Assistant Professor in Signal and Image Processing

About CentraleSupélec

CentraleSupélec is a public institution of scientific, cultural, and professional character (EPSCP) that operates under the joint authority of the French ministries responsible for higher education and industry. Its core missions include educating high-level generalist engineers, conducting cutting-edge research in engineering and systems sciences, and providing continuing professional education programs. As part of its ongoing development, CentraleSupélec is opening an Associate Professor position on an open-ended public-sector contract. The successful candidate will join the Signal, Information, Communications (SIC) Department and will conduct research within the Laboratoire des Signaux et Systèmes (L2S).

The SIC Department covers a continuum of disciplinary fields in information and communication sciences and technologies, including information theory, signal processing, data science, statistical learning, optimization, and communication networks. Its mission is to train students in the Engineering and Bachelor programs at CentraleSupélec, as well as in research-oriented Master's programs of Université Paris-Saclay.

L2S, created in 1974, is a joint research unit of CNRS, CentraleSupélec, and Université Paris-Saclay (UMR 8506, ZRR). Its research focuses on fundamental and applied mathematical aspects of control theory, signal and image processing, and information and communication theory.

Teaching responsabilities

The successful candidate will teach courses within the degree programs of CentraleSupélec in data and information sciences, specifically within the Signal, Information and Communications Department. He or she will teach core and elective courses in signal and image processing for first- and second-year students.

They will also contribute to the development of courses on optimization methods and statistical learning within the third year "Information and Communication Engineering" specialization. They may also participate in image processing courses within the third year "Healthcare and Biomedical Services" specialization.

An interest in teaching across a broader range of topics, including artificial intelligence, digital communications or information theory, will be appreciated.

The successful candidate will supervise student projects and may contribute to integration teaching in the first and second years. They must be able to teach in English.

The candidate should demonstrate an ability to effectively convey knowledge, an interest in teaching practices, and strong interpersonal skills, including attentive listening and the ability to clearly reformulate ideas.

They may also contribute to other programs at CentraleSupélec, such as Bachelor's and Master of Science degrees.

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Research responsabilities

The L2S laboratory conducts research in signal processing and statistics, with a focus on topics such as inverse problems, computational imaging, robust statistics, uncertainty quantification, and statistical learning for health, environmental, and climate data.

The scientific scope of this position encompasses statistical signal and image processing. Signals are specific types of data, structured by instrumental characteristics and acquisition constraints. Signal processing consists of extracting and conveying the information contained in available data, taking into account acquisition conditions, and following a process that extends to decision algorithms.

The Signals and Statistics Team's activities cover a broad spectrum, ranging from solving inverse problems using Bayesian techniques and low-rank constrained optimization approaches to computational imaging techniques, including astronomical imaging, biomedical imaging, remote sensing, and non-destructive testing. To carry out these activities, the Department draws on its expertise in optimization and statistics.

Signal processing research includes the design of methods for estimating models of spatio-temporally correlated time-series and for estimating structured or low-rank covariance matrices. The underlying idea is to leverage robust statistical tools to address increasing data complexity (longitudinal, multivariate, heterogeneous data), nuisance parameters, and missing data. Uncertainty quantification is another theme addressed by the Department. In signal processing, it is attracting growing interest for assessing the uncertainty of signal reconstructions due to noise or model errors.

The impact of statistical learning on signal processing research is undeniable. The use of large-scale, learned models such as deep neural networks has become popular for solving problems like signal and image restoration and recognition. However, their use faces several challenges, including the availability of large databases, the explainability of decisions, and environmental impact. Many topics stemming from statistical learning deserve further exploration to solve signal processing problems, such as physics-guided learning, learning diffusion models, and leveraging optimal transport techniques to fuse multimodal or multivariate data.

The research profile of this position is primarily intended to strengthen the signal and image processing expertise of the Signals and Statistics Department, with additional contributions in statistical learning and/or optimization.

The successful candidate will be expected to actively contribute to the scientific life of the Signals and Statistics Department and, more broadly, to the activities of the laboratory.

Qualifications and Experience

The successful candidate will hold a PhD in signal processing or a related field and demonstrate outstanding research skills, as evidenced by publications in leading international journals and conferences. Research

experience in an application-oriented field will be appreciated. The candidate should be motivated by teaching, research, and teamwork, with the ambition to develop high-level international research activities. They will also be expected to participate actively in collaborative academic and applied projects.

Application process

Applications must be submitted by email to the following email address :

drh.pole-enseignant@centralesupelec.fr

The deadline for submission is April, 30th 2026 at 11 :59 PM (Paris time). Please include the reference EC18_MCF_L2S in the email subject line. The electronic application must include the following PDF files :

- A cover letter
- A detailed CV containing teaching experience, research, mobility, publications, etc.
- A 5 to 10-page research and teaching project that meets the requirements of CentraleSupélec
- A copy of the identity card or passport
- A copy of the doctoral degree
- Thesis defense report
- Letters of recommendation (optional)
- Any other documents that prove your previous experience

Interview process

Shortlisted candidates will be invited to an interview which consists of three stages, allowing us to assess your suitability for the position :

1. Candidates will present their academic background and their teaching and research project.
2. Each candidate will demonstrate their teaching skills by presenting a lesson in English, addressing a common problem specified in the audition invitation.
3. Candidates will then respond to questions from the committee members.

The audition invitations will clearly state the duration for each stage.

Scientific contacts

Charles Soussen, head of the SIC teaching department : charles.soussen@centralesupelec.fr

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