Faculty Profile

Dr. S. K. Harisha is an Associate Professor in Mechanical Engineering at RVCE, specializing in Robotics and Automation with a Ph.D. in Mobile Robot Navigation using Fuzzy Logic. He has over two decades of teaching and research experience, with numerous publications in international journals and conferences focused on smart manufacturing, IIoT, and autonomous systems. His work includes consultancy projects in automation, energy auditing, and robotic systems, with active roles in editorial boards and academic committees. He also mentors Ph.D., postgraduate, and undergraduate students and contributes to advanced labs and curriculum development in industrial automation.

Personal Information

- **Name:** S K HARISHA
- **Designation:** Associate Professor
- **Department:** Mechanical Engineering
- **Email:** harishask@rvce.edu.in
- **Phone:** 9538300040

Google Scholar / ResearchGate / LinkedIn: [Link if applicable]/ **ORCID: [Link]**

Domain of Expertise

Research Focus

- **Primary Area:** Robotics, Automation
- **Allied Areas:**
    - Gripper, Autonomous Robot, soft robot, smart manufacturing, IIoT,IoT

Academic Qualifications

- **Ph.D.**: Mobile Robot (CS), ALU, 2013 “Development of Fuzzy Logic Based Navigation Algorithm for Multi-Featured Autonomous Robot”
- **M.Sc./M.Tech**: Comlputer Integrated Manufacturing, VTU, 2004
- **B.E:** Mechanical, Kuvempu,1998

Professional Experience

Experience			
S.No	**Institute/College/Industry**	**Job Title**	**Duration (From- To)**
1.	RVCE	Associate Professor	2013- Till date
2.	RVCE	Assistant Professor	2011-2013
3.	RVCE	Lecturer	2007-2011
2.	NHCE	Lecturer	2004-2007

Publications & Patents

Journal Publications

List of International Journals publications

[1] Gagan.K . S. K. Harisha and C. Manjunath, "Optimizing Structural Integrity: Design and Development of a Pneumatic Mast for Base Station Deployment," *International Journal of All Research Education & Scientific Methods*, 2025.

[2] Rakshith S, Syed Hassan Quadri, and D. S. K. Harisha, "Smart Occupancy Lighting System," *International Journal of Innovative Science and Research Technology*, vol. 9, no. 5, 2024.

[3] Srinivas R, S. K. Harisha, "Analysis of Alternative 3D Printed Lower Limb Prosthetic for Light Weight Design Concept," *International Journal of Innovative Science and Research Technology*, vol. 8, no. 5, 2023.

[4] M S Krupashankar S K Harisha, Prasad Awali, "Effect of Centrifugal Force on a Motor Body Housing of a Vertical Turning," *International Journal of All Research Education and Scientific Methods*, 2022.

[5] Rajkumar G R, S K Harisha, Abhishek M, "Predictive Modelling and Optimization on Machinability Aspects in Turning of AISI 4140 Steel Using Wiper Inserts," *Journal of Seybold Report*, vol. 15, no. 7, pp. 1392-1406, 2020.

[6] Pawankumar Cillanki, SK Harisha, "Data Acquisition System for Software Interfaced Material Handling System," *IJMRSET*, vol. 2, no. 7, 2019.

[7] S. K. Harisha, G. R. Rajkumar, V. Pawar, and M. Keshav, "Statistical Investigation of Tool Geometry for Minimization of Cutting Force in Turning of Hardened Steel," *Materials Today: Proceedings*, vol. 5, no. 5, pp. 11277-11282, 2018.

[8] S K Harisha, Shivaraj Kumar DN, Narendra Babu, "Effect of Blade-Casing Rub Event on Blade, Casing and Turbine Shaft in Gas Turbine Engine," *Trends in Mechanical Engineering & Technology*, vol. 6, no. 1, pp. 43-54.

[9] M S Krupashankar S K Harisha, Pavankumar Kadam, Shashidhar Hiremath, "Ergonomically designed spindle assembly workstation using RULA analysis," *Advanced Materials and Manufacturing Technology*, vol. 1, pp. 207-216, 2015.

[10] S. K. Harisha, M. Biradar, B. V. Uppar, and R. S. Kulkarni, "Design and fabrication of automatic material handling system for engraving machine," *Procedia Materials Science*, vol. 5, pp. 1540-1549, 2014.

[11] S. K. Harisha, J. R. Natraj, and R. Chandra Kumar, "Characterization of TiAlN and TiN coating on high-speed steel using ion beam and cathodic arc deposition techniques," *International Journal of Advanced Industrial Engineering*, ISSN 2320-5539, 2013.

[12] S. K. Harisha, Ramakanth. P. Kumar, M. Krishna, and S. C. Sharma, "Development of hardware simulator to validate free-state based navigation algorithm of AGV," 2013.

