

RESUME

VITALRAM RAYANKULA
Netaji Nagar, Bhimavaram
West Godavari, Andhra Pradesh

Mobile. No: 8439464176
Email: rvitalram@gmail.com

Research area of interest: Robot dynamics & control and mobile manipulators

Education Qualification

Pass out year	Course	Subjects	Institute	Score (%)
2019	Ph.D.	Robotics	Indian Institute of Technology Roorkee	NA
2009	M.Tech	CAD,CAM& Robotics	Indian Institute of Technology Roorkee	7.37/10 (CGPA)
2006	B. Tech	Mechanical (with specialization in I&P) Engg.	R.V.R&J.C. College of Engineering (Acharya Nagarjuna University)	62.52
2002	10+2	Mathematics, Physics and Chemistry	St Joan's Junior College, Guntur	73.3
2000	10	NA	Z P H School Kakani	76.16

M. Tech Dissertation

Topic of Dissertation: Development of algorithm for feeding of planar parts in Assembly Automation using fences.

Ph. D. Thesis

Topic of thesis: Inverse kinematics, control and path planning of mobile manipulator.

Work Experience

S.No	Institute and Department	Designation	Period
1	Dehradun Institute of Technology, Dehradun (Dept. of I&PE)	Lecturer	31/07/2009 to 28/12/2009
2	Raghu Institute of Technology, Visakhapatnam (Dept. of Mechanical Engg.)	Assistant Professor	09-01-2010 to 17-12-2014
3	Indian Institute of Technology Kanpur (Dept. of CSE)	Post-Doctoral Fellow	02-10-2019 to 13-01-2020
4	SRKR Engineering College (Dept. of Mechanical Engg.)	Assistant professor	21-01-2020 to till date

Subject(s) of Interest and Taught:

- Robotics
- Dynamics and control systems
- Mechatronics
- Engineering mechanics
- Strength of materials

Technical Skills

- Programming Languages: C/C++ and Python
- Application Packages : Robot Operating System (ROS), MATLAB/Simulink, 20-Sim, Maple, SOLIDWORKS, MS office, LaTeX
- Operating system : Windows and Ubuntu

Refereed Journal publications:

1. **Ram, R. V.**, Pathak, P. M., & Junco, S. J. (2019). Trajectory control of a mobile manipulator in the presence of base disturbance. *Simulation*, 95(6), 529–543. (IF:1.455)
2. **Ram, R. V.**, Pathak, P. M., & Junco, S. J. (2019). Inverse kinematics of mobile manipulator using bidirectional particle swarm optimization by manipulator decoupling. *Mechanism and Machine Theory*, 131, 385-405. (IF: 3.535)
3. **Rayankula, V.**, & Pathak, P. M (2021). Fault tolerant control and reconfiguration of mobile manipulator. *Journal of Intelligent and Robotic Systems*, 101(34). (IF: 2.259)

International conferences

1. **Ram, R. V.**, Pathak, P. M., & Junco, S. J., “Reconfiguration of the Mobile Manipulator under the Failure of Joint Actuator “, ICBGM 2018, Bordeaux, France, July 2018.
2. Crespo, Martin, Nacusse, Matías, Junco, S. J., **Ram R.V.**, and Pathak, P. M., “Control of a mobile robotic manipulator: a combined design approach” IMAACA-2018, Budapest, Hungary-2018.
3. Nacusse, Matías, Crespo, Martin, Junco, S. J., **Ram R.V.**, and Pathak, P. M., “Bond graph model conditioning for analysis, simulation and control System design: application to a planar mobile robotic manipulator” IMAACA-2017, Barcellona, Spain-2017.
4. **Ram, R. V.**, Pathak, P. M., & Junco, S. J., “Modelling of mobile robot with on board redundant manipulator arm” iNaCoMM-2015, Kanpur, India, Dec 2015.

Robot Prototype development

I developed a four degree of freedom robot arm mounted over an Omni-wheeled mobile robot during my PhD. The manipulator joints and mobile robot wheels are actuated using *maxon EC 4 pole* (brushless DC) motors. Each motor is connected with a separate *EPOS2* controller and all the controllers are connected each other through controlled area network (CAN). The controlled motion of multiple motors is programmed in C++ on MS visual studio platform.

Institute visited outside

Visited Universidad Nacional de Rosario, Rosario, Argentina for 15 days as a part of Indo-Argentina cooperation project on development of control system for mobile manipulator to handle hazardous material.

Journals reviewed

- IEEE Intelligent Systems.
- Journal of Electrical Engineering & Technology (Springer publication)

Personal profile

<i>Permanent Address</i>	Ponugupadu, Phirangipuram (M.D.), Guntur (Dist.), Andhra Pradesh-522549		
<i>Father's Name</i>	R. Syamasundara Rao	<i>Contact No</i>	+91 8439464176
<i>E-mail</i>	rvitalram@gmail.com , rvitalram@srkrec.ac.in	<i>Date of Birth</i>	17 th June 1985
<i>Nationality</i>	Indian	<i>Marital Status</i>	Married
<i>Category</i>	General	<i>Languages Known</i>	English, Hindi and Telugu (Mother Tongue)

References

1. Dr. PM Pathak, Professor, Dept. of Mechanical and Industrial Engg., IIT Roorkee, Roorkee, India. Mobile: 9411177064, email: pushparaj.pathak@me.iitr.ac.in
2. Prof. SJ Junco, Professor, Facultad de Ciencias Exactas, Ingenieria y Agrimensura, Universidad Nacional de Rosario, Argentina. Mobile:+5493416294798, email: sjunco@fceia.unr.edu.ar

Declaration

I hereby, declare that the information furnished above is true to the best of my knowledge.

Location: Bhimavaram

VITALRAM RAYANKULA