

Dr. J. C. Mohanta
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Patents Granted: 3

1. J. C. Mohanta and G. C. Mohanta, "Development of stub setting mechanism for testing of Transmission line tower", **Patent No. 431241, Date of Grant: 09.05.2023.**
3. J. C. Mohanta and Faiyaz Ahmed, "A Site Inspection Autonomous Unmanned Aerial Vehicle System" **Patent No. 541950, Date of Grant: 14.06.2024**
3. J. C. mohanta and Sri krishna Singh, "An automatic writing machine for drawing sketch and writing text and the method involved thereof", **Patent No. 565968, Date of Grant: 05.05.2025**

Book Publications:

1. Mohanta Jagadish Chandra (Author), Introduction to Mobile Robots Navigation, ISBN-10: 3659680648 and ISBN-13 : 978-3659680649, (2015).
2. Jagadish Chandra Mohanta and Mohd. Nayab Zafar, A Text Book on Mobile Robot Path Planning and Navigation Control, ISBN-978-620-5-63295-6 (2023).

X. List of Publications

X(I) Journal Publications: 26 [Since Last Promotion]

Sl. No.	Details of Publications	Volume & Page	SCI/ Scopus	Impact factor	Quartile	Year
1	Deep Learning-Based Fault Detection for Power Transmission Insulators Using a Custom-Developed UAV Platform, Kartikey Pandey, J. C. Mohanta, Vandana Agrawal, Sigma Journal of Engineering and Natural Sciences	Accepted (10.09.2025)	Scopus	0.7	Q4	2025
2	Optimizing ABB MIG welding robot through polynomial trajectory planning and artificial intelligence integration F Ahmed, M Barman, F Shaik, JC Mohanta "Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science"	11.18	SCIE	1.9	Q2	2025
3	Comparative LCA of thermal power plant with CCS and solar PV system: sustainability assessment in Indian context, S Malode, R Prakash, JC Mohanta, Environmental Science and Pollution Research	31 (54), 62853-62876	SCIE	5.8	Q1 (Green)	2024
4	Sustainability assessment of rooftop solar photovoltaic systems: A case study, Satyajit Malode, Ravi Prakash, JC Mohanta, Environmental Impact Assessment Review.	Volume 108, 107609, 01-09	SCIE	9.2	Q1 (Green)	2024
5	Inspection of power transmission line insulators with autonomous quadcopter and SSD network,	Volume: 42(3),	SCI	0.6	Q3	2024

	Faiyaz Ahmed, JC Mohanta , Sigma Journal of Engineering and Natural Sciences.	621 -632				
6	Modeling and performance evaluation of mecanum wheel platform with reduced vibration and a robust path planning, PS Yadav, JC Mohanta , V Agrawal, MDF Ahmed - Journal of the Brazilian Society of Mechanical Sciences,	Vol. 46(5), 292, 1-25	SCI E	2	Q3	2024
7	Development of a dual-axis solar tracker for efficient sun energy harvesting , A Sanyal, JC Mohanta , MD Faiyaz Ahmed - Proc IMechE Part E: J Process Mechanical Engineering. https://doi.org/10.1177/09544089241241453	Vol.1, 1–13	SCI	2.3	Q2	2024
8	Power Transmission Line Inspections: Methods, Challenges, Current Status and Usage of Unmanned Aerial Systems F Ahmed, JC Mohanta , A Keshari, Journal of Intelligent & Robotic Systems	110 (2), 54	SCI E	3.2	Q1 (Green)	2024
9	Autonomous Site Inspection of Power Transmission Line Insulators with Unmanned Aerial Vehicle System , MDF Ahmed, JC Mohanta , Electric Power Components and Systems.	Vol. 1, 1-24	SCI	2.7	Q3	2024
10	Energy-water nexus for thermal power generation in India: challenges and opportunities , R Prakash, S Malode, JC Mohanta , AK Dubey, Jatin, D Husain, Environment, Development and Sustainability	Volume 26, 8893–8913, (2024)	SCI	5.6	Q2	2024
11	A Life Cycle Assessment of Coal-Fired Thermal Power Plants with Post-Combustion Control Techniques: An India Scenario, S Malode, R Prakash, JC Mohanta , Environmental Science and Pollution Research	Vol. 39, 90639-90655	SCI	5.8	Q1 (Green)	2023
12	Path Planning of Unmanned Aerial Systems for Visual Inspection of Power Transmission Lines and Towers MDF Ahmed, JC Mohanta , A Sanyal, PS Yadav, IETE Journal of Research, 1-21	Vol. 1, 1-21	SCIE	3.3	Q2	2023
13	Inspection and identification of transmission line insulator breakdown based on deep learning using aerial images , MDF Ahmed, JC Mohanta , A Sanyal, Electric Power Systems Research.	Volume 211, 108199, 1-15	SCIE	3.3	Q2	2022
14	Recent Advances in Unmanned Aerial Vehicles: A Review , F Ahmed, JC Mohanta , A Keshari, PS Yadav, Arabian Journal for Science and Engineering 47 (7), 7963-7984	Vol. 47(7) 7963-7984	SCIE	2.6	Q2	2022
15	A Theoretical Review of Mobile Robot Locomotion based on Mecanum Wheels, PS Yadav, JC Mohanta , V Agrawal, MDF Ahmed, EVERGREEN Joint Journal of Novel Carbon Resource Sciences	Vol. 09 (02), pp396-403	Scopus	2.8	Q3	2022
16	A review on life cycle assessment approach on thermal power generation , S Malode, JC Mohanta , R Prakash Materials Today: Proceedings	Vol, 56, 791-798	Scopus	3.2	NA	2022
17	A robust sliding mode control of mecanum wheel-	Vol. 56,	Scopus	3.2	NA	2022

