

**Multiple Faculty Positions  
School of Applied Sciences and Engineering  
Universidad EAFIT**

The School of Applied Sciences and Engineering at Universidad EAFIT invites candidates to apply to multiple faculty positions in its thrust areas. We are looking to fill several vacancies during the 2024 academic year and into 2025. We will give the highest of priorities to candidates interested in entry Assistant Professor level tenure-track positions. Hiring dates are flexible.

We are particularly interested in candidates with expertise in one or more of the following or related areas: Mechatronics and Industrial IoT, Smart Products, Product innovation, Computing and algorithms, and Artificial intelligence and information theory.

Viable candidates should hold a Ph.D. degree (by the time of appointment) in science or engineering, depending on the application details provided below for each thrust area. Successful candidates will be expected to teach basic and advance science and engineering courses, mandatory core and elective trajectory courses, in undergraduate and graduate programs, as well as in continuing education programs; to establish and grow a recognized research program, and to contribute to established research groups and the strategic goals of the thrust area of affiliation; to have the ability to transfer scientific knowledge to organizations and society, and participate in consulting projects or have interest in entrepreneurship; and to help advance the overall success of the School of Applied Sciences and Engineering, and the University.

### **About the School and its Thrust Areas**

The School of Applied Sciences and Engineering is the strongest academic division at Universidad EAFIT in terms of research and innovation, representing 75% of expenditures in R&D, and over 85% of overall knowledge transfer products and initiatives of the University. The School houses a community of about 3,900 students, and has the largest infrastructure facilities, laboratory spaces and equipment, teaching spaces and personnel, with a faculty of 120+ full-time tenured and tenure-track professors distributed in its six thrust areas, and about 250+ adjunct instructors. Academically, the school offers 12 undergraduate programs and over twenty graduate and professional programs, including seven master's and three Ph.D. programs. The School's thrust areas are:

1. Fundamental Sciences
2. Natural Systems and Sustainability
3. Territories and Cities
4. Industry, Materials and Energy
5. Computing and Analytics
6. Product and Experience Design

Each thrust area is comprised of a faculty body of about 20+ professors. These thrust areas are multidisciplinary in nature and composition. Each faculty member builds upon his or her own research interests and branches from the area of affiliation out to contribute to the academic programs of the School,

which are led by Program Chairs under the coordination of the Associate Dean for Academic Programs. Overall, the school is led by the Dean's Office and the Area Directors, with the help of a supporting staff including chairs and directors of Continuing Education, the Center of Laboratories, the Center for Urban and Environmental Studies, and NODO– a center for technology learning.

It stems from this that successful candidates to the faculty openings at the School of Applied Sciences and Engineering at Universidad EAFIT are expected to exhibit an ability and potential, or a track-record of experience, in multi- and inter-disciplinary work in all academic dimensions of teaching, research, and service.

## General Requirements

All candidates are expected to have earned a Ph.D. degree or an equivalent research doctorate, or to be in the process of obtaining one by the time of appointment. Priority will be given to candidates with an international degree or significant international experience. Candidates who obtained their degrees in Colombian or Latin American universities are expected to have completed doctoral or postdoctoral international internships with a six-month period of residence or longer. Candidates with an international degree must have an apostille seal on their diplomas and have them officially recognized by the Colombian Ministry of Education by the end of the first year of appointment. Successful candidates are expected to be proficient in English.

## Description of Faculty Openings

We aim to hire over ten new faculty members over the next year and a half. This equates to approximately two new professors per thrust area. Below are the descriptions of the research and teaching subjects of the highest interest for each thrust area. Faculty openings are expected to be fulfilled in these subjects but are not limited to them. Priority will be given to specific subjects based on our most current needs. Opening announcements will be regularly updated over time.

### 1. Area of Fundamental Sciences

#### 1.1. Computational mathematics and applications

This call is closed.

#### 1.2. Quantum physics and computing:

This call is closed.

#### 1.3. Theory and computing in biophysics and biochemistry:

This call is closed.

#### 1.4. Mathematics Education:

This call is closed.

**2. Natural Systems and Sustainability:**

This call is closed.

**3. Area of Territories and Cities:****3.1. Risk Engineering:**

This call is closed.

**3.2. Infrastructure Materials Engineering:**

This call is closed.

**3.3. Urban Sciences:**

This call is closed.

**4. Area of Industry, Materials and Energy****4.1. Mechanical systems:**

This call is closed.

**4.2. Mechatronics and Industrial IoT:**

Candidates for this position should possess an undergraduate or graduate background in Mechatronics Engineering, Informatics/Systems Engineering, Electronics Engineering, Mechanical Engineering, Physics Engineering, and related; complemented by doctoral-level studies in areas such as Industrial Internet of Things (IIoT), Embedded Systems, Robotics, or Machine Learning applied to Industrial IoT systems. The ideal candidate will demonstrate expertise in IIoT platforms, hardware and software integration, embedded systems and applied robotics, with a strong emphasis on innovative solutions and interdisciplinary collaboration. Applications will be accepted until January 10, 2025

**5. Area of Computing and Analytics****5.1. Statistics and analytics:**

This call is closed.

