

## Assistant Professor in Control Systems

### Executive Summary

#### **DESCRIPTION**

IMT School launched a selection procedure for a position of Assistant Professor in Control Systems, as described below.

The IMT School adopts equal opportunity principles in its selection procedures and rejects any type of discrimination based on sex, gender identity, nationality, ethnicity, religious belief, sexual orientation, state of health, and any other status or quality that is not strictly relevant to the call outlined in this document.

**CATEGORY:** Assistant Professor

**ACADEMIC SECTOR:** 09/G1 - SYSTEMS AND CONTROL ENGINEERING

**SCIENTIFIC DISCIPLINARY SECTOR:** ING-INF/04 - SYSTEMS AND CONTROL ENGINEERING

#### **EXPECTED RESEARCH ACTIVITIES AND THEIR IMPLEMENTATION:**

The researcher is expected to conduct scientific activities consistent with the topics of the disciplinary scientific sector, focusing on methods and technologies for information processing (data and signals) aimed at the automation (i.e., automatic planning, management, and control) of plants, processes, and dynamic systems in general. Emphasis should be placed on methodological approaches, such as multi-agent system control, control of uncertain systems, algorithmic game theory, and other rigorous approaches to control theory.

#### **RESEARCH, TEACHING, INTEGRATED TEACHING, AND STUDENT SERVICE ACTIVITIES AND THEIR IMPLEMENTATION**

The researcher is expected to engage in teaching activities within the scope of the sector's themes, contributing to the consolidation of the Computer Science and Systems Engineering scientific area of the School. This includes expanding internal collaborations through multidisciplinary research initiatives and establishing external collaborations with international research groups, thereby enhancing the School's visibility and impact. Additionally, the researcher will contribute to mentoring and supervising doctoral students and supporting their doctoral training.

**CONTRACT TYPE:** Fixed-term researcher under the provisions of Law No. 240/2010, Article 24, paragraph 3, letter b)

**DURATION:** As stipulated by current regulations (3 years)

**GROSS AMOUNT:** By Italian legislation, the salary will be approximately € 44,000 before taxes, based on qualification and experience. The Italian Tax Agency may grant a tax relief of ~90% in the first six years of residence in Italy if the applicant can demonstrate that s/he had tax residence abroad for at least two years before the starting date.

**ACTIVITY LOCATION:** IMT School for Advanced Studies Lucca, located at Piazza San Francesco 19, Lucca.



## **REQUIREMENTS**

### Mandatory Requirements

- Doctoral degree or equivalent in areas related to the profile, obtained in Italy or abroad.
- Have benefited from contracts under Article 24, paragraph 3, letter a) of Law No. 240/2010, or have held research grants for at least three years, even non-consecutively, under Article 51, paragraph 6 of Law No. 449/97 and subsequent amendments, or under Article 22 of Law No. 240/2010, or have held post-doctoral fellowships under Article 4 of Law No. 398/89, or have similar contracts, grants, or fellowships at foreign universities, or have benefited from contracts under Article 1, paragraph 14, of Law No. 230/2005 for at least three years, or have obtained the national scientific qualification for the functions of a first or second-level professor under Article 16 of Law No. 240/2010.

For the purpose of meeting the minimum three-year requirement, the activities carried out under the aforementioned types are cumulative.

For the verification of the similarity of contracts, grants, or fellowships at foreign universities, reference will be made to Decree No. 236 of May 2, 2011.

- Scientific curriculum suitable for carrying out research activities.
- Excellent knowledge of both written and spoken English.

Professors of the first and second levels and researchers, who are already employed on an indefinite basis, even if retired, are not eligible for selection.

For admission to the procedure, the Selection Committee bases the evaluation of the requirements on the scientific and professional curriculum of the candidate.

The requirements for admission must be met by the deadline for the submission of applications, failing which the candidate will be excluded.

## **APPLICATION**

The **application form** must be **mandatorily** filled out through the School's online procedure **by June 19, 2023, at 01:00 p.m. (Italian tyme)**.

