

Date: 18.04.2024

**Call for Admissions in Ph.D, Dual Degree & M.Tech (Research) at Centre For AI & Robotics,
IIT Mandi (Aug-Dec. 2024)**

Centre for AI & Robotics, IIT Mandi is inviting applications for admission in the Ph.D., Dual Degree (M.Tech (R)+Ph.D.) & M.Tech (Research) programme in a variety of disciplines and Interdisciplinary areas under Regular/Part-time mode.

Available Program and Specializations for Admissions:

Broad Research Area	Specific Areas (but not limited to)	Branches
Drones	<ul style="list-style-type: none"> ● Aerial manipulation ● Autonomous navigation and control In GPS denied environment. ● Drone analytics ● Nano Drones ● Drone application for Surveillance and Industrial Structure Inspection ● Swarm Drones ● Novel propulsion mechanism for Drones ● Airborne sensors such as Lidar, Multispectral Cameras ● Drone Electronics ● Energy management of Drones 	Master's / Bachelor's degree in: Mechanical Engineering /Electrical and Electronics Engineering/ Electrical and Communication Engineering / Computer Science Engineering/Information Technology/ /Instrumentation and control/ Mechanical (Robotics)/ Automation Engineering/Automobile Engineering/ Industrial Engineering/Aeronautical/ Aerospace Engineering.
Multi-Agent Systems	<ul style="list-style-type: none"> ● Visual Servoing ● Visual Robot Programming ● Multi-agent Systems ● Swarm Robotics ● Formation control ● Collision Avoidance ● Autonomous navigation ● Human-Robot Collaboration 	
Robotics	<ul style="list-style-type: none"> ● Grasping and manipulation ● Collaborative manipulation ● Teleoperation ● Marine Robotics 	
Legged Robotics	<ul style="list-style-type: none"> ● Quadruped ● Humanoid 	
AI & Robotics for Biomedical Applications	<ul style="list-style-type: none"> ● Generative AI tools for Enhanced sampling of biomolecules ● Drug Target identification ● In Silico protein-protein interactions ● Machine learning for molecular/drug design ● Nano robots for sensing and diagnosis ● Image-guided surgery intervention ● Robot-assisted surgery 	

Cyber-Physical Systems (CPS) and Connected and Autonomous Vehicles (CAVs)	<ul style="list-style-type: none"> ● Driverless Cars ● Cloud-Facilitated Control of CAVs ● Optimal control of CAVs ● Intelligent control in CPS ● Electric and Hybrid Electric Vehicles 	
Cyber Security	<ul style="list-style-type: none"> ● Cyber security of connected systems ● AI/ML based threat detection and protection ● AI/ML based analysis of cyber-Attack and Deep fake Detection. ● Network Security ● Blockchain for cyber security ● Quantum cryptography 	
AIML for Robotics	<ul style="list-style-type: none"> ● Robot Learning ● Robotic Inspection and AIML based anomaly detection. ● Predictive maintenance of Industrial Structures based on data from Intelligent agents. ● NLP (LLM) integration with Robotic Agents ● Reinforcement Learning for Robotic Agents ● Generative AI for training of Robotic agents ● Deep Learning for Robotics 	
Sensors for Robotics	<ul style="list-style-type: none"> ● Developing sensors for Robotics ● Robot fabrication ● Smart materials for Robots ● Developing actuator for Robotics 	

Minimum Eligibility Criteria for Appearing in Admission Process:

The candidate must fulfill any one of the criterion mentioned below in the table:

For admission in Ph.D.	<p>I. Master's degree in Engineering/Technology. OR</p> <p>II. B.Tech. /B.E. from Centrally Funded Technical Institutes (CFTIs), with a minimum CGPA of 7.5 on a 10.0 point scale (or equivalent). OR</p> <p>III. B.Tech. /B.E. from Non-CFTIs with a valid GATE score/ any of the top 100 institutes according to NIRF ranking (overall category) at the time of application/ any Himachal Pradesh Govt. Institutions or universities with CGPA/CPI of at least 7.5 (on a scale of 10) or equivalent.</p>
For admission in M.Tech. (Research)	<p>Bachelor's degree in Engineering/Technology with a valid GATE score; OR</p> <p>B.Tech. /B.E. from CFTI (Centrally Funded Technical Institute)/ any of the top 100 institutes according to NIRF ranking (overall category) at the time of application/ any Himachal Pradesh Govt. Institutions or universities with CGPA/CPI of at least 7.5 (on a scale of 10) or equivalent.</p>
For admission in Dual degree (M.Tech(R) + Ph. D)	<p>Bachelor's degree in Engineering/Technology with a valid GATE score; OR</p> <p>B.Tech. /B.E. from CFTI (Centrally Funded Technical Institute)/ any of the top 100 institutes according to NIRF ranking (overall category) at the time of application/ any Himachal Pradesh Govt. Institutions or universities with CGPA/CPI of at least 8.0 (on a scale of 10) or equivalent.</p>

Notes:

- The shortlisted candidate will be called for an interview.
- Reservation policies as per prevailing GoI rules will be followed. IIT Mandi reserves the right to admit

/ not admitted for any of the advertised areas.

- For each specialization and program, candidates should submit a separate application with the application fee.
- The decision of the competent authority in all matters relating to the eligibility of the candidate, written test/Interview and admission would be final and binding on all the candidates. In case of any dispute/ambiguity that may occur in the process of admission the decision of the Institute shall be final
- All the details furnished in the online application will be treated as final and no changes shall be entertained. Non submission of valid/required documents and/or incomplete application shall be summarily rejected.
- Industrial or Academic Institute Sponsored /Part-time/Self-sponsored M. Tech (Research)/Ph.D candidates are not eligible for MHRD/HTRA scholarships.
- Employed candidates seeking admission to M. Tech (Research)/PhD must submit a “No Objection Certificate” from their current employer at the time of interview.
- Project Staff of IIT Mandi working on research projects for a period of 6 months or more. They may be considered for admission to the Ph.D/Dual Degree/M.Tech (Research) Programme (guided by the same PI only) with strong support of the candidature by the PI.

❖ It is kindly advised to get in touch with faculty members directly for further information regarding the different research areas and positions available with them listed at <https://research.iitmandi.ac.in/cair/faculty.php>

Link to the online application:

<https://iitmandiadm.samarth.edu.in/aug24/index.php/>

Application Fee:

Category	Amount in ₹
General/EWS/OBC/OBC(NCL)/Transgender/Foreign Nationals	200
Women/SC/ST/PD	100

Mode of Payment: Online

Contact Details

- For any queries related to the admission process, required documents, eligibility conditions you may contact cairoffice@iitmandi.ac.in, or call **01905-267791**
- For only technical issues, contact it_helpdesk@iitmandi.ac.in

Important Dates:

Start of online application	18th April 2024
Last date for filling Online Application	29th April 2024 (till 5 PM)
Tentative date of Interview	2nd Week of May 2024 (To be announced on IIT Mandi website)

Note: IIT Mandi reserves the right to recruit/ not recruit for any of the advertised areas and apply appropriate criteria for shortlisting candidates.

Ph: 01905-267791