**5.2. Computing and algorithms:**

Candidates for this position should have: Undergraduate and Graduate training in computer science or systems engineering, preferably with graduate studies in algorithm analysis, data structures, or programming paradigms. Background in formal languages, operating systems, and advanced algorithm design is highly valued. Experience in teaching and research in

programming languages and paradigms, data structures and algorithms, and algorithm analysis and design is required.

Applications will be accepted until January 10, 2025

### 5.3. Artificial intelligence and information theory:

Academic Background: Undergraduate or Graduate Studies: A strong academic foundation in mathematics, applied mathematics, computer science, or related fields.

Doctoral Degree: Candidates should hold or be in the final stages of completing a Ph.D. in artificial intelligence, machine learning, intelligent systems, information theory, or closely related disciplines. Special consideration will be given to those with expertise in the mathematical foundations of AI, such as optimization, probability theory, linear algebra, statistical learning, or computational complexity. Candidates with research focus in advanced AI domains like deep learning, reinforcement learning, computer vision (CV), or natural language processing (NLP) are strongly encouraged to apply. Experience in integrating these techniques with theoretical frameworks or applying them to practical, real-world problems will be highly valued.

Applications will be accepted until January 17, 2025

### 5.4. Information Systems and Digital Transformation:

This call is closed.

## 6. Product and Experience Design:

### 6.1. Generative design

This call is closed.

### 6.2. Product innovation

Candidates for this position should hold undergraduate or graduate degrees in design, industrial design, industrial engineering, product design engineering, business administration, administrative engineering or related fields; with doctoral studies in product and services innovation, design management, strategic design, new product and services development, innovation roadmaps, user characterization and analysis, product life cycle management, or product marketing design. Strong candidates for this position should demonstrate experience and a deep understanding of product innovation within the contexts of industry and organizations, spanning both established and entrepreneurial sectors.

### 6.3. Smart Products:

Candidates for this position should have an undergraduate and graduate background in fields related to smart products. Strong research and/or industrial experience in developing design methods and strategies for creating product-service systems (PSS) is required. Candidates should possess expertise in electronics, artificial intelligence tools, and human-centered design, enabling them to handle data acquisition, processing, and interaction with the physical world, as well as to implement algorithms that emulate human intelligence for enhanced service development. This expertise should be rooted in a human-centered design perspective.

Applications will be accepted until January 31, 2025

## Application Instructions

Applications must consist of a single PDF file with the following ordered content:

- A one-page cover letter addressed to the thrust area Director (names provided below), indicating in the subject, the faculty opening of primary interest to the candidate.
- A two-page research statement, including a description of relevant experiences, results, and plans, highlighting the candidate's most significant contributions to the field of interest.
- A two-page teaching statement, including relevant experience and potential or desirable course assignments and planned contributions (based on the existing program listings of our programs.)
- A two-page outreach and knowledge transfer statement, including continuing education and consulting interests and plans.
- A one-page document listing the contact information of three references. Candidates should refrain from requesting directly or including letters of recommendation with their applications.
- A curriculum vitae in academic format, including education, experience, publications, service and leadership activities (if applicable), and research funding (if applicable). (Listings should be ordered with the most recent item first. Publications should include DOI or URL links to open-access or downloadable versions.)
- Academic transcripts and diplomas.

Review of applications will begin in January, 2025. Reception and review of applications will continue until the positions are filled, with priority given to those received on-time as indicated.

This announcement will be updated as positions are filled.

The application file package could be written in Spanish or English and should be sent to:

[escuela-caei@eafit.edu.co](mailto:escuela-caei@eafit.edu.co)

with the subject:

Application to Faculty Position #.#

where the numbering should reference the faculty opening as per the descriptions given above. The PDF file enclosed to the application email should be named:

#.#-firstname-lastname.pdf

with the first name and last name of the applicant and the numbering in front in reference to the faculty opening of interest.

## Contact Information and Questions

Questions about the application process should be addressed to:

Lina María González  
[escuela-caei@eafit.edu.co](mailto:escuela-caei@eafit.edu.co)

Questions about the positions, the fields of interest and other academic aspects should be addressed to the Director of each thrust area. Their contact information is provided below.

Maria Eugenia Puerta Yepes  
Computing and Analytics  
[mpuerta@eafit.edu.co](mailto:mpuerta@eafit.edu.co)

Elizabeth Rendón Vélez  
Product and Experience Design  
[erendonv@eafit.edu.co](mailto:erendonv@eafit.edu.co)

Mónica Lucía Álvarez Lainez  
Industry, Materials and Energy  
[malvar26@eafit.edu.co](mailto:malvar26@eafit.edu.co)

### Hiring Conditions

Hiring conditions and tenure process are described in detail in the University's faculty handbook available [here](#). All positions are expected to be filled at the Assistant Professor entry level (Profesor Assistant 1). Exceptional candidates expecting a different level of appointment or category should contact the respective area director for alternative opportunities prior to sending an application package.

### Gender and Diversity Statement

We are committed to contributing to gender equality and diversity in the scientific and engineering fields. Currently, the School has a faculty body with a 35-to-65 ratio of female-to-male professors. We encourage female candidates to apply to these positions, as it is our expressed interest to level the field of opportunities for professional development.