Faculty position (associate professor, 3 years, renewable once) at Telecom Paris in Statistical Learning Theory in the Generative AI Era

Important Dates

- September 15, 2025: Application deadline
- Mid-October, 2025: Selected candidates are due to audition

Telecom Paris's [1] machine learning, statistics and signal processing group (a.k.a S²A group) [2], within the laboratoire de traitement et communication de l'information (LTCI) [3] and the Image, Data & Signal (IDS) department [4], is inviting applications for a 3 years (renewable once) faculty position at the Associate Professor level (Maitre de Conferences) in *Statistical Learning Theory (in the Era of Generative AI)*.

[1] https://www.telecom-paris.fr/en/home
[2] https://s2a.telecom-paris.fr
[3] https://www.telecom-paris.fr/en/research/labs/information-processing-ltci
[4] https://www.telecom-paris.fr/en/school/departments/image-data-signal

Additional information Hi! PARIS

This recruitment is made possible thanks to Hi!Paris [5], the interdisciplinary center on Data Analytics and AI for Science, Business and Society created by Institut Polytechnique de Paris (IP Paris) and HEC Paris and joined by Inria (Centre Inria de Saclay) and the financial support of France 2030 IA Cluster. It has been backed by strong funding and support from major multinational companies. On a larger scale than ever before, Hi!Paris is conducting groundbreaking and interdisciplinary research in AI and Data Science, shaping strategic insights for economic and public decision-makers in France and Europe. In 2024, the Center was officially designated as an "AI Cluster" by the French government.The center is home for leading researchers in AI & Data Science, it offers seminars, workshops, summer schools, reading groups, fundings through calls for project and the valuable support of an engineering team.

The person recruited will benefit from a **starting grant** to finance his or her research activities.

[5] https://www.hi-paris.fr

Main missions

The person recruited must have the experience and expertise required to carry out the following research and teaching assignments.

Skills

- **Main expertise :** Machine-learning (theory and algorithms)

- **Other expertise desired:**
  - Simulation, stochastic approximation/optimization
  - Structured data (e.g. graphs, multivariate time series, text)
  - Optimal transport
  - Incremental, sequential, active, reinforcement-based statistical learning

Research activities

Develop groundbreaking research in the field of theoretical machine learning, aligned with the topics of the S²A group and the Images, Data & Signals department with a focus on the impact of generative AI. With recent advances in generative AI and its intensive use today, new structured data (e.g. texts, images, videos, graphs, code) are being mass-produced by models of great complexity. Advances in the ability to generate random variables using pseudo-probabilistic techniques transformed numerical and statistical methods in the last century, with the development of numerous variants of Monte Carlo algorithms for approximation, optimization, simulation of (possibly extreme) random phenomena, denoising or inference. Similarly, the complex information generated by (large) AI models is already being used in practice for a variety of purposes (e.g. data augmentation, conversational agents, deepfakes). If it is to make a real contribution to improving systems with guarantees, the use of synthetic data generated by AI "big models" calls for the development of new analyses, theoretical notions and algorithmic methods, enabling us to:

- understand and control the impact of biases in generative models on performance and generalizability
- generate structured data (e.g. with values in non-Euclidean spaces) from specifications (properties to be satisfied) reliably and robustly
- generate data by limiting supervision and exploiting knowledge and properties (semantic, physical, mathematical)

Develop both academic and industrial collaborations on the same topic, including collaborative activities with other Telecom Paris research departments and teams, and research contracts with industrial players.

Set up research grants and take part in national and international collaborative research projects.

Teaching activities

• Participate in teaching activities at Telecom Paris and its partner academic institutions (as part of joint Master programs), especially in machine learning and Data science, including life-long training programs.

Impact

• Publish high quality research work in leading journals and conferences.
• Be an active member of the research community (serving in scientific committees and boards, organizing seminars, workshops, special sessions…).

Candidate profile

As a minimum requirement, the successful candidate will have:
• A PhD degree
• A track record of research and publication in the field of machine learning
• Experience in teaching
• Good command of English

The ideal candidate will also (optionally) have:
• A post-doctoral or international experience in an academic or industrial laboratory

NOTE:
The candidate does *not* need to speak French to apply, just to be willing to learn the language (teaching will be mostly given in English)

Other skills expected include:
• Capacity to work in a team and develop good relationships with colleagues and peers
• Good writing and pedagogical skills

More about the position

• Place of work: 19 place Marguerite Perey, 91120 Palaiseau, France. You'll be working in a fast-growing, pleasant, green and accessible environment (particularly for people with disabilities) just 20 km from Paris (RER B and C, close to major roads, shared shuttle service from Porte d'Orléans).
• 49 days' annual leave (CA + RTT)
• Flexible working hours (depending on the department's activity)
• Teleworking 1 to 3 days/week possible
• 75% reimbursement of public transport season ticket
• Proximity to numerous sports facilities, concierge service, underground car park, in-house catering, etc.
• Staff association at school and department level
• Good to know: our social security contributions are lower than in the private sector

How to apply
Applications are sent using the link
Anglais : https://institutminestelecom.recruitee.com/l/en/o/enseignant-chercheur-en-theorie-de-lapprentissage-statistique
Français : https://institutminestelecom.recruitee.com/o/enseignant-chercheur-en-theorie-de-lapprentissage-statistique

The application should include:
• A complete and detailed curriculum vitae
• A letter of motivation
• A document detailing past activities of the candidate in teaching and research: the two types of activities will be described with the same level of detail and rigor.
• The texts of the main publications

- The names and addresses of two referees
- A short teaching project and a research project (maximum 3 pages)

Please, do not hesitate to contact the team before applying.

Contacts :

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