SANDESH G. BHAT

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Sandesh Bhat is a Ph.D. candidate in the Systems Engineering program at the Polytechnic Campus. He has worked on many proposals with Dr. Sangram Redkar in the field of Prostheses and mechanical design. With his experience in working on new ideas and projects, he understands the efforts needed to bring an idea to fruition. His academic details are as listed below:

EDUCATION

Arizona State University, U.S.A. *January 2018 - Present*
Doctor of Philosophy GPA: 4/4
Department of Systems Engineering

Arizona State University, U.S.A. *August 2016 - December 2018*
Master of Science in Mechanical Engineering GPA: 3.44/4
Department of Mechanical and Aerospace Engineering

Mumbai University, India *August 2012 - May 2016*
Bachelors in Engineering CGPA: 7.71/10
Department of Mechanical Engineering

EXPERIENCE

Graduate Teaching Assistant August 2019 - December 2019
Arizona State University

· Teaching Assistant for EGR 217 and EGR 343. Both courses revolved around Mechanics and Strength of Materials.

Graduate Teaching Assistant August 2018 - May 2019
Arizona State University

· Instructed and guided undergraduate students in Matlab, C and other computational programming languages for EGR 219: Computational Modelling of Engineering Systems.

Graduate Research Assistant August 2017 - December 2018
Arizona State University

· Worked in the Robotics, Dynamical Systems and Controls Group as a Ph.D. student under Dr. Sangram Redkar and Dr. Thomas Sugar.
· Designed and Developed a Passive Prosthetic Ankle under a Small Business Innovation Research grant.
· Worked on Universal Robots 5 and Baxter platforms and guided undergraduate students on the same.
· Worked on multiple proposals with Dr. Redkar.

Control System Modelling and Simulation Engineer September 2016 - June 2017
AZLoop - A Hyperloop Competition Team

· Leaded the Control System Modelling and Simulation sub-team of 8 engineers at AZLoop for the SpaceX Hyperloop Competition.
· Worked on the levitation system control modelling and simulation.

RESEARCH CONTRIBUTIONS

Analysis of a periodic force applied to the trunk to assist walking gait 2019
SG Bhat, S Cherangara, J Olson, S Redkar, TG Sugar *2019 WearRAcon*

Design and Analysis of an Auto-Parametrically Excited Platform for Active Vibration Control 2019
T Le, SG Bhat, SC Subramanian, P Waswa, S Redkar *ASME 2019 IDETC-CIE*

Volitional control of an active prosthetic ankle: a survey 2018
SG Bhat, S Redkar *International Robotics and Automation Journal*

Development of a Passive Prosthetic Ankle With Slope Adapting Capabilities 2018
SG Bhat, S Redkar, TG Sugar *ASME 2018 IMECE*

POSITION OF RESPONSIBILITY

Graduate and Professional Student Association August 2019 - May 2020
Engineering Assembly member *Arizona State University*

· Elected Assembly member for The Polytechnic School.
· Served in the Engineering Committee and the Special Projects Committee.

Mechanical Engineering Students Association August 2015 - May 2016
Student President *Mumbai University affiliated college*

· Handled the day-to-day operations of the association.
· Spearheaded a 2-tier team of 30 people to successfully conduct professional shows, exhibitions and talks for Yantram 2016 (a technical event).
· Organised event related to technical and professional advancement.

Mechanical Engineering Students Association August 2014 - May 2015
Treasurer *Mumbai University affiliated college*

· Handled the monetary operations and the budgeting for the association.

SKILLS

- Computer Aided Design/Drawing (SolidWorks, Fusion 360, ProE)
- Matlab Programming (Matlab and Simulink)
- Python Programming
- Limited C++ Programming Skills
- Operation of various Manipulator Arms (Baxter Dual-Arm Robot, UR5, Dobot Magician and self-built arm)
- Limited ROS Capability
- Limited Embedded Systems Capability
- Bio-mechanical Analyses
- OpenSim Simulation (Human Bio-mechanical Modelling)
- Motion Capture and Data Analysis (Vicon and Optitrack systems)
- Fabrication of Various Devices