Manav Kumar

Ph.D. Research Scholar
Department of Mechanical Engineering,
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RESEARCH INTEREST

Target Tracking, Unmanned Vehicles (UAV & AUV), Estimation Theory, Modeling and Simulation, Heat Transfer, Refrigeration and Renewable Energy

EDUCATIONAL CREDENTIALS

Doctor of Philosophy (Mechanical Engineering), Pursuing (2018-2023)
National Institute of Technology Patna, Bihar, India.
Master of Technology (Thermal Engineering), 2012-2014
National Institute of Technology Warangal; Telangana, India.
Bachelor of Engineering (Mechanical Engineering), 2008-2012
Chhattisgarh Institute of Technology Rajnandgaon, Chhattisgarh, India.

Working Experience

- Assistant professor at MIT Purnea, Bihar, India (From November 2014 to October 2017).
- Research Scholar at NIT Patna, Bihar, India (From July 2018 to till date)

Projects Undertaken

- **Ph.D. Thesis:** Robust and adaptive nonlinear filters for target tracking problems **(Aug 2018-till date)**
- **M.Tech Dissertation:** Performance evaluation of evaporator coil under dry and wet conditions **(Jun2013-May2014)**
- **B.E. Project (Major):** Power Generation by wind cube **(Dec2011 -May 2012)**
- **B.E. Project (Minor):** Theoretical study of Stewart Platform **(Jun2011-Nov2011)**

Research Publications

Journals

- Kumar, M. and Mondal, S., **Recent developments on target tracking problems: A review**. Ocean Engineering. Vol. 236, (109558), 15th September - 2021,1-20 (SCI). DOI: 10.1016/j.oceaneng.2021.109558
- Kumar, M., Kumar, Kiran K. And Mondal, S. **Performance Analysis of Heat Exchanger for Cooling Applications under Dry and Wet Conditions.** Heat Transfer Research, January-2023, (SCIE). **DOI:** 10.1615/HeatTransRes.2023046670
- Kumar, M. and Mondal, S., **Adaptive extended Kalman filter for two-dimensional target tracking using range and bearing angle measurement.** Computer Integrated Manufacturing Systems, vol. 28, (12), 2022, 2041-2058 (Scopus). DOI: 10.24297/j.cims.2022.12.131
- Ahmad, S.N., Priyadarshi, N., Bhoi, A.K., Kumar, M. and Sharma, A. **Exergy analysis of double tube heat exchanger for parallel flow arrangement**. In IOP Conference Series: Materials Science and Engineering (Vol. 377, No. 1, p. 012112), June, 2018.
- Ahmad, S. N., Priyadarshi, N., Kumar, M., Priyam, S. and Rahman, O., **Experimental investigation on ground source heat pump system**. Interdisciplinary Environmental Review. 18(1), 2017, 55-66.

International Conferences

- Kumar, M. and Mondal, S., **An adaptive cubature Kalman filtering process for two-dimensional target tracking**, 2nd IEEE International Conference on Emerging Frontiers in Electrical and Electronic Technologies (ICEFEET 2022). Patna, June - 2022. DOI: 10.1109/ICEFEET51821.2022.9848343
- Kumar, M. and Mondal, S., **Fuzzy Logic Based PID Controller Design for Car Suspension System with Magneto-Rheological Damper**, International Conference on Progressive Research in Industrial & Mechanical Engineering (PRIME 2021). Patna, India, August - 2021.
- Kumar, M., Kumar, K.K., and Mondal, S., **Experimental Investigation of Evaporator Coil Performance with Ethylene Glycol**, International Conference on Progressive Research in Industrial & Mechanical Engineering (PRIME2021). Patna, India, August – 2021.
- Kumar, M., Prasad, A., Mondal, S., **PID controller design for active suspension system with MR damper**, International Conference on Advances in Systems, Control and Computing (AISCC 2020). MNIT Jaipur, February – 2020.
- Kumar, M., Kumar, D., and Mondal, S., **Design and Static Analysis of Sandwiched Leaf Spring with Hyper-elastic Material,** International Conference on Innovations in Mechanical and Materials Engineering (IMME 2022), MNNIT Allahabad, Novemeber-2022.
- Kumar, M., Kumar, S., and Mondal, S., **Design and Fatigue Analysis of Connecting Rod Using composite materials**, International Conference on Innovations in Mechanical and Materials Engineering (IMME 2022), MNNIT Allahabad, Novemeber-2022.

Memberships & Society

- Member, IAENG (178973)
- Professional Member, InSc (2022033E)
- Senior Member, ISME, (SMISME221221115**)**

Declaration

I hereby declare that all the information furnished above is true and accurate to the best of my knowledge and belief.

Place: - Patna, India.
Date: - 01/02/2023