

Dr. SHUBHASRI KUNDU

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Assistant professor-II



Contact details :

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INTERESTED RESEARCH AREAS:

- ❑ Design of mobile robot for all terrain.
- ❑ Navigational Methodologies of Robots
- ❑ Artificial Intelligence Techniques

ACADAMIC DETAILS :

Educational Qualification	Discipline	Year of Passing	Board/Institute
PhD	Underwater Robot and Computational Intelligence	Awarded on 10 th March, 2016	NIT Rourkela, Odisha
M. Tech(Res.)	Robotics and AI, Mechanical Engineering	2011	NIT Rourkela, Odisha
B. Tech	Electrical Engineering	2007	Jalpaiguri Govt. Engineering College, West Bengal (W.B.U.T)
Higher Secondary Education	Science	2003	W.B.C.H.S.E, West Bengal
Secondary Education	All	2001	W.B.B.S.E, West Bengal

PUBLICATION:

A. International Journals:

1. Shubhasri Kundu and Dayal R. Parhi, "Navigation of Underwater Robot based on Dynamically Adaptive Harmony Search Algorithm", accepted for publication in Memetic Computing (January, 2016).

2. Dayal R. Parhi and Shubhasri Kundu, "Navigational control of underwater mobile robot using dynamic differential evolution approach", accepted for publication in IMeche, Part M: Journal of Engineering for the Maritime Environment (November, 2015).
3. Shubhasri Kundu and Dayal R. Parhi, "Reactive Navigation of Underwater Mobile Robot using ANFIS Approach in a Manifold Manner", accepted for publication in International Journal of Automation and Computing (March, 2015).
4. Shubhasri Kundu and Dayal R. Parhi, "Differentially Adaptive Harmony Search for Path Planning of Underwater Robot", under review for publication in Intelligent Service Robotics (2015).
5. Dayal R. Parhi and Shubhasri Kundu; "Multiple ANFIS Model Approach for Motion Planning of Underwater Mobile Robot", International Journal of Artificial Intelligence and Computational Research (IJAICR), 6(1), 2014, pp: 57-67.
6. Dayal R. Parhi and Shubhasri Kundu; "Analysis of Thruster Dynamics for Underwater Mobile Robot", International Journal of Applied Artificial Intelligence in Engineering System, 5(2), 2013, pp. 129-139.
7. Dayal R. Parhi and Shubhasri Kundu; "Theoretical Analysis of 6 DOF Motion for Underwater Robot", International Journal of Artificial Intelligence and Computational Research (IJAICR), 4(2), 2012, pp. 59-69.
8. Dayal R. Parhi and Shubhasri Kundu; "Review on Guidance, Control and Navigation of Autonomous Underwater Mobile Robot", International Journal of Artificial Intelligence and Computational Research (IJAICR), 4(1), 2012, pp. 21-31.
9. Shubhasri Kundu, Dayal R. Parhi and B.B.V.L Deepak, "Fuzzy-Neuro based Navigational Strategy for Mobile Robot", International Journal of Scientific and Engineering Research, 3(6), June-2012, pp: 97-102.
10. Dayal R. Parhi and Shubhasri Kundu; "A Hybrid Fuzzy Controller for Navigation of Real Mobile Robot", International Journal of Applied Artificial Intelligence in Engineering System 3(1), 2011, pp. 19-33.
11. Dayal R. Parhi and Shubhasri Kundu, "Analysis of Fuzzy Inference System for Controlling a Mobile Robotic Agent", International Journal of Applied Artificial Intelligence in Engineering System, 2(1), 2010, pp. 65-79.

B. International Conferences:

1. Shubhasri Kundu, Manu Mishra and Dayal R. Parhi, "Autonomous navigation of underwater mobile robot based on harmony search optimization", 2014 IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES), Mumbai, 16-19 Dec. 2014, pp: 1-6.

