NAMASIVAYA NAVEEN S

EDUCATION

NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA, Odisha, India

Mater of Technology (M. Tech), Biomedical engineering **May 2018**

SRI SIVASUBRAMANIYA NADAR COLLEGE OF ENGINEERING, Chennai, India

Bachelor of Engineering (B.E.), Biomedical engineering **April 2016**

St. JOSEPH'S MHSS, Chengalpattu, India

Tamil Nadu Higher Secondary Course Certificate **April 2012**

St. JOSEPH'S MHSS, Chengalpattu, India

Matriculation School Leaving Certificate **April 2010**

WORK/TEACHING EXPERIENCE

SRI RAMACHANDRA INSTITUTE OF HIGHER EDUCATION AND RESEARCH (DU), Tamil Nadu, India

Assistant Professor, Sri Ramachandra Faculty of Engineering and Technology **Aug 2021 – Present**
Courses Handled: Medical Science for Engineers, Medical Devices and Systems for Engineers, Medical Imaging Procedures, Biochemistry, Design Thinking
Additional Positions held: Faculty Coordinator, Internship Coordinator, Faculty Mentor

NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA, Odisha, India
Teaching Assistant, Applications of MATLAB in Bioengineering (Undergraduate Course) **Autumn 2017**

- Prepared MATLAB tutorials and helped students to implement the codes.
- Formulated questions for assignments and graded them.

RESEARCH EXPERIENCE

INDIAN INSTITUTE OF TECHNOLOGY MADRAS, Tamil Nadu, India

Research Fellow, Biomedical engineering group, Department of Applied Mechanics **Jun 2018 – Nov 2020**
Research areas: Biomaterials, Tissue engineering, Cancer therapy
Cell Mechanics lab

RESEARCH PROJECTS

Mini project – UG **Jan 2015 – Apr 2015**
Title: 'Design and development of low-cost blood pressure monitor'

- Developed a circuit for measuring blood pressure by interfacing a pressure sensor (MPXV5050) and microcontroller (PIC18F14K50). The main objective of the project was to minimize the cost of blood pressure monitor and improve its ease of use.

Thesis – UG **Aug 2015 – Apr 2016**
Title: 'Performance of silver coated 316L stainless steel by thermal evaporation method'

- Silver was deposited on 316L SS using thermal evaporation method to increase its antimicrobial properties and

validated using different studies as a candidate for orthopedic application.

Summer research project – PG **May 2017 – Jul 2017**

Title: 'Carbon fiber polyether-etherketone reinforced polyvinyl alcohol composite for bone tissue regeneration'

- Developed a polymer composite for bone tissue engineering by reinforcing carbon fiber polyether-etherketone into polyvinyl alcohol and the composite was studied for its physico-chemical, implant and medical device standards.

Thesis – PG **Jul 2017 – Apr 2018**

Title: 'Microwave assisted amorphous calcium phosphate coatings on porous carbon fiber reinforced polyether-ether ketone composite scaffolds for permanent implant fixation**'**

- Developed a non-biodegradable polymeric scaffold for permanent implant fixation with improved Osseo integration.

Projects worked on as Research Fellow **Jun 2018 – Nov 2020**

- Improved the electrical conductivity of silk fibroin films through long range aligned silk fibers coated with Fe_3O_4 particles for tissue engineering applications.
- Developed a pressure-based system for the delivery of therapeutics into mammalian breast cancer cells.
- Developed a portable mini-incubator for transportation and maintenance of cultured mammalian cells.
- Designed and developed a community-level process for the extraction of lac resin and dye.

PUBLICATION

- Subashini R, **Namasivaya Naveen S**, Loganathan V, Mohammed Ikram A, Meenachi P (**2016**)." Performance study of silver coated 316L stainless steel for orthopedic applications". Transylvanian Review Vol XXIV, No. 10, Special Issue, 2016: 1914-1925.
- **Namasivaya Naveen S** and Saumendra K Bajpai (**2023**). "Community-level process-design for the extraction of lac resin and dye". Rural Technology Development and Delivery. Design Science and Innovation. Springer, Singapore. https://doi.org/10.1007/978-981-19-2312-8_13

