

Isaac John

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I am a research scholar of Dept. of Mechanical Engineering, IIT Palakkad. My areas of interest include robotics and machine design. I was involved in the development of parallel manipulators as part of master's thesis. For my doctoral studies at IIT Palakkad, I am pursuing the development of tensegrity mechanisms. Being a quick and enthusiastic learner, I am eager to accept challenges even from interdisciplinary areas outside core mechanical engineering.

WORK EXPERIENCE

- 2020-2021 Senior Research Fellow (SRF), IIT Palakkad**
Project title: Design and Development of a new Sitting - Type Lower Limb Rehabilitation Robot.

EDUCATION

- 2021 Aug-present PhD Research scholar at Dept. of Mechanical Engineering, IIT Palakkad**
Area of research: Tensegrity mechanisms
Course work C.G.P.A = 9.25
- 2018- 20 M. Tech in Machine Design, NIT Calicut**
First Class with distinction, 8.67 C.G.P.A
Master's thesis: 'Development of a parallel robot for coordinated tasks'
- 2013- 17 B. Tech in Mechanical Engineering, School of Engineering, CUSAT**
First class with distinction, 8.13 C.G.P.A
- 2011- 13 Higher Secondary (Plus two), St. Joseph's E.M.H.S.S, Thrikakkara**
Passed with 89.5 %
- 2010- 11 Secondary School leaving Certificate, St. Joseph's E.M.H.S.S, Thrikakkara**
Passed with 87 %

RESEARCH INTERESTS

- Robotics
- Tensegrity mechanisms
- Parallel Manipulators
- Statics, Kinematics and dynamics

SOFTWARE SKILLS

- MATLAB
- ANSYS, ABAQUS
- Solid Works/Onshape
- Mathematica

PUBLICATIONS

• Journals

- [1] John, I., Mohan, S. and Rybak, L., 2022. Numerical investigations, development and control of a cartesian (3-PRRR) parallel manipulator. *proceedings of the institution of mechanical engineers part c-journal of mechanical engineering science*. <https://doi.org/10.1177/09544062221086856>

• Conferences

- [2] John I., Sunilkumar P., Mohan S., Rybak L. 2021, Investigation of Interference-Free Workspace of a Cartesian (3-PRRR) Parallel Manipulator. In: *Zeghloul S., Laribi M.A., Arsicault M. (eds) Mechanism Design for Robotics. MEDER 2021. Mechanisms and Machine Science*, vol 103. Springer, Cham. https://doi.org/10.1007/978-3-030-75271-2_9
- [3] John, I., Amudhan, A.N. and Sudheer, A.P. 2020, July. Kinematic Analysis of a Dual Mode Parallel Manipulator. In *2020 IEEE Students Conference on Engineering & Systems (SCES)* (pp. 1-6). IEEE. doi: 10.1109/sces50439.2020.9236750