	chair for trajectory tracking PS Yadav, V Agrawal, JC Mohanta , MDF Ahmed Materials Today: Proceedings	623-630	s			
18	Development of smart quadcopter for autonomous overhead power transmission line inspections MDF Ahmed, JC Mohanta , MN Zafar, Materials Today: Proceedings.	Vol. 51, 261-268	Scopus	3.2	NA	2022
19	GWO-potential field method for mobile robot path planning and navigation control MN Zafar, JC Mohanta , A Keshari Arabian Journal for Science and Engineering 46 (8), 8087-8104	Vol. 6(8) 8087-8104.	SCIE	2.6	Q2	2021
20	Navigational Control of Several Mobile Robotic Agents using Petri Potential Fuzzy Hybrid Controller , JC Mohanta , DR Parhi, Applied Soft Computing 11, 3546-3557	Vol. 11, 3546-3557	SCI	9.7	Q1 (Green)	2021
21	Design and implementation of an autonomous robot manipulator for pick & place planning , MN Zafar, JC Mohanta , A Sanyal, IOP Conference Series: Materials Science and Engineering 691 (1), 012008, 01-08,	Vol. 691, No. 1, p. 012008	Scopus	0.5	NA	2019
22	Development and Fabrication of an Autonomous Seed Sowing Robot , S Dutta, U Shanker, S Katiyar, V Singh, MN Zafar, JC Mohanta , IOP Conference Series: Materials Science and Engineering 691 (1), . 012023, 1-8	Vol. 691, No. 1, p. 012023	Scopus	0.5	NA	2019
23	Modeling and analysis of articulated robotic arm for material handling applications , R Jain, MN Zafar, JC Mohanta , IOP Conference Series: Materials Science and Engineering 691 (1), 012010, 1-8	Vol. 691, No. 1, p. 012010	Scopus	0.5	NA	2019
24	A knowledge based fuzzy-probabilistic roadmap method for mobile robot navigation , JC Mohanta , A Keshari, Applied Soft Computing 79, 391-409	Vol. 79, 391-409.	SCIE	9.7	Q1 (Green)	2019
25	A control scheme for navigation and obstacle avoidance of autonomous flying agent , JC Mohanta , DR Parhi, SR Mohanty, A Keshari, Arabian Journal for Science and Engineering 43, 1395-1407	Vol. 43, 1395-1407	SCIE	3.67	Q1	2018
26	Methodology for path planning and optimization of mobile robots: A review , MN Zafar, JC Mohanta , Procedia computer science 133, 141-152	Vol. 133, 141-152	Scopus	0.51	NA	2018

X(II) Book Chapter Publications: 5 [Since Last Promotion]