CONFERENCE PRESENTATIONS

- **Namasivaya Naveen S**, Tejinder Kaur, A. Thirugnanam **(2017)**." Carbon fiber polyether-etherketone reinforced polyvinyl alcohol composites for bone tissue regeneration", The 6th Asian Biomaterials Congress (ABMC6), Thiruvananthapuram, India.
- Payal Mukherjee, Tejinder Kaur, **Namasivaya Naveen S**, A. Thirugnanam **(2017)**. "Polyether-etherketone Reinforced Chitosan-Polyethylene Glycol Composites for Biomedical Applications". The 6th Asian Biomaterials Congress (ABMC6), Thiruvananthapuram, India.
- **Namasivaya Naveen S** and Saumendra K Bajpai (**2020**). "Community-level process-design for the extraction of lac resin and dye". 2nd International conference on "Rural Technology Development and Delivery" (RTDD-2020), Chennai, India.
- B S Nithya Shree, **Namasivaya Naveen S (2021)**. "Magnetic resonance imaging-conditional Pacemakers: Current design aspects". The 42nd Annual conference of Indian Association of Biomedical Scientists (IABMSCON - 2021), Mangaluru, India.

PATENT

- **Namasivaya Naveen S**, Rajive Gandhi C, Prasath P, Prabhu kavin B (**2022**)." System for the delivery of therapeutics into mammalian cancer cells" Indian Design Patent Application No. **367202-001**, filed July 4th, 2022.

FDPs, WORKSHOPS AND PARTICIPATIONS

- Volunteered for the "**INSPIRE SCIENCE CAMP**" sponsored by DST, New Delhi conducted at SSN college of engineering. **August 2014**

- Attended a Forensic Science workshop on **"Blood stain science, Spatter time, Forensic hair and finger print analysis"** conducted by Biotechnology Association, Anveshna, of Department of Biotechnology, School of Bioengineering, SRM university. **August 2015**

- Attended a 40-hour Online Faculty Development Programme on **"Artificial Intelligence for Computer Vision and Image Processing"** Sponsored by Ministry of Electronics and Information Technology (MeitY) GoI organised by E&ICT Academy, NIT Warangal and Kakatiya Institute of Technology and Science, Warangal during 6th – 18th June, 2022. **June 2022**

- Attended a 5-day Faculty development program on **"Interdisciplinary Translational Science & Engineering"** organized by Centre for Biomaterials, Cellular & Molecular Theranostics (CBCMT) at Vellore Institute of Technology (VIT), Vellore, India, from 18th to 22nd of July 2022. **July 2022**

- Attended a Three days Live online workshop on **"3D Printing technology"** organized by EduXLabs (Esoir Business solution LLP) in Association with Mechanica IIT Madras during 23rd – 25th December, 2022. **December 2022**

SKILLS

Wet laboratory and instrument handling: Mammalian Cell Culture · *invitro* testing of Biomaterials · Cell-material interaction · Fluorescence Microscopy · Microwave Plasma Cleaner · Freeze dryer · Polymer and hydrogel synthesis · Ceramic, metal and composite processing · Scaffold Fabrication · Spectroscopy (UV, IR) ·

Computer skills: Basics of C, C++ · MATLAB · HTML · JavaScript · Adobe Dreamweaver CS6 · Solid works · Ansys · LabVIEW · NI Multisim · Proteus · Endnote · MS Office Suite (Excel, Word, PowerPoint) ·

Managerial skills: Facilities management · Lean Six Sigma · Management of Technology · Project Management · Team Development ·

LEADERSHIP EXPERIENCE

Faculty Organizer, Hack@SRET, An International Virtual Hackathon **April, 2022**
Sri Ramachandra Faculty of Engineering and Technology, SRIHER (DU)

- As a member of the organizing committee, my role was to co-ordinate students in the design team for making posters & certificates and also the sponsorship team for generating funds for the event.

Organizer, **INSTINCTS 2K16**, SSN College of Engineering **March, 2016**

- Being a member of the Food Committee, my responsibility was to generate funds for the cultural fest by renting out stalls to restaurants and eateries.

Organizer, **SRISHTI 2K15**, SSN College of Engineering **September, 2015**

- I was a member of the organizing committee in which my role was to coordinate the work flow of design, transportation, and finance committees.

AWARDS & RECOGNITION

2017 Secured Bronze medal in the Inter-hostel badminton tournament held at NIT Rourkela
2017 Runner up in singles and doubles event of intra-hall badminton tournament held at NIT Rourkela
2016 Qualified GATE 2016 in Instrumentation engineering
2016 Secured Third place in "Project Exhibition" at Dept. of BME, SSN college of engineering
2014 Secured First place in the 'BRAIN CHASE' event conducted by the Dept. of Biotechnology, SRM university
2012 Runner in intra-school Singles Badminton tournament
2011 Winner in intra-school Doubles Badminton tournament
2008 Secured 409th rank in the state level science talent search examination (T.N.) conducted by Unified council