



# Workshop on Microwave Spintronics

for smart communication systems:

energy harvesting, communication, security, edge computing

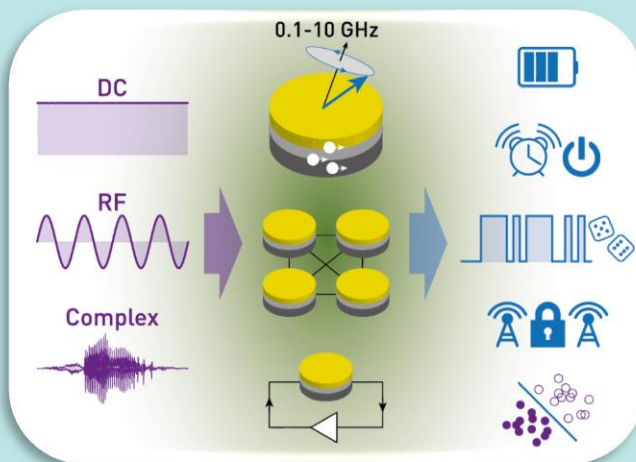
**When:** 29-30 January 2026

**Where:** Amphitheatre Bergès, GReen-ER, Grenoble INP - UGA, Grenoble, France

This workshop will gather **researchers from the academic and private sector** in order to exchange on the potential that **microwave spintronics** offers for different application areas such as IoT, smart communicating objects, security and edge computing. The workshop will cover four subject areas: • **RF energy harvesting and WPT for autonomous operation** • **Low power RF communication – wake-up receivers** • **True random number generation for secure communication** • **Novel hardware approaches for edge computing.**

For each subject area, an overview will be provided by experts from the academic and/or private sector on the current developments and issues within this area. It will be followed by an introduction to the state of the art in spintronics research dedicated to this topic. Each subject area will be concluded by a round table discussion to allow for in depth discussions and evaluation of an exploitation roadmap.

**Microwave spintronics** combines the physics of spintronics with the non-linear magnetization dynamics within magnetic tunnel junctions to **generate and detect RF signals**. Their **multifunctional and complex dynamic properties** of single and coupled devices (generation, modulation, frequency sweep, synchronization, chaos, exceptional point) allow defining numerous functionalities to address major issues of smart communication systems.



**For applications** and further information see: <https://spincomworkshop.sciencesconf.org/>



## Organization committee

Chairs: Ursula EBELS (SPINTEC), Florence PODEVIN (TIMA),

Program committee: Vincent CROS (Laboratoire Albert Fert), Joo-Von KIM (C2N), Sébastien PETIT (Institut Jean Lamoure), Grégoire De LOUBENS (CEA-SPEC), Damien RONTANI (Centrale Supélec Metz).

