Aditya Sripada

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San Francisco Bay Area, USA

Education

- **Carnegie Mellon University**, MS in Robotics, The Robotics Institute 2019–2021
  GPA: 4.08/4.0
  Thesis: Turning Behavior of Running Systems induced by Leg Placement.
  This work was partially supported by NSF Grant 1563807: Collaborative Research on Self-stabilizing Running Robots
- **SRM University**, B.Tech in Electrical and Electronics Engineering 2013–2017
  CGPA: 9.3/10

Experience

- **Senior Robotics Engineer**, Nimble.ai, San Francisco Bay Area, USA 2021–Present
  Tech Lead on Mobile Manipulation Robotics Team
  - First robotics engineer on the flagship robotic system, responsible for item picking and autonomous warehouse navigation.
  - Spearheaded development of high-impact control features, doubling throughput in Q4 2023, which proved crucial for **commercial success** as well as **fundraising**.
  - Diagnosed and resolved critical production issues involving mobile robot dynamics slip and sensing noise across heterogeneous robot fleets.
  - Designed simulation and data analytics tools to benchmark and improve locomotion reliability and multi-sensor integration.
  - Collaborated with hardware, software, and production teams to deliver robust system improvements under high operational load.
- **Research Assistant**, Robotics Lab, IIT Hyderabad, India 2017–2019
  Advisor: Prof. Prasanth Kumar R — Worked on bipedal locomotion, push recovery, and jumping control strategies.
- **LVP-MIT Research Fellow**, L.V. Prasad Eye Institute, Hyderabad, India 2017
  Advisor: Dr. Premnandhini S — Worked on innovation in low-cost assistive technologies as part of a collaboration with MIT Media Lab to improve eye care accessibility.
- **Team Lead**, SRM Team Humanoid, SRM University, India 2013–2017
  Advisor: Prof. Hemalatha B — Led design, fabrication, and control of humanoid robots for international competitions.

Awards & Honors

- **Mike Stilman Award for Outstanding Research Paper**, Finalist, *IEEE RAS International Conference on Humanoids 2025, Seoul, South Korea.*

- **Best Safety Features Award**, Micron UV Robot Design Challenge 2020 — *Global competition for UV-C autonomous robots during the COVID-19 pandemic.*
- **Third Prize**, Humanoid Application Challenge: Humanoid Magic, — *IEEE International Conference on Intelligent Robots and Systems 2017.*
- **Robogames 2017**, International Robotics Olympics, San Francisco, USA:
  - Gold Medal – Autonomous Humanoid Penalty Kick
  - Silver Medal – Humanoid Freestyle
  - Silver Medal – Humanoid Biped Race
  - Bronze Medal – RC Humanoid Sumo

  One of the largest international robotics competitions, often dubbed the Olympics of Robots.
- **IEEE Travel Grant** ($500) — To attend IROS 2017, Vancouver
- **Best Graduation Thesis**, EEE Department of 700+ students, SRM University (2017)
- **1st Runner-up**, Konvolve-16 Project Design Competition, SRM University
- **Winner**, National Maker Summit 2016, IIT Madras
- **University Merit Scholar**, All 4 years, SRM University

Patents

- **Self-Adjusting Foot Support Apparatus** — Patent No. 201841032214 (Published August 2018)
  A mechanism to dynamically adapt foot support systems in humanoid robots, prosthetics, and exoskeletons for improved balance and movement.

Publications

Google Scholar

Papers

- **A. Sripada**, A. Warrier, "Walking, Rolling, and Beyond: First-Principles and RL Locomotion on a TARS-Inspired Robot", International Conference on Humanoid Robots 2025 (Humanoids 2025)(Accepted, yet to appear)
- **A. Sripada**, "Building Baymax: A First Step Toward Soft-Link Humanoids", 10th "Can we build Baymax?" Workshop, International Conference on Humanoid Robots 2025 (Humanoids 2025)(Accepted, yet to appear)
- **A. Sripada**, "Bridging Fiction and Reality: Evaluating the Feasibility of Adaptive Gaits Inspired by TARS from Interstellar", International Symposium of Experimental Robots 2025 (ISER 2025)(Accepted, yet to appear)

- **A. Sripada**, "Adaptive Gaits of TARS: A Sci-Fi Inspired Multimodal Robot", 2nd Workshop on Unconventional Robots, IEEE International Conference on Robotics and Automation 2025 (ICRA 2025)
- **A. Sripada**, H. Geyer, "Turning Behavior of Running Systems induced by Leg Placement", Robotics Institute, Carnegie Mellon University, Technical Report, 2021
- **A. Sripada**, J. Vistapalli, R.P. Kumar, "Biped Robot Vertical Jumping with Control Constraints," Robotics and Biomimemtics 2018 (ROBIO 2018)
- **A. Sripada**, H. Asokan, A. Warrier, A. Kapoor, H. Gaur, R. Sridhar, "Real-Time Teleoperation of a Humanoid Robot with Motion Imitation and Legged Locomotion," International Confernece on Advanced Robotics and Mechatronics 2018 (ICARM 2018)
- **A. Sripada**, A. Warrier, A. Kapoor, H. Gaur, B. Hemalatha, "Dynamic Lateral Balance of Humanoid Robots on Unstable Surfaces," ICEECCOT 2017

Poster Presentations and Extended Abstracts

- **A. Sripada**, "FlexiTact: A Flexible 3D-Printed Capacitive Tactile Sensor Array", Humanoids 2025 (Accepted, yet to appear)
- **A. Sripada**, "Adaptive Gaits of TARS: A Sci-Fi Inspired Multimodal Robot", ICRA 2025
- **A. Sripada**, "Bridging Fiction and Reality: Evaluating the Feasibility of Adaptive Gaits Inspired by TARS from Interstellar", Ubiquitous Robots 2025
- **A. Sripada**, H. Geyer, "Turning Behavior of Running Systems Induced by Leg Placement," Dynamic Walking 2020
- **A. Sripada**, V. Joshi, R.P. Kumar, "Towards a Flying and Leaping Humanoid Robot," IROS 2018
- **A. Sripada**, H. Asokan, A. Warrier, R. Sridhar, "Dynamic Whole-Body Imitation of Human Motions in Humanoid Robot," IROS 2017

Media Coverage

- **"TARS3D is a fully 3D-printed research robot developed by robotics engineer Aditya Sripada..."**, Wevolver
  Wevolver
- **"Meet Hyderabad's very own RoboCop"**, The Times of India — Featured as core member of the RoboCop development team.
  timesofindia.indiatimes.com
- **"Hearing Problems? Don't Worry, Just Wear This Cap"**, The New Indian Express — Work on assistive technology highlighted.
  newindianexpress.com
- **"SRM hearing aid draws praise"**, The Deccan Chronicle — Recognized innovation in low-cost hearing devices.
  deccanchronicle.com

- **"Aditya Sripada won India its First Gold Medal at the Robogames"**, MyCaptain Blog — Profiled as India's first Robogames gold medalist.
  medium.com/@theclimber_ind

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