

Nathan Shammah

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Date of Birth: 12 April 1987 (Italian citizen)

Milan, Italy

Work

Mar 2020 - Now **Chief Technology Officer – Unitary Fund, Berkeley, USA**

Head of the technical staff performing in-house research on quantum error mitigation (Mitiq). Oversight of the non-profit activities in the open-source quantum tech ecosystem.

Jan 2019 – Now **Visiting Scientist, Department of Physics – University of Milan “La Statale”, Italy**

May 2020 – Now **Visiting Scientist, TQP Lab – RIKEN Wako, Japan**

Aug 16 - Mar 20 **Postdoctoral Research Scientist – RIKEN Wako, Japan**

Theoretical Quantum Physics Lab (Prof. Franco Nori)

Work on out-of-equilibrium quantum systems, superradiance, ultrastrong-coupling in light emission and quantum transport, intersubband transitions in THz polariton devices.

- Mentored 6 research interns and PhD students on quantum optics projects.
- Authored ``scikit-project`` a guide for researchers developing open-source libraries.

Jan 18 – Now **QuTiP – Lead Developer**

- Developed the popular ``piqs`` library and 8 online tutorials on qutip.org, 40 citations/yr paper.
- Organized the first QuTiP devs workshop, defined roadmap, governance & project directions.
- From Jan 2018, QuTiP downloads increased from 30k (since 2016) to over 180k in 2019.
- Engaged researchers on *Nature's* blog & open-source developers at EuroSciPy (two talks).
- Invited talks at Berkeley Lab, Stanford, Caltech, Google AI, NASA, and Rigetti Computing.

Jan 17 – Mar 2020 **Co-founder – Quantika quantika.co Deep tech physics consulting firm (quantum, photonics)**

- Sourced startups for largest European deep-tech venture capital firm. Technical due diligence.
- Wrote a newsletter (<https://medium.com/quantum-tech>) for 700 subscribers (50% click rate).

Awards and Funding

2019, 2020 Google Summer of Code Program (Mentor)

2016 University of Southampton. *Vice-Chancellor's Awards (Runner-up)* for Science Outreach

2015 Embassy of Italy in the UK. *'Italy Made Me' Awards Certificate of Excellence in Research*

2013 – 2016 EPSRC UK and University of Southampton *EPSRC DTA Studentship* (PhD Funding)

2013 Best Poster Award *by the EPL Journal* at the Intl. School of Nanophotonics (Maratea, Italy)

2010 – 2012 EU Erasmus Scholarships, one at Imperial College (thesis) and one at U. of Copenhagen (1 yr)

Education

Apr 2013 – Jul 2016 **PhD in Physics.** University of Southampton, *Southampton, United Kingdom*

Teaching assistant for Numerical Physics and Atomic Physics.

Apr 2006 – Mar 2012 **BSc and MSc in Physics.** University of Milan, Italy (MSc grade: 110/110 *cum laude*).

Erasmus Student at Imperial College, Copenhagen University.

Scientific Publications and Presentations

My theoretical research in quantum physics lies at the boundary between cavity quantum electrodynamics and solid state physics, focusing on emergent cooperative phenomena. A list of publications can be found on [Google Scholar](https://scholar.google.com/citations?user=...) > 20 invited seminars at research centers, >10 poster presentations, >15 talks at conferences (Europe, Asia, USA).

Languages and IT Skills <https://github.com/nathanshammah>

Italian, English, French, Spanish. IT: Python, Mathematica, MATLAB, C++. Version Control: Git. Editing: LaTeX.

Service and Science Outreach

2019 – Now: Co-founder and vice president of the Association of Italian Researchers in Japan, airj.info.

2018 – Now: Referee for Sci. Rep., Opt. Lett., Phys. Lett. A, Eur. Phys. J. Plus, SciPost Phys., QST, PRX Quantum.

2015 – 2016: University coordinator, Pint of Science International Festival, *Southampton, United Kingdom*