Presenter	Company	Date	Title	Abstract
Dimitri Labat	Chipiron	16-janv	Unlocking access to MRI with superconducting detection systems	MRI is the most powerful and versatile medical imaging technique to date, yet it remains very inaccessible due to its cost and the technical constraints related to the use of high magnetic fields (of the order of Tesla) produced by a superconducting magnet. Chipiron is building an MRI system based on ultra sensitive SQUID-based amplification systems, working at a main field of 10 mT (300 times less than a regular MRI device). We show advancement on the building of our first breast cancer screening product.
Matthieu Dupont-Nivet	Thales	23-janv	Compact cold atom clock, accelerometer and gyroscope for use in compact positioning systems.	In this presentation, I will introduce the key physical concepts and technologies required for the development of compact cold atom clocks, accelerometers and gyroscopes. I will discuss how these technologies could be used in future products for positioning purposes, and how they would compete with existing accelerometer and gyroscope technologies.
Christophe Jurczak	Quantonation	30-janv	Investing in the quantum future: how venture capital and startups are driving quantum innovation	Quantonation is a very special fund, investing exclusively in startups leveraging quantum technologies and what we call "deep physics". We back startups - in their vast majority founded by quantum physicists - from day one, towards growth and ultimately putting products on markets for applications that have a deep impact on society. We have invested in Pasqal (neutral atoms quantum computing), Quandela (photonics), Nord Quantique (superconducting qubits), Cryptonext (post-quantum cryptography), Qnami (quantum sensing) and many more, all around the world. I have been trained as quantum scientist and will discuss exciting opportunities, but also challenges and pitfalls for the emerging quantum industry.
Zaki Leghtas	Alice&Bob	06-févr	Quantum information with superconducting circuits	In this presentation I will introduce superconducting circuits and explain how they are being widely used to encode, protect and manipulate quantum information. The remarkable progress achieved over the last 20 years in this field has triggered a recent interest of the industrial sector, which I will briefly review.
Pierre-Emmanuel Emeriau & Sébastien Boissier	QUANDELA	13-févr	The best of both worlds: a light-matter quantum computing platform	In this presentation, we will discuss how conducting fundamental studies of light-matter interaction with semiconductor quantum dots, our team progressively developed useful devices for optical quantumtechnologies. These devices, namely efficient sources of single photons, are now commercialised by Quandela, a spin-off company created in 2017. With continuing progresses on the technological side, Quandela is now working on the development of an intermediate-scale quantum computing platform based on photons. We will discuss the assets and challenges of such a platform.
Clément Barraud	Pioniq	20-févr	Emerging quantum materials and their applications	During this class, I will introduce the concept of quantum materials and heterostructures from a Physisist point of view. I will discuss about present and future industrial applications and I will present the next milestones to achieve.
Vincent Ménoret	Exail Quantum Sensors	06-mars	Industrial cold atom sensors: from research labs to volcanoes... and beyond	Transforming a high-precision laboratory experiment into a commercial instrument is a long process. I will describe the challenges faced by Exail Quantum Sensors (formerly Muquans) during the development of an industrial cold atom absolute gravimeter and show some applications in geophysics. I will then discuss ongoing research towards onboard applications, along with first results.
Sylvain Gigan	LightOn	13-mars	Computing with white paint? yes, we can.	I will describe our path, from fundamentals of light in complex media and biological imaging in our team at the physics department of ENS, to the founding of LightOn, a young startup that proposes to address modern machine learning challenges, leveraging on the same concepts, i.e. what I would call « optical computing with white paint.
Julien Laurat	Welinq	20-mars	Quantum connectivity for scale	To advance quantum information science and technologies, a wide variety of quantum machines and protocols are being developed based on different physical systems. Interconnecting these systems is a grand challenge to scale up quantum information architectures. This effort requires to develop specialized photonic devices and capabilities, ranging from efficient photon extraction for qubit connectivity to the implementation of advanced optical memories. In this talk, I will provide an overview of the opportunities presented by networking, including long-distance quantum communications and distributed quantum computing