

Dr. Lucas Clemente

[View at clemente.io](#)

Hi! I'm Lucas, based in Munich, Germany, and looking for interesting projects. I'm particularly interested in big data and machine learning.

since 2014

Side projects

Go Ember.js

[git-cr](#)

Client-side encryption for git that also keeps your repo's metadata secure.

[goldfish](#)

A personal wiki / notes blend powered by markdown and git.

since 08/2012

Co-founder

C++11 Rails Go Ember.js

[univedo GmbH](#)

I co-founded univedo, where we develop a novel solution for the integration of business data and processes.

10/2011 – 02/2016

PhD Student (thesis)

Mathematica Python

[Theory group](#), Max-Planck-Institute of Quantum Optics

In the quantum information theory group of Prof. Ignacio Cirac, I worked 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. I obtained my PhD from LMU Munich in January 2016 with high honors.

During my time at MPQ I gave several seminars, the slides can be found here:

- [Seminar on Macrorealism \(Source\)](#)
- [Seminar on inflation \(Source\)](#)
- [Seminar on macroscopicity measures \(Source\)](#)

06/2007 – 10/2011

Various Student Research Assistantships

C++ Mathematica

[Theory group](#), Max-Planck-Institute of Quantum Optics

[Computational radiation physics](#) Helmholtz Zentrum Dresden Rossendorf

[FEL group](#), Cluster of Excellence "Munich Advanced Photonics"

[Medical physics](#), Maier-Leibnitz-Laboratorium Munich

10/2009 – 10/2010

B. Sc. in physics (thesis)

LMU Munich

After early studies in computer science (at TUM) and physics (at LMU Munich), I completed my Bachelor's degree at LMU.

09/1999 – 06/2009

Abitur

C++

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.

Contact

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Personal

Birthday

14/01/1993, Munich, Germany

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, ³²P-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. Grünert, 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, Germany