

**OFFICE OF THE DoRD**

No. IITGOA/ DoRD/16/REC/2022

Date: 10.10.2022

**RECRUITMENT OF JUNIOR RESEARCH FELLOW**

Applications are invited for the position of Junior Research Fellow under the Project titled “An affordable therapeutic solution for rehabilitation of cerebral palsy children with crouch gait” in the School of Electrical Sciences, IIT Goa .The project is sponsored by Science and Engineering Research Board, Government of India.

<b>Nature of work</b>	The work will involve cutting-edge research and development tasks in the area of assistive devices for rehabilitation. The work is carried out in collaboration with NIT Karnataka and Kasturba Medical College (KMC) Mangalore and will involve design, analysis, fabrication and testing of the electric motor drives and the charging unit for a KAFO and integration of the drive scheme with sensors, control unit and the mechanical structure. The JRF is expected to carry out high impact research, and produce patents/ research manuscripts for journals/conferences in the area.  The work may involve frequent travels to collaborator institutes for data gathering, design integration and testing.
<b>No. of Position</b>	<b>One</b>
<b>Duration of appointment</b>	For a period of 1 year. It may be further extended based on the performance of the candidate and availability of funding.
<b>Eligibility</b>	<b>Essential qualification:</b> 1. (a) M.Tech/M.E in Power Electronics and Drives / Drives and Control/ Robotics/ Mechatronics and (b) GATE Qualified in EE/EC <b>OR</b> 2. (a) B.Tech/B.E in EE/EC stream with first class and (b) valid GATE score in EE/EC <b>Desirable:</b> -Experience in hardware development and coding for motor drives, control or robotics. - Ability to work in a team, good communication skills. <b>Age limit:</b> - Below 30 years as on date of application, preferably under 28 years.
<b>Consolidated Salary</b>	Rs.31, 000/- Per Month.
<b>HRA</b>	As per funding agency norms.
<b>Medical Benefits</b>	As per the Institute norms.
<b>Leave entitlements</b>	As per the norms.
<b>How to apply</b>	Interested candidates can fill the below google form. <a href="https://forms.gle/GvrbJHx2qfNommK49">https://forms.gle/GvrbJHx2qfNommK49</a>
<b>Last Date of application</b>	<del>31.10.2022,5:00 PM</del> . 08.11.2022 , 5:00 PM (For any update regarding the last date of submission of application candidates have to visit <a href="https://iitgoa.ac.in/project-position/">https://iitgoa.ac.in/project-position/</a> )

**General Instructions:**

- If the number of applications received in response to advertisement is large, the constituted selection committee may restrict the number of candidates to be called for interview to a reasonable limit of desirable qualification and /or on the record of academic performance and/or any other benchmark decided by a committee constituted to screen the applications. No communication will be entertained with candidates who are not called for Interview.

2. If the applicants have any questions, they can write to [res-staff-rect@iitgoa.ac.in](mailto:res-staff-rect@iitgoa.ac.in) and in the subject they have to mention the Institute project number “2021/EMR/SF/029”.
3. Informal inquiries via email may be made with Co-PI-Dr. Sheron Figarado ,Assistant Professor, School of Electrical Sciences , via email [sheron@iitgoa.ac.in](mailto:sheron@iitgoa.ac.in)
4. The appointment is purely temporary and will terminate automatically without any notice or compensation on termination of the research project.
5. The appointed person shall have no claim of appointment / absorption in funding Agency or in IIT Goa.
6. The qualification prescribed should have been obtained from recognized Universities / Institutions.
7. No TA/DA will be admissible for appearing for the interview.
8. Selected candidates will have to join in a reasonable time upon receipt of the offer.

**Sd/-**  
**Sr. Superintendent (R&D)**

### **More about the project**

Total Duration: 3 Years (August 2021-August 2024)

The aim of the project is to develop a cost effective, portable, and powered exoskeletal orthosis. The project, by its very nature, is multidisciplinary and will involve:

- Mechanical design and fabrication of the orthosis.
- Integration of different sensors and actuators.
- Human gait phase detection using signal processing and pattern recognition techniques.
- Selection/ Design of actuators, controllers and power supply, etc.

This collaborative project demands interaction with medical practitioners and travel between the participating institutes. Significant part of the project also requires going to the medical college and testing of the prototype.

### **Principal Investigator:**

**Dr. Krishnan C. M. C.**

Department of Electrical and Electronics,  
NITK Surathkal, Mangalore, India  
E-mail: [cmckrishnan@nitk.edu.in](mailto:cmckrishnan@nitk.edu.in),

### **Co- Investigators:**

Dr. Deepu Vijayasenan, Dept. of Electronics and Communication Engineering, NITK Surathkal, Mangalore, India.
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Dr. Ranjith M, Department of Mechanical Engineering, NITK Surathkal, Mangalore, India.
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Prof. Sumam David, Dept. of Electronics and Communication Engineering, NITK Surathkal, Mangalore, India.
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Dr. Sheron Figarado, School Of Electrical Sciences, Indian Institute of Technology, Goa, India.
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Prof. Unnikrishnan B, Dept. of Community Medicine, Kasturba Medical College, Mangalore, India.
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**Collaborator and Consulting Physician:** Dr. Shyam Krishnan, Department of Physiotherapy, Kasturba Medical College, Mangalore, India.