

The European Research Council awards ICFO two new Advanced Grants

ICREA Professors Antonio Acin and Maciej Lewenstein awarded grants for frontier research with potentially ground-breaking impact on science and society beyond

March 28, 2019

The European Research Council (ERC) has announced the awarding of two Advanced Grants for senior researchers to **ICREA Professors at ICFO Antonio Acin and Maciej Lewenstein**. Over the years, both Group Leaders have been extremely successful in securing ERC funding. For Prof Lewenstein, this is the third consecutive Advanced Grant, the first received in 2008 just a year after the founding of the European Research Council. This is Prof Acin's fourth ERC grant, with European Council support marking various stages of his career. He earned a Starting Grant in 2008, the same year as Prof. Lewenstein, a Proof of Concept Award in 2012, and a Consolidator Grant in 2014.

The ERC Advanced grants, aimed at active researchers who have a track-record of significant research achievements in the last 10 years, enable scientists to carry out frontier research with potentially ground-breaking impact on science and society beyond. Each project grant has a duration of five years. They are awarded under the `excellent science? pillar of Horizon 2020, the EU´s research and innovation programme.

Prof Maciej Lewenstein's project, entitled i¿½NOvel Quantum simulators - connectI g Areasi¿½ **(NOQIA)**, is a theory project, aimed at introducing the established field of Quantum simulators + Topological effects in physics + quantum validation and certification into two novel areas: physics of ultrafast phenomena and attoscience, on one side, and quantum machine learning and neural networks on the other. This will open up new horizons and opportunities for research both in Attoscience and in Machine Learning and neural networks.

Prof Antonio Acin's project, entitled i¿½Certification of quantum technologiesi¿½ **(CERQUTE)** aims to provide the tools to achieve quantum certification, ensuring that a quantum system is entangled, random, secure, and performing computations correctly. CERQUTE goes at the heart of the fundamental question of what distinguishes quantum from classical physics and will provide the concepts and protocols for the certification of quantum phenomena and technologies.

ICFO's success rate in this call was 50%, giving ICFO an average institutional success rate of 50% for the ERC 2012-2018 calls. The official success rate reported by the ERC 2012-2017 is 12% for the physics panels, and 11% in this call, placing ICFO far above average. With these new awards, ICFO now holds 34 grants in total from the European Research Council: 10 Starting Grants, 4 Consolidator Grants, 10 Advanced Grants and 10 Proof of Concept Grants.

The President of the European Research Council (ERC), Professor Jean-Pierre Bourguignon, commented in the ERC press release, i¿½Since 2007, the European Research Council h s attracted and financed some of the most audacious research proposals, and independe t evaluations show that this approach has paid off. With this call, another 222 researchers fr m all over Europe and beyond will pursue their best ideas and are in an excellent position o trigger breakthroughs and major scientific advances.i¿½

The European Research Council, set up by the European Union in 2007, is the first European funding organisation for excellent frontier research. Every year, it selects and funds the very best, creative researchers of any nationality and age, to run projects based in Europe. It has three core grant schemes: Starting Grants, Consolidator Grants and Advanced Grants.



European Research Council