



GOBIERNO DE
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CONAHCYT
CONSEJO NACIONAL DE HUMANIDADES
CIENCIAS Y TECNOLOGÍAS



**Faculty Positions Open for Senior Researchers in the Electronics Department of the
Instituto Nacional de Astrofísica Óptica y Electrónica (INAOE)
Tonantzintla, Puebla, Mexico**

The *Instituto Nacional de Astrofísica, Óptica y Electrónica (INAOE)*¹ is a federally funded public research center in the state of Puebla, Mexico, dedicated to basic and applied research. It offers graduate programs in Astrophysics, Optics, Electronics, Computer Science, Space Science and Technology and Biomedical Technology, accredited by the “Sistema Nacional de Posgrados (SNP)”² of the CONACyT³. INAOE provides an intellectually stimulating work environment, undertaking state-of-the-art research as well as high quality technological development and certified quality graduate courses.

INAOE is one the most renowned Public Research Centers in Mexico, and the faculty of its Electronics Department (ED) includes some of the most important research leaders in the country, in many of the areas of modern electronics. The faculty is comprised of 36 full-time researchers, of whom 32 are members of the “Sistema Nacional de Investigadores e Investigadoras (SNII)”⁴. The ED offers Master’s of Science and Doctoral programs, included in the SNP as “International Quality Graduate Programs”, and thus all the students are entitled to a full scholarship by the CONAHCyT. This announcement invites qualified researchers to join the ED’s faculty, filling tenure-track positions in specific areas, to wit, Digital Integrated Circuit Design, Communications and Electronic Instrumentation.

Based on INAOE’s General Director’s attributes, established in Article 20, Section I, of the “Decree by which the Instituto Nacional de Astrofísica, Óptica y Electrónica is Restructured”, and aiming at finding the best candidates to fill these positions, while efficiently contributing to meet institutional goals, the INAOE hereby invites all those professionals, Mexican or foreign, who would like to earn the position of Senior Researcher for an initial one-year period, as stated in Article 24, Section I, of the Faculty Statute of the INAOE, to undertake scientific and technological research, as well as technological innovation associated to the needs of different social sectors, and prepare high quality human resources through graduate studies, to apply for one of these positions according to the following.

Considerations

I. Academic Background

A doctoral degree or equivalent in Electronics or related areas, and a research career showing a proven, successful academic capability to autonomously undertake research projects and to teach graduate courses. Proof of the former by having at least seven refereed scientific publications in his/her area of expertise, indexed in the Journal Citation Report(JCR), in the areas indicated in the candidate’s profiles.

¹ National Institute for Research on Astrophysics, Optics and Electronics

² A registry of accredited graduate programs issued by Conahcyt

³ The National Council for Humanities, Science and Technology

⁴ National System of Researchers, grants a distinction and fellowship for outstanding research



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II. Candidate's Profile

Selected candidates must show academic ability to independently carry out scientific research activities, and must contribute to the advancement of the Electronics Department of the INAOE, undertaking research projects with external funding, contributing to graduate programs, and establishing academic collaborations with researchers from INAOE. They must also have excellent abilities for teamwork, and be proficient in both Spanish and English, in reading, writing and speaking. It is also desirable that candidates belong to the SNII, or have the academic achievements to qualify in the short run. Candidates must have the specific capabilities required for each open position:

- 1) *Integrated Circuit Design:* – A solid background, knowledge, and experience in the field of digital and/or mixed integrated circuit design. Familiarity with integrated circuit simulation programs such as CADENCE, Mentor Graphics, Synopsis or the like. Experience in the design flow and testing of integrated circuits.
- 2) *Communications:* – Demonstrable experience in information theory (i.e., study of the quantification, storage, transmission and reception of information), stochastic processes, and digital signal processing. Complementary knowledge will also be considered in one or some of the following areas: digital systems, embedded systems, wired channels (e.g, transmission lines, waveguides, and optical fibers), wireless communications, and electromagnetic theory.

III. Job Description

The chosen candidates must:

- Perform high quality, original research in his/her area of expertise, working in a team;
- Publish the results of their research activities in top-of-the-line conferences and the highest ranked refereed journals in their field;
- Collaborate with all the other members of the faculty, as well as other researchers at INAOE;
- Teach high quality and high level graduate courses, especially those of the programs of the Electronics Department;
- Supervise master's theses and doctoral dissertations;
- Serve as a reviewer of theses and dissertations directed by colleagues;
- Fulfill the administrative tasks related to the position;
- Participate in the different activities of the Institute.

IV. Additional considerations

- Availability to live in or nearby the city of Puebla, Mexico.
- A positive attitude when confronted with challenges, and to work in general.
- A high sense of responsibility.
- Willingness to work in a team.
- In the case of foreign nationals, having the required legal documents to allow them to work and perform the duties herein established.

Luis Enrique Erro No. 1, CP. 72840, Tonantzintla, Pue., México.

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V. Procedure

The candidates aspiring to obtain the position of Senior Researcher under this announcement, must present:

- A letter stating their motivation to work in INAOE.
- A research project proposal for the middle run (3 years), in less than five pages, closely related to the Electronics Department goals, highlighting personal professional development goals, academic, and scientific and technological objectives, detailing the main foreseen scientific contributions, and indicating how they will integrate with the existing faculty of the Electronics Department.
- A résumé with evidential documents.
- Copies of their seven most relevant publications.
- Three letters of recommendation, in sealed envelopes, written by researchers of worldwide prestige.

All the documents must be delivered or sent electronically by November 22, 2024 before 4:00 pm, to:

Dirección de Investigación

Instituto Nacional de Astrofísica Óptica y Electrónica (INAOE)

Calle Luis Enrique Erro 1,

Tonantzintla, Puebla, México

C.P. 72840 Tel/Fax +52 (222) 266 3100 ext. 3206

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All applications will be reviewed by a committee consisting of personnel from the Electronics Department, who will program interviews with the candidates through the Research Directorate. The opinion of this committee will be considered by the General Director of the INAOE, who will, in case all the requirements established in Article 24, Section I, of the Faculty Statute of the INAOE are fulfilled, grant the position to the selected candidate. These positions will remain open until they are satisfactorily filled. The hiring date will be subject to approval by the Ministry of Finance and Public Credit.

VI. Additional Information

Let it be known that once the one-year period established in this announcement for the selected candidates comes to an end, they can apply for permanence, promotion and tenure, based on the Faculty Statute of the INAOE and all the other pertinent regulations. All offered positions are full-time, with a position and salary in accordance with the academic trajectory of each candidate. The position includes the following fringe benefits besides salary: Social Security for the researcher and his/her immediate family, sick leave, paid vacation after six months of work, and a retirement package. Based on internal regulations, selected candidates will be offered a temporary contract, which will be reviewed at the end of the first and third years. The initial position is the equivalent to an Associate Professor in the United States. Besides the salary and benefits, the researchers in the INAOE can qualify for an additional stipend based on a merit scale. They can also apply to become

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part of the SNII, and receive a monthly fellowship in case of meeting the requirements. As part of their benefits, the researchers can apply for a three-month paid leave every year to collaborate with other academic institutions, as well as to enjoy a paid sabbatical leave after a period of six years of uninterrupted work.

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