Upon successful registration of the application, an email is automatically generated, containing, among other things, the protocol number for the application. The email is forwarded to the candidate at the address provided in the application form. This message serves as a receipt confirming the transmission date. If the message is not received, it is the responsibility of the candidate to directly verify with the Human Resources office, using the email address provided in this call, the reasons why the application was not registered correctly.

In the application, the following information must be provided, failure to do so will result in exclusion from the procedure:

- Surname and name in full;
- Date and place of birth;
- Contact address for evaluation purposes: complete address (Country, City, Street, House Number, Postal Code);
- Citizenship;
- Telephone number;
- Email address;  
This address will be used by the IMT School Administration for communications related to the selection.
- Valid identification document number;

Any changes to the above information must be promptly communicated to the Human Resources Office at the following email address: [researchers.opening@imtlucca.it](mailto:researchers.opening@imtlucca.it).

- Doctorate title obtained and the university at which it was obtained;
- Names of three referees, along with their roles, affiliated institution, and email addresses.

Candidates are also required to fill out a **separate section of the application form** dedicated to referees: The three referees mentioned above will automatically receive an email requesting the automatic submission of a reference letter for the candidate who provided their names. Referees also have the option to send the letter to [researchers.opening@imtlucca.it](mailto:researchers.opening@imtlucca.it).

It will also be permitted to submit reference letters through designated offices such as Job Placement Offices. Receiving reference letters is not necessary for admission to the selection process but will be considered as part of the evaluative documents by the Selection Committee at various stages.

The deadline for receiving reference letters is set within 15 days from the closing date of the call. From the deadline date until the following 15 days, the submission of reference letters is allowed exclusively via email to [researchers.opening@imtlucca.it](mailto:researchers.opening@imtlucca.it).

In the reference letters sent via email, the position title "Assistant Professor in Control Systems" must be clearly indicated.

The following documents must be attached to the application, failure to do so will result in exclusion:

- Curriculum vitae in English, providing comprehensive information about professional experiences and scientific activities.
- Copy of a valid identification document.
- Brief description of research interests (Research Statement - max. 3000 characters).
- Research paper in English.

This research paper will be presented by the candidates who are included in the Final Shortlist, during the Research Seminar.

- Up to a maximum of 12 scientific publications, which will be evaluated during the assessment process, including the doctoral thesis.

The committee will only consider publications or texts accepted for publication according to current standards, including essays included in collective works and articles published in print or digital journals, excluding internal notes or departmental reports.

The publications should be in their original language; they must be translated into Italian or English only if the original is produced in a different language. Candidates may provide the original publications or make a declaration stating that the copies of the publications are faithful to the original. For publications abroad, the date and place of publication should be indicated or, alternatively, the ISBN code or any other equivalent information. In the case of exceeding the maximum limit of publications indicated in this call, the Selection Committee will evaluate them in the order listed, up to the established limit.

- List of all publications.

Furthermore, it is required to indicate the date from which the candidate will be available for potential employment at IMT.

Individuals with disabilities must request necessary assistance related to their disability, as well as any need for additional time during the selection process, by sending a communication to the aforementioned contacts, in accordance with Law No. 104 of February 5, 1992.

The School assumes no responsibility in the event of the recipient's unavailability or the loss of communications due to inaccurate indication of contact information by the candidate, or failure to timely notify changes to the address indicated in the application. The School also disclaims any liability for postal, telegraphic, or computer-related issues not attributable to the Administration's fault.

### **SELECTION COMMITTEES**

The Rector appoints, by his own decree, the Selection Committee, composed of three or five members who may be professors from Italian and foreign universities, experts with proven qualifications within the international scientific community in the relevant disciplinary field, or professors or researchers from the School. The Rector may also designate additional members, who are researchers from IMT, to assist in the procedural activities of the Selection Committee, without participating in the evaluative judgment, which remains the exclusive competence of the regular members. The absence of additional members does not hinder the regular conduct of the Selection Committee's activities. The Rector's decree regarding the appointment of the Selection Committee is published on the online notice board and in the specific section of the School's website, with any additional forms of publication, if required by law.

In the event of documented incapacity of one or more members of the Selection Committee, the Rector appoints, by his own decree, one or more substitute members who will assume the responsibilities for all subsequent phases of the comparative evaluation procedure.

