/](http://www.hindawi.com/journals/aav/si/121348/))
- 4) *E-Leader International Journal*, *Editorial Board Member*, ([www.g-casa.com/journal.htm](http://www.g-casa.com/journal.htm))

#### **b. RESEARCH MONOGRAPH**

Sahu, Atma, Quinn, D.D, Sotelino,E. (2001); *The Elastic Vibrations, Smart Structures and Their Solution Technologies*. Monograph Grant Number NSF 0002002000, pages 58.

#### **c. EXAMPLES OF CONFERENCE SESSION CHAIR/PRESENTATIONS**

- i) Atma Sahu (2022); IEEE Integrated STEM Education Conference, Virtual Online Event, March 26, 2022 (IEEE ISEC'22) paper #1570785195.
- ii) Atma Sahu (2022). Presented in NSF funded "STEM Instructional Innovations Necessitated by COVID-19: Evolution of Process of Post Pandemic' Conference. Coppin State University, Baltimore, March 25, 2022.
- iii) Atma Sahu, January 17-19, 2019, 3rd International Conference on Recent Advances in Mathematical Sciences & its Applications. RAMSA-2019, Jaypee Institute of Information Technology, Noida, UP India (Invited speaker)
- iv) Atma Sahu & Kirti Jain, Feb 28-March 3, 2019, 28th Annual International Conference of the Association for practical and professional Ethics, Baltimore Maryland. (Presenter)
- v) Atma Sahu, July 8-13, 2018, SIAM Conference, Portland Oregon USA. (Presenter)
- vi) Atma Sahu, June 13, 2018, Roundtable on Data Science Postsecondary Education, The National Academy of Sciences. (Participant).
- vii) Atma Sahu, December 28-30, 2017. Intl Conference on Recent Trends in Operations Research and Statistics. RTORS 2017, Math Dept, IIT Roorkee, India (Invited Speaker).
- viii) Atma Sahu, May 2019, 2018, 2017. 15th, 14th & 13 th, Annual Dr. Habtu Braha Information Technology in Teaching & Learning Conference. Coppin State Univ., MD. (Participant)
- ix) Atma Sahu, April 30, 2016. IEEE Shannon Centennial Celebration at the Catholic Institute of Business and Technology in Accra, Ghana. (Invited keynote Speaker).
- x) Atma Sahu, 12-13, October 2017. 1st International Conference on Computing and

DR. ATMA R. SAHU

7704 Mystic River Terrace, Glendale MD 20769 | 240-354-1268 | asahu@coppin.edu

Communication Technologies for Smart nations, GD Goenka University, Gurugram, Haryana, India. (Session Chair)

xi) Atma Sahu (2014); AMS Session on Applied Math, II; Jan 17, pprs# 1387 to 1398; (Chair)

xii) Atma Sahu (2013). Theme Meeting on Fuzzy and Interval Based Uncertainty Modeling, FIUM 2013, July 18-20, 2013. Dept. of Mathematics, NIT Rourkela, Odisha, India, presenter & session chair

**d. RESEARCH PROCEEDING**

*Sahu, A.R., Bhargava, R.R., Gupta, A.P. (editors) [ 2001]; Advances in Elastic Vibrations and Smart Structures. Phonix Publishing House Pvt.Ltd. New Delhi, pages 281, (ISBN 81-7484-043-5); Jointly NSF-USA and DST-India sponsored grant. (Univ. of Roorkee, NSF-DST workshop).*

**e. OTHER CITATION**

Google Scholar <https://scholar.google.com/citations?user=tNdMgA0AAAAJ&hl=en>

ORCID <https://orcid.org/0000-0002-5072-5590>

<https://www.linkedin.com/in/dr-atma-sahu-ph-d-3922992/>

---