Center for Research and Advanced Studies

Open positions for full-time researchers in the Mechatronics Section Department of Electrical Engineering

The Center for Research and Advanced Studies (Cinvestav) is Mexico's leading scientific Institution. The Mechatronics Section was created in 1998, performing Scientific research in Mechatronics and established the first Graduated Program in the Country. Currently, it gathers 9 highly evaluated Researchers and conducts research in the following topics: nonlinear control design, design and control of transport systems, multi agent systems, Power Electronics, Robotics, Vibrations compensation, optimization of mechatronics systems, modeling and control of manufacturing cells, among others.

The Mechatronics Section announces the opening of two full-time researcher positions. One to start immediately, upon appointment of one qualified candidate, and another to start by the last quarter of 2025, depending on budget disposal. The applicants selection is subject to the following requirements:

- Candidates must have a doctoral degree in Mechatronics, Engineering, Physics or closely related fields and strong commitment to research.
- The selected candidates are expected to establish and lead an individual research program, collaborate on projects within the Mechatronics Section, teaching graduate courses, supervising graduate students and apply for research projects with external funding.
- The work adscription is the Mechatronics Section, at the Electrical Engineering Department, Cinvestav, Mexico City, Mexico. Cinvestav will provide legal assistance to obtain a visa, if required, but will not cover any travel expenses.
- Salary will depend on the assigned category, according to the candidate's CV. Typically, it is about 3,500 usd monthly, after taxes.
- Applicants should meet some of the following conditions:

    - Hold a doctoral degree awarded within the past ten years, preferably with a doctoral dissertation on some of the following topics:
        - Reinforcement and imitation learning
        - Large language models
        - Computer vision
        - Motion planning
        - Trajectory optimization
        - Computer Sciences with application to dynamical control systems
        - IA applied to mechatronics systems
        - Transport systems, mobile robotics, autonomous vehicles.
        - Human computer interaction

- Experience in system dynamics modeling and simulation, hardware-in-the-loop.
- Proficiency in programming, experience with Python, C++, and machine learning libraries, collaborative software development, embedded systems under Linux and/or real-time operating systems such as RTEMS.
- Experience in hardware driver development and experimental design.
- Ability to work independently and collaboratively in a multidisciplinary research environment.
- Strong problem-solving skills and a creative approach to research and innovation.
- Strong conceptual and analytical skills.
- Prior experience in teaching at the graduate or undergraduate levels.
- Fluency in English as a second language and formal commitment to pursue teaching, supervising and administrative duties in Spanish within a horizon of one year.

Interested candidates should submit the following documents, in PDF, to the address below:

- A cover letter highlighting professional experience and qualifications relevant to the position.
- A detailed Curriculum Vitae highlighting the most significant publications with copies of up to 5 of the most relevant.
- The names and full contact information of three academic references
- Proposed research program stating research interest lines and future plans.

Important Dates:

- Submission of applications: until June 24th, 2025.
- Online presentation of research program and interview of selected candidates: June 25th to 30th, 2025
- Results announcement: July 4th, 2025

Further particulars may be obtained from

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