### **EVALUATION CRITERIA AND SELECTION PROCEDURE**

#### **Evaluation criteria**

In the first meeting, prior to assessing the qualifications, the Selection Committee establishes, in compliance with applicable laws, the evaluation criteria pertaining to the qualifications and, more generally, the entire selection process.

The evaluation of each qualification is carried out by specifically considering its significance in terms of the quantity and quality of the candidate's individual achievements:

- a. Doctoral degree or equivalent obtained in Italy or abroad;
- b. Teaching experience at the university level and supervision of students, in Italy or abroad;
- c. Documented research and training activities conducted at qualified Italian or foreign institutions;
- d. Documented clinical activities related to the competition sectors that require these specific skills.
- e. Experience in organizing, directing, and coordinating national and international research groups, or participation in such groups.
- f. Completion of project activities related to the specified competition sectors.
- g. Speaker or presenter at national and international conferences and conventions.
- h. National and international awards and recognition for research activities.
- i. Ownership of patents related to the specified competition sectors.
- j. European specialization diploma recognized by international boards, in the specified competition sectors.
- k. Research organization skills.
- l. Overall relevance of the profiles of the candidates.

The Selection Committee performs a comparative evaluation of the submitted publications based on the following criteria:

- a. Originality, innovativeness, methodological rigor, and relevance of each scientific publication, including consideration of publications in internationally peer-reviewed journals.
- b. Consistency of each publication with the competition sector for which the selection procedure is announced, as well as any specific profiles or interdisciplinary themes related to them.
- c. Scientific relevance of the editorial placement of each publication and its dissemination within the scientific community.
- d. Analytical determination, also based on recognized criteria in the relevant international scientific community, of the individual contribution of the candidate in the case of collaborative work.

In evaluating the publications, the Selection Committee also utilizes the following indicators within the competition sectors where their international usage is well-established:

- a. Total number of citations.
- b. Average number of citations per publication.
- c. Total impact factor.
- d. Average impact factor per publication.
- e. Combinations of the aforementioned parameters aimed at enhancing the impact of the candidate's scientific output (Hirsch index or similar).

The Selection Committee must also assess the overall consistency of the scientific production, its intensity, and temporal continuity.

In evaluating the Interview, the Selection Committee takes into account the relevance of the candidates' profiles to the advertised macro sector and the Research Area/Research Units in which the candidate will be positioned.

During the Research Seminar, the Selection Committee will assess the candidate's ability to present scientific topics in the English language.

### **First phase of selection: Evaluation of qualifications**

Based on the evaluation of the submitted qualifications, the Selection Committee identifies the candidates admitted to the first interview (interview) through a Preliminary Shortlist. The number of candidates admitted to the interview is between 10% and 20% of the total number of candidates, but not less than six candidates. If the number of candidates is six or less, all candidates are admitted to the interview.

The Preliminary Shortlist, as well as the schedule for the interviews, are published on the online notice board and the website of the IMT School, subject to any additional required forms of advertisement by law.

### **Second phase of selection: Interview**

The Interview, involving the candidates included in the Preliminary Shortlist mentioned in the previous Art. 6, focuses on the discussion of qualifications and scientific production. It takes place at the IMT premises, through video conferencing, or using any other technology that allows visual identification of the candidate.

### **Final Shortlist**

After completing the evaluation phase of qualifications and the interview for those admitted to the interview, the Selection Committee compiles a Final Shortlist in alphabetical order without assigning scores. The Final Shortlist includes all candidates who, based on the evaluation of qualifications and the interview, are admitted to the final phase of the selection process.

### **Research Seminar**

The candidates listed in the Final Shortlist are invited to present their own research paper for a public open seminar (Research Seminar) held at the School, in the presence of the Selection Committee. The Research Seminar will be attended by the Faculty and students of the IMT School. The School shall bear the expenses incurred by the candidates for their participation in the Research Seminar.

