

# Nathan Shammah

nathan.shammah@gmail.com

Date of Birth: 12 April 1987 (Italian citizen)

Milan, Italy

## Work

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- 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](http://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](http://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

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- 2019 – 2021 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

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- 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

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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=NathanShammah) > 20 invited seminars at research centers, >10 poster presentations, >15 talks at conferences (Europe, Asia, USA).

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

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

## Service and Science Outreach

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- 2019 – Now: Co-founder and vice president of the Association of Italian Researchers in Japan, [airj.info](http://airj.info).
- 2018 – Now: Referee for Sci. Rep., Opt. Lett., Phys. Lett. A, EPJ. Plus, SciPost Phys., QST, PRX Q, PRL, PRA.
- 2015 – 2016: University coordinator, Pint of Science International Festival, *Southampton, United Kingdom*