[13] S. K. Harisha, Ramakanth. P. Kumar, M. Krishna, and S. C. Sharma, "Easing of fuzzy multiplexing in complex robot arbitration by FBSP grouping," *IJCSNS*, vol. 8, no. 12, p. 309, 2008.

[14] S. K. Harisha, Ramakanth P. Kumar, M. Krishna, and S. C. Sharma, "Fuzzy logic reasoning to control mobile robot on pre-defined strip path," *World Academy of Science, Engineering and Technology*, vol. 42, pp. 642-646, 2008.

List of National Journal Publications:

[1] Harisha S K Sreekar K , Kaushal Rao B, "Heat Distribution Study in Li-Ion Battery with Different Cell Configuration," *Journal of Fluid Mechanics and Mechanical Design*, vol. 6, no. 1, pp. 47-64, 2024.

[2] S. K. Harisha and N. V. Nanjundaradhya, "Acoustic Performance of Glass Wool Insulation for Noise Reduction in Industrial Gearboxes," *Journal of Industrial Mechanics*, vol. 34, pp. 34-44, 2024.

[3] N. V. Nanjundaradhya S. K. Harisha, Sachin T. R, "Gesture-Based Kinematic Robot Control Using Visual Servoing," *Journal of Mechanical Robotics*, vol. 8, no. 3, pp. 23-28, 2024.

[4] S. K Harisha N. V Nanjundaradhya, Nischit U. R, Pradeep K Sahoo., "Enhancing Machine Tool Performance Through Analysis and Implementation of an IoT-Based Energy Monitoring System," *Journal of Mechanical and Mechanics Engineering*, vol. 10, no. 1, pp. 20-31, 2024.

[5] N. V. Nanundaradhya S K Harisha, Jeerankalagi Sachin Gurupadappa, "Automated Anthropometric Measurement System for CNC Machine Workspace Design," *Journal of Automation and Automobile Engineering*, vol. 8, no. 3, 2023.

[6] H. E. Shashidhar N. V. Nanjundaradhya, A. Pavan Kumar, S K Harisha "A Solar-Electric Hybrid Portable Grain Winnower: Design and Analysis," *Journal of Advancement in Machines*, vol. 8, no. 2, pp. 29-39, 2023.

[7] N V Najnundaradhya S K Harisha, Rahul R Vernekarr, "Statistical Analysis of Small Punch Test to Forecast the Mechanical Behaviour of Ti-6Al-4V," *Journal of Mechanical and Mechanics Engineering*, vol. 9, no. 2, pp. 12-21, 2023.

International Conference Papers

[1] T. V. Pavan, V. L. J. Gupta, S. K. Harisha, and G. R. Rajkumar, "Topology Optimization and Generative Design for Weight Reduction in Palletizer Robots," in *Proc. 8th Int. Conf. on* Computational System and Information, 2024.

[2] Sunithkumar Guraddi, Dr. Harish S K and Vinayagam N, Design of IoT based smart shop floor- an exploratory case study, International Conference, ICECDS 2017. 1st and 2nd August of 2017, SKR Engineering College, Poonamalle, Tamilnadu.

[3] Malakanagouda B Biradar, Dr. Harish S K, PLC based automation for brake actuator testing, ICECDS 2017. 1st and 2nd August of 2017, SKR Engineering College, Poonamalle, Tamilnadu.

[4] Venkatesh Kulkarni, Dr. Harisha S K, Design and simulation of combined stamping and forging process for sheet metal of non uniform thickness component, AMMMT-2016, SIT-Tumkur, September 23-24,2016.

[5] Anuoop Abraham, A S Vysakh, Jobin Philip, Praveen M P, Harisha S K , Design of Harvesting Mechanism for Advanced Remote-controlled Coconut Harvesting Robot (A.R.C.H-1),international conference on 3D printing held in NIMHANS, October 2014, Bangalore.

[6] S K Harisha"Fuzzy Logic Reasoning to Control Mobile Robot on Pre-defined Strips Path" ICMSE'08, World Academy of Science Engineering Technology, Singapore, VOL-32, August 2008, pp 729-733.

[7] S K Harisha, "The Development of Fuzzy Logic Concept for Mobile Robot Navigation in Rough Terrain" TeamTech'08, II Sc, Bengaluru, Karnataka, pp120.

[8] S K Harisha, "Development of Hardware based Simulator to Validate the Free Way State Based Navigation algorithm" ICAMB'09, VIT, Vellore, Tamilnadu.

[9] S K Harisha, "Recast layer minimization in Spark eroded surface using Design of Experiment" TEAMTECH'04, Bengaluru. Karnataka.

[10] S K Harisha, Design and Fabrication of Automatic Material Handling System for Engraving Machine, ICAMME, NITK.

[11] S K Harisha, Design of IoT based smart shop floor- an exploratory case study, International Conference, ICECDS 2017. 1st and 2nd August of 2017, SKR Engineering College, Poonamalle, Tamilnadu.

