

## RADHE SHYAM SHARMA

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### ACADEMIC DETAILS

- **PhD** (Electrical Engineering)  
**Institute:** Indian Institute of Technology (IIT) Kanpur, India, 2020  
PhD thesis title: “*Smart Control Strategies for Autonomous Navigation of Multi-robot Systems*”  
**CPI:** 9 out of 10  
[List of Courses](#) 
- **M.Tech.** (Modelling & Simulation)  
**Institute:** Defence Institute of Advanced Technology (DIAT) Pune, India, 2013  
**Percentage:** 75.25  
[List of Courses](#) 
- **B.E.** (Biomedical Engineering)  
**Institute:** Samrat Ashok Technological Institute (SATI) Vidisha, India, 2007  
**Percentage:** 74.25  
[List of Courses](#) 

### RESEARCH INTERESTS

- Visual Servoing
- Robot Learning
- Autonomous Navigation
- Multi-Robot Systems

### PUBLICATIONS

1. **Radhe Shyam Sharma**, Arindam Mondal, Laxmidhar Behera, “Tracking Control of Mobile Robots in Formation in the Presence of Disturbances,” *IEEE Transactions on Industrial Informatics*, vol. 17, no. 1, pp. 110–123, 2021. [PDF](#)  [Video of the Experiments](#) 
2. **Radhe Shyam Sharma**, Ranjith Ravindranathan Nair, Pooja Agrawal, Laxmidhar Behera, K. S. Venkatesh, “Robust Hybrid Visual Servoing using Reinforcement Learning and Finite Time Adaptive FOSMC,” *IEEE Systems Journal*, vol. 13, no. 3, pp. 3467–3478, 2018. [PDF](#)  [Video of the Experiments](#) 
3. **Radhe Shyam Sharma**, Santosh Shukla, Laxmidhar Behera, Venkatesh K S, “Position Based Visual Servoing of a Mobile Robot With an Automatic Extrinsic Calibration Scheme,” *Robotica*, vol. 38, no. 5, pp. 831–844, 2020. [PDF](#)  [Video of the Experiments](#) 
4. **Radhe Shyam Sharma**, Santosh Shukla, Hamad Karki, Amit Shukla, Laxmidhar Behera, Venkatesh K S, “DMP Based Trajectory Tracking for a Nonholonomic Mobile Robot With Automatic Goal Adaptation and Obstacle Avoidance,” *IEEE International Conference on Robotics and Automation (ICRA)*, pp. 8613–8619, 2019. [PDF](#)  [Video of the Experiments](#) 
5. Atulya Shivam Shree, **Radhe Shyam Sharma**, Laxmidhar Behera, K. S. Venkatesh, “Position Based Visual Control of The Hovering Quadcopter,” *International Conference on Intelligent Human Computer Interaction*, pages 15–26. Springer, 2016. [PDF](#)  [Video of the Experiments](#) 

## AWARDS AND FELLOWSHIPS

- DAAD Postdoc-NeT-AI 4/2021 Fellow
- Visiting research scholar at Khalifa University, Abu Dhabi, UAE, Oct - Nov 2018
- Received Institute fellowship for doctoral studies from Indian institute of Technology (IIT) Kanpur, India, Jan 2015 - Dec 2019
- Received GATE scholarship for Master of Technology course from MHRD, Govt of India, Aug 2011- May 2013

## PROJECTS

- A condition monitoring system with multi-agent mechanism for external non-contact smart inspection of buried oil and gas pipelines  
*The Petroleum Institute (PI), Khalifa University, Abu Dhabi, UAE*
- Study on personal drone benefits for driver assistance  
*Renault Nissan Technology and Business Center India (RNTBCI), Chennai, India*
- Robotics and Automation in Agriculture  
*Ministry of Electronics and Information Technology, India*

## INDUSTRIAL, RESEARCH AND TEACHING EXPERIENCE

- Assistant Professor  
School of Computing and Electrical Engineering  
*IIT Mandi*  
*From 26-07-2022 to Till Date*
- Autonomy Senior Engineer  
Integrated Components and Solutions Division  
*Caterpillar*  
*From 05-07-2021 to 25-07-2022*
- Project Post-Doctoral Fellow  
*IIT Kanpur, India*  
*From 16-04-2021 to 30-06-2021*
- Project Scientist  
*IIT Kanpur, India*  
*From 16-06-2020 to 15-04-2021*
- Research Associate  
*IIT Kanpur, India*  
*From 01-01-2020 to 31-05-2020*
- Faculty  
*NIT Raipur, India*  
*From 15-07-2013 to 31-05-2014*
- Lecturer  
*SGSITS Indore, India*  
*From 15-07-2008 to 11-08-2011*
- Lecturer  
*SATI Vidisha, India*  
*From 11-09-2007 to 14-07-2008*

## TUTORSHIPS

- Lab Tutor for Introduction to Electronics (ESc201A), 2018-19-II Semester, IIT Kanpur
- Theory Tutor for Introduction to Electronics (ESc201A), 2019-20-I Semester, IIT Kanpur
- Theory Tutor for Introduction to Electronics (ESc201A), 2019-20-II Semester, IIT Kanpur

## PROFESSIONAL ASSOCIATIONS

- Reviewer for IEEE Robotics and Automation Letters
- Reviewer for IEEE Transactions on Mechatronics
- Reviewer for IEEE Systems Journal
- Reviewer for IEEE Transactions on Instrumentation and Measurement
- Reviewer for IEEE RO-MAN (Robot and Human Interactive Communication)
- Student member of IEEE
- Member of IEEE Robotics and Automation Society
- Visiting research scholar in the Department of Mechanical Engineering at Khalifa University, Abu Dhabi, UAE
- Speaker for GIAN (Global Initiative of Academic Networks) course on Selected Topics in Internet of Things, Jan 2018

## POSITIONS OF RESPONSIBILITY

- Academic Mentor, Counselling Service, IIT Kanpur, 2015
- Advisor of Light & Decoration Committee in *Techno Vision*, 2008
- Convener of SAC Committee In *SU-2007*
- Co-Convener of Audio-Visual Committee In *SU-2006*

## TRAININGS ATTENDED

- Connected Vehicle 2022, Conference and Exhibition at *Bengaluru*, (May 2022)
- National workshop on “SVM in pattern recognition & its applications in biological sciences” at *NIT Raipur* (Jan 2014)
- Faculty training/orientation program at *SGSITS Indore* (Dec 2008)
- Major training on “Imaging systems” at *AFMC (Armed Forces Medical College) Pune* (Jun-Jul 2006)
- Minor training on “Biomedical Equipments” at *MH (Military Hospital) Gwalior* (Jun-Jul 2005)

## TECHNICAL SKILLS

- Languages: MatLab, and Python
- Operating Systems: Linux, ROS (Robot Operating System)
- Others: PyBullet,  $\text{\LaTeX}$
- Hands-on experience with unmanned ground and aerial vehicles – Pioneer P3-DX, Guardian mobile platform, Segway RMP, Nayan, and AscTec Hummingbird.



(a) Pioneer P3-DX



(b) Guardian robot



(c) Segway RMP



(d) Nayan



(e) AscTec Hummingbird

## TREKKING AND CAMPING EXPERIENCE

- Gaumukh Tapovan Trek
- Dodital Trek
- NSS CAMP

## INTEREST AND HOBBIES

- Adventure trekking
- Robotics
- Horse riding

## REFERENCES

Prof. Laxmidhar Behera  
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IIT Mandi  
Himachal Pradesh, India.  
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