
Research topics	Quantum Information, Quantum Statistics, Quantum Communication, Quantum Learning
Position (M/F)	PhD, thesis offer
Reference offer	CS/AP/QUANT/032026
Research Department	Communication Systems (CS)
Publication date	16/03/2026
Start date	01 June 2026
Type of employment contract	Fixed-term doctoral position in private law

Context

In the recent past, it has been established beyond doubt that by leveraging the unique quantum properties of sub-atomic particles, information can yield unparalleled advantages in various disciplines of information processing including computing, communication, cryptography and control. In fact, protocols such as quantum key distribution accomplish tasks hitherto believed impossible. Notably, these protocols have been demonstrated in practice and research is underway to scale them up. We are shaping up towards emergence of a new age in information processing. Recognizing this vast potential, developed countries across the world including United States, France, Germany, Netherlands, China, Singapore and others are investing vast amounts of money and resources in quantum information. New labs are being formed, several startups are emerging. Just like the last two decades offered great jobs in technology, research and academia in classical digital information, the coming decades is expected to generate such opportunities in quantum information. The younger generation who now gets trained in this new emerging area will be able to command great opportunities as they grow in their career.

The broad topic of research will be quantum information theory, quantum learning, quantum statistics, quantum source compression. The focus will be on conducting research of a highest quality. The student will be funded by an Agence National De Research project. Mastering quantum information is a challenging task today. It is at the intersection of physics, mathematics and engineering - computer science and electrical engineering. More so, the field is currently dominated more by physicists and mathematicians. The doctoral program advertised below provides a unique opportunity to gain expertise and become a leader in quantum information. Hosted at EURECOM - a top research institution of France that is strongly connected to leading universities of Europe including TU Munich, IMT, Telecom Paris - it provides an ideal environment to pursue research. With leading research labs such as INRIA right beside EURECOM, the doctoral student will get a unique opportunity to interact with leading researchers in France and beyond.

Specific advantages of this job offering : A close hands-on regular interactions with faculty advisors and hands-on research mentoring and training. This is a crucial aspect to educate oneself and become an expert in this deep field of research. An opportunity to work on foundational problems and thereby obtain a thorough understanding of the intricacies of the field. For a student, GENUINELY interested to ACQUIRE KNOWLEDGE, and become an expert, the former is very valuable in shaping up one's career. This specific advantage offered in this position is perhaps less available in large research groups. The faculty advisor will provide an interested candidate with earlier and/or senior students so the candidate gets a good understanding of the research culture and the both the advantages and disadvantages of joining the group. Any candidate genuinely interested to elevate one's knowledge, learn research skills and enhance oneself is strongly encouraged to have a transparent interaction with the group they wish to join including past and present students who have experienced the research culture. This will be facilitated by transparently providing contacts of students who have worked with the faculty advisor.

Requirements

- Education Level / Degree : Masters
- Field / specialty: Mathematics, Physics, Information Science, Statistics, Electrical Engineering, Computer Science
- Other skills / specialties: Good mathematical and/or analytical skills.
- Other important elements: A strong interest in pursue foundational studies with interest in mathematics, physics, quantum information and probability theory. A candidate with a EAGER CURIOUS Mind with a love of learning and passion to excel and become a knowledge powerhouse. Energetic, enthusiastic committed, perseverant and curious.



Application

The application must include:

- Detailed curriculum,
- List of publications specifying the three most important publications,
- Motivation letter of two pages also presenting the perspectives of research and education,
- Name and address of three references.

Applications should be submitted by e-mail to secretariat@eurecom.fr with the reference : **CS/AP/QUANT/032026**

About EURECOM

EURECOM is a major Engineering School and a Research Center in digital sciences founded in 1991 as a consortium in the international technology park of Sophia Antipolis. The IMT is a founding member of the GIE. Teaching and research activities are organized around 3 promising fields: digital security, communication systems and Data Science.

EURECOM has a staff of 150 (researchers and support teams) and welcomes 400 international students on the Campus Sophia Tech, the largest information science and technology campus of the region. EURECOM enjoys a privileged geographical environment on the French Riviera (Côte d'Azur), between sea and mountains, at the heart of a dynamic and multidisciplinary ecosystem that promotes high-level scientific and technological innovation.

Social advantages

- International and multicultural environment
- Attractive salary - Corporate saving plans
- Employee profit sharing policy
- Company health insurance (mutuelle) with high levels of guarantees for the whole family (employer participation of 60%)
- Restaurant vouchers (employer contribution of 60%)

EURECOM is one of Europe's leading engineering schools specializing in digital technologies. It is located in the heart of the Côte d'Azur, in Europe's Silicon Valley (Tech Park Sophia-Antipolis). EURECOM's research teams work in an international, multicultural environment.

EURECOM has a dynamic policy in terms of **inclusion and quality of life at work**. We are committed to diversity and give equal consideration to all applicants, without discrimination. Above all, we look for competence and team spirit.

All our positions are open to **people with disabilities**. EURECOM has set up a disability advisor to provide support and advice, organize accommodation and make positive commitments to personal integration.

As part of its **gender equality plan**, EURECOM encourages gender diversity within its teams. As part of our gender equality action plan, we encourage male applications for administrative positions, traditionally held by women, and female applications for IT and research positions, traditionally held by men.

EURECOM is taking positive action as part of its **CSR policy**. A CSR representative oversees EURECOM's CSR and energy transition policies (electric charging stations, solar panels, waste sorting, etc.).

Web site EURECOM: <https://www.eurecom.fr/fr/eurecom/presentation>

EURECOM in VIDEO: <https://www.youtube.com/watch?v=u1IFcgNijnM>

Employee experience: <https://www.youtube.com/watch?v=BHv9zlduzuQ>