# MAX PLANCK INSTITUTE OF QUANTUM OPTICS

MPQ

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Press Release

# Jordi Tura receives Thesis Prize from the Universitat Politècnica de Catalunya

Dr. Jordi Tura i Brugués, a young scientist in the Theory Division of Prof. Ignacio Cirac at the Max Planck Institute of Quantum Optics (Garching near Munich), has been honoured with the UPC (Universitat Politècnica de Catalunya) thesis prize. Each year the academic commissions of the



doctoral programs of the UPC select the best PhD theses in five sections. This year's awards refer to the theses defended in the years 2014 to 2015. In the science section, only five candidates have won the prize, on the ground of the excellence and the impact of their theses.

Jordi Tura (Photo: MPQ) received the prize from UPC's Doctoral School during an award ceremony that took place at the Polytechnic University of Catalonia on 17th November 2017.

Born in Girona (Spain) in 1987, Jordi Tura began his education with the study of Mathematics and Telecommunications Engineering at the CFIS-Center for Interdisciplinary Studies at the Polytechnic University of Catalonia. In 2011 he received a Master of Science in Applied Mathematics at the UPC. He then joined the group of Prof. Maciej Lewenstein at ICFO - **The Institute of Photonic Sciences**, where he completed his PhD thesis in July 2015. He first continued to work as a postdoctoral researcher at ICFO until he joined the group of Prof. Ignacio Cirac in September 2016 in the frame of the CELLEX-ICFO-MPQ Postdoctoral Program.

"The central topic of my thesis was the study and characterization of entanglement and nonlocal correlations constrained under symmetries," the young scientist explains. "It contains original results in these four threads of research: entanglement in the symmetric states, nonlocality detection in many-body systems, the non-equivalence between entanglement and nonlocality, and elemental monogamies of correlations. My current research interests also combine various disciplines: I would like to bring together the quantum information insights gained during my PhD with the world leading expertise on tensor networks of Cirac's group, applying both to the exciting field of quantum machine learning."

In January 2017, Jordi Tura received the "PhD Thesis Award" from ICFO. His thesis was also nominated as an outstanding PhD thesis by AMOP section of the German Physical Society and has been published in the Springer Theses series. *Olivia Meyer-Streng* 

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