Lucas Clemente

10/2011 – present

PhD Student
Max-Planck-Institute of Quantum Optics & LMU Munich

In the quantum information theory group of Prof. Ignacio Cirac, I work on quantum foundations, in particular conditions for quantum violations of classical behavior in macroscopic systems. Before, I worked in the field of quantum magnetomechanics, where we proposed experimental setups using the magnetic properties of superconductors to observe quantum behavior on massive objects.

10/2009 – 10/2011

Student Research Assistant
Max-Planck-Institute of Quantum Optics

10/2009 – 10/2010

B.Sc. in physics
LMU Munich

07/2008 – 10/2009

Student Research Assistant
Forschungszentrum Dresden-Rossendorf — Plasma Theory

06/2008 – 09/2009

Student Research Assistant
Cluster of Excellence "Munich Advanced Photonics"

10/2007 – 10/2009

Early studies in computer science & physics
TUM / LMU Munich

06/2007 – 05/2008

Student Research Assistant
Maier-Leibnitz-Laboratorium Munich — Simulated Medical Physics

09/1999 – 06/2009

Abitur
Elementary School & Maria-Theresia-Gymnasium

During school I skipped the 1st, 8th and 10th grade, studied computer science and physics and worked as student research assistant at three different institutes. For my final thesis I received the thesis prize of the German Physical Society.

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Organizations
German National Academic Foundation ("Studienstiftung"), Chaos Computer Club, German Physical Society

Publications

L. Clemente, J. Kofler, *No Fine theorem for macrorealism: Retiring the Leggett-Garg inequality*, arXiv:1509.00348

L. Clemente, J. Kofler, *Necessary and sufficient conditions for macroscopic realism from quantum mechanics*, arXiv:1501.07517, Phys. Rev. A 91, 062103 (2015)

L. Clemente, J. Kofler, Poster at Qupon 2015, Vienna, Austria

L. Clemente, J. Kofler, Poster at 554. WE-Heraeus-Seminar "Quantum Contextuality, Non-Locality and the Foundations of Quantum Mechanics" 2014, Bad Honnef, Germany

W. Assmann, R. Becker, H. Otto, M. Bader, L. Clemente, S. Reinhardt, C. Schäfer, J. Schirra, S. Uschold, A. Weizmüller, R. Sroka, *^{32}P-haltige Folien als Implantate für die LDR-Brachytherapie gutartiger Stenosen in der Urologie und Gastroenterologie*, Zeit. Med. Phys. 23, 21 (2013)

L. Clemente, C. Navau, A. Sanchez, J. I. Cirac, O. Romero-Isart, Poster at GRC "Mechanical Systems in the Quantum Regime" 2012, Galveston, TX, USA

O. Romero-Isart, L. Clemente, C. Navau, A. Sanchez, J. I. Cirac, *Quantum Magnetomechanics with Levitating Superconducting Microspheres*, arXiv:1112.5609, Phys. Rev. Lett. 109, 147205 (2012)

F. Pastawski, L. Clemente, I. Cirac, *Quantum memories based on engineered dissipation*, arXiv:1010.2901, Phys. Rev. A 83, 012304 (2011)

C. Hoeschen, H. Schlattl, M. Zankl, T. Seggebrock, L. Clemente, F. Grüner, *Simulating mammographic absorption imaging and its radiation protection properties*, World Congress on Medical Physics and Biomedical Engineering, 2009, Munich, Germany

L. Clemente, *Integrating Tracking and Beam-Matter Interaction for Beam Line Design*, Talk at ENLITE 09, Dresden, Germant