Sl. No.	Details of Publications	Page	SCI/ Scopus	Impact factor	Year
1	Inspection of Overhead Power Transmission Conductors with Autonomous Quadcopter , MD Faiyaz Ahmed, JC Mohanta	145-155	Scopus (Book)	0.6	2023

	Mohanta , Soft Computing Applications in Modern Power and Energy Systems.		chapter)		
2	A Comparative Water Life Cycle Assessment of Pulverized Coal-Fired Power Plants with Various Post-combustion Controls , S Malode, JC Mohanta , R Prakash, Emerging Trends in Mechanical and Industrial Engineering: Select Proceedings.	309-319	Scopus (Book chapter)	0.7	2023
3	Recent Developments and Challenges in Solar Harvesting of Photovoltaic System: A Review , A Sanyal, MDF Ahmed, JC Mohanta , Emerging Trends in Mechanical and Industrial Engineering: Select Proceedings.	251-275	Scopus (Book chapter)	0.7	2023
4	Path planning approaches for mobile robot navigation in various environments: a review A Sanyal, M Nayab Zafar, JC Mohanta , M Faiyaz Ahmed Advances in Interdisciplinary Engineering: Select Proceedings of FLAME 2020.	555-572	Scopus (Book chapter)	0.7	2021
5	Effect of Temperature on Path and Trajectory Tracking of Mobile Robots in a Cluttered Environment , M Nayab Zafar, JC Mohanta , M Faiyaz Ahmed, Advances in Interdisciplinary Engineering: Select Proceedings of FLAME 2020.	31-41	Scopus (Book chapter)	0.7	2021

X(III) Conference Publications: 6 [Since Last Promotion]

Sl. No.	Details of Publications	Page	Index	Year
1	A Comparative Water Life Cycle Assessment of Pulverized Coal-Fired Power Plants with Various Post-combustion Controls, S Malode, JC Mohanta , R Prakash, Emerging Trends in Mechanical and Industrial Engineering: Select Proceedings	309-319	Scopus	2023
2	Recent developments and challenges in solar harvesting of photovoltaic system: A review, Alok Sanyal, MD. Faiyaz Ahmed, J. C. Mohanta . Emerging Trends in Mechanical and Industrial Engineering (LNME).	251- 275	Scopus	2023
3	Inspection of Overhead Power Transmission Conductors with Autonomous Quadcopter , MD Faiyaz Ahmed, JC Mohanta , In: International Conference on 3rd Electric Power and Renewable Energy Conference (EPREC-2022) at NIT Jamshedpur, India. 2022	145-155	Scopus	2023
4	Modeling and analysis of quadcopter F450 frame , MDF Ahmed, MN Zafar, JC Mohanta , 2020 international conference on contemporary computing and applications.	196-201	Scopus	2020
5	Effect of Temperature on Path and Trajectory Tracking of Mobile Robots in a Cluttered Environment , M Nayab Zafar, JC Mohanta , M Faiyaz Ahmed, Advances in Interdisciplinary Engineering: Select Proceedings of FLAME 2020	31-41	Scopus	2021

6	Path planning approaches for mobile robot navigation in various environments: a review A Sanyal, M Nayab Zafar, JC Mohanta , M Faiyaz Ahmed Advances in Interdisciplinary Engineering: Select Proceedings of FLAME 2020	555-572	Scopus	2021
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X(IV) List of Publications: 20 [Before Last Promotion]