### **Final ranking**

At the end of the Research Seminar, the Selection Committee finalizes the comparative evaluation procedure and prepares the final ranking. The Committee provides an overall assessment and score for each individual candidate, taking into account the qualifications, publications, and the insights gained from the discussion during the interview.

### **Approval of proceedings and publication**

The proceedings consist of the minutes of each meeting. The judgments expressed by the Selection Committee on each candidate during the interviews and the Research Paper Presentation are an integral and necessary part of the minutes.

The Rector approves the proceedings and issues a decree with the final ranking, which is published on the online notice board and in a dedicated section on the School's website, subject to any additional required forms of advertisement by law. The ranking remains valid for a period of 24 months.

### **Negotiation and contracts**

Based on the approved ranking, the Rector initiates the negotiation phase to define specific details for each candidate that are not determined in the current call for applications.

The remuneration, tax, and social security treatment for Assistant Professor positions are indicated on the School's website.

The negotiation process concludes with a proposal made by the Rector and a summary of the candidate's rights and specific obligations as a researcher.

In the event of the winning candidate's refusal to accept the offer, the ranking is adjusted accordingly.

After the candidate's acceptance of the offer, the Rector, upon receiving a favorable opinion from the Academic Senate and the approval of the Board of Directors, proceeds with the appointment.

In the event that the position is funded by external financiers and is tied to the performance of a specific research activity, the cessation of funding entitles the School to terminate the contract. In such a case, the researcher shall receive the compensation corresponding to the current month.

### **Employment Relationship**

The successful candidate of the selection process shall establish an employment relationship with the IMT School through the signing of a three-year fixed-term contract, which is non-renewable and governed by private law. The contract shall be signed by the Rector and regulated by the IMT School's Regulations on assignments and employment relationships in the educational and scientific field, published on the School's website.

The contracts may provide for full-time and part-time arrangements.

The total annual commitment for teaching, supplementary teaching, and student service activities shall amount to 350 hours. The rights and duties of teaching and research staff regarding teaching responsibilities and obligations are governed by the School's Regulations on the rights and duties of teaching and research personnel, published on the School's website.

The successful candidate shall submit all the required documentation, as per the applicable regulations, for the establishment of a fixed-term employment relationship with research duties, in order to proceed with the individual employment contract.

The regulations concerning incompatibilities and the undertaking of additional assignments are governed by the IMT School's Regulations on assignments and employment relationships in the educational and scientific field, as well as the Regulations on the rights and duties of teaching and research personnel.

Contracts cannot be awarded to individuals who have a degree of kinship or affinity (as defined in Articles 74 and subsequent of the Civil Code) up to and including the fourth degree, with a professor of the School, the Rector, the Director General, or a member of the Board of Directors.



### **Return of Documentation**

Upon the completion of the procedure, after 60 days have passed since the publication of the Rector's decree of approval of the acts in the official register, the IMT School shall return the original documents attached to the application to those who have expressly requested their return, except in cases of ongoing litigation. The documents must be collected by the individual within 30 days from the expiration of the aforementioned deadline. After this period, the School is no longer responsible for the storage and return of the documentation.

### **Treatment of Personal Data**

The self-certified states, facts, and personal qualities provided by the winners shall be subject to appropriate checks by the IMT School to verify their truthfulness, including random sampling.

The processing of personal data carried out by the IMT School of Advanced Studies in Lucca adheres to the principles established in Article 5 of EU Regulation 2016/679 and Legislative Decree No. 196 of June 30, 2003.

The School undertakes to respect the confidentiality of the information provided by the candidate, and all the data provided will be processed only for purposes related to the procedure and potential recruitment, in compliance with applicable provisions.

### **Procedure Manager**

The procedure manager for this call is Lara Bertoncini at the Human Resources Office, located at Piazza San Ponziano, 6 - 55100 Lucca (tel. 0583-4326578 - 556 - fax 0583-4326565 - email: [researchers.opening@imtlucca.it](mailto:researchers.opening@imtlucca.it)).

### **Publication**

The Italian version of the call is published on the School's Online Register and in the Official Gazette, Series IV "Competitions and Examinations." The English version, provided for informational purposes only, is also advertised on international websites dedicated to the development of research careers and researcher mobility.