[12] S K Harisha, PLC based automation for brake actuator testing, ICECDS 2017. 1st and 2nd August of 2017, SKR Engineering College, Poonamalle, Tamilnadu.

[13] S K Harisha, Modelling and analysis of piezoelectric cantilever energy harvester for different proof mass and material proportion, International conference, IConAMMA-2017, Amrita School of Engineering. 17th August to 19th August 2017.

[14] S K Harisha, Statistical investigation of Tool Geometry for Minimization of Cutting

Force in Turning of Hardened Steel, ICMMM-2017, VIT, Vellore. 9th - 11th March 2017.

[15] S K Harisha, Design and simulation of combined stamping and forging process for sheet metal of non-uniform thickness component, AMMMT-2016, SIT-Tumkur, September 2324,2016.

[16] S K Harisha, Ergonomically Designed Spindle Assembly Workstation using RULA Analysis, International Conference on Materials and Manufacturing Technology, ICMMT, 2015), November 5-7, 2015 at Vijaya Vittala Institute of Technology, McGraw Hill publication)

[17] S K Harisha, Design of Harvesting Mechanism for Advanced Remote-controlled Coconut Harvesting Robot A.R.C.H-1), International conference on 3D printing held in NIMHANS, October 2014, Bangalore.

National Conference Papers

[1] S K Harisha "Development of new Fuzzy Logic approach for Mobile Robot pit detection and avoidance on table" ADMI'08, Karpagam college of Engineering, Coimbatore, Tamilnadu.

[2] S K Harisha "Adaptive Fuzzy Logic in differential drives mechanism of Mobile Robot" Dhruv'08, MSRIT, Bengaluru.

[3] S K Harisha "Fuzzy Logic based reasoning for stair climbing Autonomous Robot" ETIME'08, BMSCE, Bangalore.

[4] S K Harisha "The methods to reduce the effects of residue on spark eroded surface" RAIME'04, National Engineering College, Kovilpatti, Tamilnadu.

[5] S K Harisha "Simultaneous scheduling of machines and material handling systems in manufacturing" MECHARNIVAL'04, QUISCET, Ongole, A.P.

Books/Book Chapters

[1] S. K. Harisha. N. V. Nanjundaradhya, N. U. R., and P. K. Sahoo, "Enhancing First Pass Yield in Multi-Cylinder Fuel Injection Pumps," *Futuristic Trends in Mechanical Engineering*, vol. 3, pp. 1-14, 2024.

[2] S. K. Harisha, Pavankumar Kadam, Shashidhar Hiremath and M. S. Krupashankar, Ergonomically Designed Spindle Assembly Workstation using RULA Analysis, McGraw Hill publication.

R & Grants & Consultancy Projects

Ongoing & Completed Consultancy Projects

Sl. No	Project Title	Funding Agency	Duration	Amount	COPI/Scholar
1	Auto Traverse Winder with Vision	TE Connectivity	1 Year	20L	Co-PI

	System				
2	Tribo-electric Nano Generator	TE Connectivity	1 Year	10L	Scholar
3	Micro Hydro Power Generation	TE Connectivity	1 Year	8L	Scholar
4	Bruderer Machine Power Gen	TE Connectivity	1 Year	8.5L	Scholar
5	Foundry Sand Reuse in Building	Bhuwalka Castings	1 Year	6.14L	Scholar
6	Thermal Energy Audit of Kiln	VRPL	1 Year	6L	Scholar
7	Electrical Energy Audit	VRPL	1 Year	5.65L	Scholar
8	Automated Gift Toy Picker	Samson Tech Ltd.	6 Months	12L	Scholar
9	Raspberry Pi Testing	TE Connectivity Pune	6 Months	3L	Co-PI
10	6-DOF Collaborative Robot	TE Connectivity	1 Year	16.5L	Scholar
11	Design of High pressure Pneumatic valve for sorting macine	Swan Sorter	2 Years	29L	Co-PI

Professional Memberships

- ISTE, AMIEE, IFREP

Awards & Recognitions

- **Academic Excellence**- M.Tech Program, Sir MVIT, 2004
- **Academic Excellence**- Paper Presentation in Singapore, RVCE,, 2010

Student Supervision

- **Ph.D. Candidates:** 04Registred
- **M.Tech/M.Sc. Students:** 30
- **Undergraduate Research Mentees:** 22

Professional Roles

- **Editorial Board:** AMIEE
- **Chair/Committee Member:** IEEE

Teaching

Core Courses:

- Flexible Manufacturing System
- Mechatronics System

- Industrial Automation
- Robotics & Autoamtion

Advanced/Lab Courses:

- IIoT lab
- Advanced Product Design
- Digital Manufacturing

Professional Roles

Responsibilities

- **Academic:** IDEA Lab coordinator
- **Administrative:** CoC-FANUC Coordinator, Budget Committee, Research Committee

External Connect

- Interview panel -Faculty appointment DSCE
- Journal Paper Reviewer
- Conference Paper Reviewer