ICFO researchers Leticia Tarruell and Maciej Lewenstein receive the BEC awards

The biennial Bose-Einstein Condensation conference (BEC 2025) has awarded the ICFO researchers Tarruell and Lewenstein with the Junior BEC and the Lifetime Achievement Awards respectively.

September 23, 2025

The biennial Bose-Einstein Condensation conference (BEC 2025), held September 6-12 nearby Barcelona, has once again become a focal point for breakthroughs and recognition in quantum gas and related fields research. Physics experts in the field from around the world have gathered to discuss new developments in ultracold atomic gases, including the physics of bosonic and fermionic quantum gases, to quantum simulation with single atom resolution, quantum computation with neutral atoms, synthetic gauge fields and topology, quantum magnetism, long-range interactions and Rydberg systems, and open quantum systems, among other topics. They also celebrated this year the 30th anniversary of the first BEC in

dilute atomic gases.

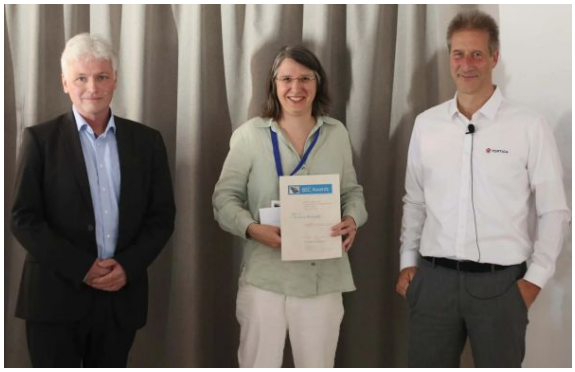
One of the highlights of the conference was the presentation of the **TOPTICA BEC Awards 2025**, honouring outstanding contributions to the field. Among the laureates, the awardees included **ICREA Prof. at Leticia Tarruell**, who has been awarded the Junior BEC Award for her seminal work on quantum droplets in Bose mixtures, and on supersolidity in spin-orbit coupled Bose?Einstein condensates. In addition, **ICREA Prof. at ICFO Maciej Lewenstein** received the Lifetime Achievement Award for his visionary and transformative contributions to ultracold quantum gases; his theoretical work has inspired both experimental and theoretical research across the field.

Prof. Leticia Tarruell is a leading experimental physicist whose work has opened new directions in the field of Bose-Einstein condensation. In particular, her pioneering studies on quantum droplets and spin-orbit-coupled BECs have revealed new exotic phases of quantum matter, revitalizing the investigation of BECs. Prof. Maciej Lewenstein, on the other hand, has been a driving theoretical force in quantum optics and ultracold gases, renowned for his visionary insights that bridge many-body physics, light-matter interactions, and quantum technologies. Together, their contributions embody the synergy between experiment and theory that defines progress in the field.

The BEC Awards, sponsored by TOPTICA Photonics AG, include a cash prize and a certificate for each recipient. They aim to highlight both recent major advances (Senior Award), early-career excellence (Junior Award), and lifelong impact (Lifetime Award). ?

Two other awards were also given to the experts present at the conference. The Senior BEC Award went to Prof. Dan Stamper-Kurn, recognized for his long-standing impact on ultracold atoms, particularly early studies of Bose?Einstein condensation, magnetic phenomena, and cavity optomechanics. The Lifetime Award is also shared, in this instance, with Prof. Randy Hulet, for pioneering experiments involving both bosonic and fermionic quantum gases, including work on attractive interactions, solitons, and fermion pairing.

We congratulate all the note-worthy recipients of BEC2025 awards, with an especially warm round of applause to Leticia and Maciej!



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