2. Shubhasri, K., and D. R. Parhi: Navigation Based on Adaptive Shuffled Frog-Leaping Algorithm for Underwater Mobile Robot. In Intelligent Computing, Communication and Devices, pp. 651-659, Springer India (2015), presented in ICCD-2014 organized by SOA University, 18-19th April, 2014.
3. Shubhasri Kundu, Dayal R.Parhi, "Navigational Analysis for Underwater Robot Based on Multiple ANFIS Approach", published in Proceedings of IEEE sponsored International Conference on Recent Advances in Mechanical Engineering and Interdisciplinary Developments [ICRAMID - 2014], 07-08th March, 2014, Ponjesly College of Engineering, Nagercoil, Tamilnadu, pp: 397-401.
4. Shubhasri Kundu and Dayal R.Parhi, "Underwater Mobile Robot Navigation based on Dynamically Modified Shuffled Frog Leaping Algorithm", published in Elsevier Science and Technology Proceedings on "Computer Networks and Security", presented in International Conference on Communication and Computing (ICC- 2014) Bangalore, India,12-14th June, 2014, pp: 73-80.
5. Shubhasri Kundu, Chinmaya Sahu and Dayal R.Parhi, "ANFIS Approach based on Hybrid Learning for Motion Planning of Underwater Mobile Robot", published in Proceedings of IEEE sponsored International Conference on Convergence of Technology - 2014 (I2CT 2014), 6-8th April, 2014, Pune, pp: 1-6.
6. Shubhasri Kundu; Dayal R. Parhi; "Behavioural Analysis for Underwater Mobile Robot Navigation based on Shuffled Frog Leaping Algorithm", Proceedings of Second International Conference on Intelligent Robotics, Automation and Manufacturing (IRAM 2013), IIT Indore, Emerald Group Publishing Limited, pp. 44-50.
7. Shubhasri Kundu and Dayal R. Parhi; "Modified Shuffled Frog Leaping Algorithm based 6DOF Motion for Underwater Mobile Robot", Procedia Technology 10 (2013) 295 – 303, presented in International Conference on Computational Intelligence: Modeling, Techniques and Applications (CIMTA- 2013), Kalyani University.
8. B.B.V.L Deepak, Dayal R. Parhi, Shubhasri Kundu; "Innate immune based path planner of an Autonomous Mobile Robot", ICMOC-2012, Procedia Engineering 38 (2012) 2663-2671.
9. Shubhasri Kundu, Dayal R.Parhi, "Behavior based Navigation of Multiple Robotic Agents using Hybrid Fuzzy Controller", published in the proceedings of IEEE sponsored International Conference on Computer and Communication Technology (ICCCT-2010), Sep 17-19, MNNIT, Allahabad, pp.706-711.
10. Shubhasri Kundu; Dayal R. Parhi; "A Fuzzy Approach towards Behavioral Strategy for Navigation of Mobile Agent", published in the proceedings of IEEE and DRDO sponsored International Conference on Emerging Trends in Robotics and Communication Technologies [INTERACT-2010], Dec 3-5, Sathyabama University,

Chennai, pp. 328-333

11. Shubhasri Kundu; Dayal R. Parhi; “Fuzzy based Reactive Navigational Strategy for Mobile Agent”, published in the proceedings of IEEE sponsored International Conference on Industrial Electronics, Control and Robotics 2010, NIT Rourkela, Dec 27-29, 2010, pp. 37-42.

C. National Conference:

1. Dayal R. Parhi; Shubhasri Kundu; “Reactive Navigational Strategy for Mobile Agent based on Hybrid Fuzzy Logic”, published in National Conference on ETME-2011, Bhubaneswar, pp. 105-118.

FILED PATENT:

Title of filed patent: UNDERWATER MOBILE ROBOT FOR MONITORING AND EXPLORATION PURPOSE

Application No.: 359/KOL/2015

Date of filing patent: 31st March, 2015.