Sl. No.	Details of Publications	Index	Impact factor	Year
1	R. Jain, Mohd.Nayab Zafar, J. C. Mohanta : Modeling and Analysis of Articulated Robotic Arm for Material Handling Applications. In: ICCEMME 2019, held 3-5 May 2019. DOI: 10.1088/1757-899X/691/1/012010. [IOP Conference Series Materials Science and Engineering].	Scopus	0.5	2017
2	Microgrid protection using Hilbert–Huang transform based-differential scheme , A Gururani, SR Mohanty, JC Mohanta , IET Generation, Transmission & Distribution 10 (15), 3707-3716	SCI	2.52	2016
3	Design of a new improved intake manifold for F-Sae car , A Raj, JC Mohanta , B Paul, MN Zafar, Int J Adv Prod Mech Eng (IJAPME) (4), 48-52	Scopus	--	2016
4	An improved path planning approach for mobile robot navigation based on particle swarm optimization , PK Yadav, JC Mohanta , SR Mohanty,			2016
5	Motion analysis of articulated robotic arm for industrial application , PK Dhote, JC Mohanta , M Nayab Zafar			2012
6	Genetic Algorithm based Trajectory Planning and Control of Multiple Mobile Robot Navigation , DR Parhi, JC Mohanta , SK Patel, International Journal of Applied Artificial Intelligence in Engineering	Scopus	-	2011
7	Kinematic Analysis of Wheeled Mobile Robots Path Planning Based On FuzzyLogic Approach , JC Mohanta , DR Parhi, SK Patel, IPS Paul, A Jha, International Journal of Applied Artificial Intelligence in Engineering.	Scopus	--	2011
8	Premature failure and Remedial measure for prototype teting of UHV transmission line towers:an overview , JC Mohanta , D Revanna, The Journal of CPRI 7 (1), 115-122	Scopus	0.27	2011
9	Path planning strategy for autonomous mobile robot navigation using PetriGA optimisation , JC Mohanta , DR Parhi, SK Patel, Computers & Electrical Engineering 37 (6), 1058-1070	SCIE	5.32	2011
10	Navigational Control of Several Mobile Robotic Agents using PetriPotentialFuzzy Hybrid Controller , JC Mohanta , DR Parhi, Applied Soft Computing 11, 3546-3557	SCIE	10.16	2011
11	Analysis of Hybrid Genetic Technique for Navigation of Intelligent Autonomous Mobile Robots , JC Mohanta , DR Parhi, SK Patel, BBVL Deepak, International Journal of Artificial Intelligence in Engineering systems 2 (2).	Scopus	--	2010
12	An Intelligent Motion Planning Approach for Multiple Mobile Robots Using Artificial Potential Field Method , JC Mohanta , DR	Scopus	--	2010

	Parhi, SK Patel, IPS Paul, International Journal of Artificial Intelligence in Engineering system 2(1)			
13	D Revanna, JC Mohanta , B. M. Varadaraj & B. N. Dinesh Kumar, A Novel Experience on Testing of UHV Transmission Line Towers at CPRI, National Conference on Latest Trends in Design and Testing of Transmission Line Components, conducted by CPRI Bangalore, 22-23 November.	--	--	2010
14	<u>RealTime Motion Planning of Multiple Mobile Robots Using Artificial Potential Field Method</u> , JC Mohanta , DR Parhi, SK Patel, SK Pradhan, International Journal of Computational Intelligence: Theory and Practice 4 ...	--	--	2009
15	JC Mohanta , DR Parhi, SK Patel, S. K. Pradhan, Mobile robot motion planning using improved Artificial potential field Method, National Conference on Mechanism science and Technology: Theory to application, conducted by NIT Hamirpur, Nov. 13-14	--	--	2008
16	JC Mohanta , DR Parhi, SK Patel, IPS Paul, Motion Control and Path Tracking of Mobile Robot using Artificial Intelligence Method, IEEE Conference on Computational Intelligence, Control, and Computer Vision in Robotics and Automation, Conducted by Dept. Electrical Engineering, NIT Rourkela, 12-13 October.	--	--	2008
17	<u>Mobile Robot Path Planning and Tracking using AI Techniques</u> , DR Parhi, JC Mohanta , International Journal of Computational Intelligence: Theory and Practice 2 ...	--	--	2007
18	JC Mohanta , DR Parhi, SK Patel, Navigational Control and Path Tracking of Mobile Robot using Artificial Potential Field Method, International Conference on Modeling and Simulation, Conducted by CIT Coimbatore from 27-29 August	--	--	2007
19	JC Mohanta , A.K. Behera, K.P. Maity, Simulation of a Robotic Welding System in a Virtual Environment, Proceedings of All India Seminar on “Recent Advances in Manufacturing Technologies “, conducted by Dept. of Mechanical Engineering NIT Rourkela.	--	--	2005
20	JC Mohanta , A.K. Behera, K.P. Maity, Simulation of Material handling System through Virtual Reality Software, Proceedings of All India Seminar on “RAMT” conducted by Dept. of Mechanical Engineering NIT Rourkela.	--	--	2005