

Daniel Cohen - Curriculum Vitae

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Address: 20 Ibn Gabirol st. Tel-Aviv, Israel

Date of birth: 05/09/1990



Education and Training

Present: PhD studies in physics. Research in the field of quantum information at the Alex Retzker group, the Hebrew University of Jerusalem.

- Patent application: velocity measurement using color centers (pending).

2016-2018: MSc studies in physics with expertise in quantum technologies, the Hebrew University of Jerusalem.

- Research in the field of quantum information.
- Conference participation: Qdiamond (Apr 18), Qdiamond (May 19).
- Participation in the Bad Honnef School of Quantum Technologies.

2013-2016: BSc studies in physics, the Hebrew University of Jerusalem.

- Participation at the undergraduate program “Amirim” for excellent students.
- Research project in the field of quantum information.

Awards and Honors

2020: Acceptance to the Clore scholars programme.

2019: Recipient of the Millner fellowship.

2019: Graduated the MSc program with excellence.

2018: Received the Rector's award for excellent Master students.

2017: Graduated the BSc program with excellence.

2017: Inclusion in the Dean's list of excellent BSc students.

2016: Inclusion in the Dean's list of excellent BSc students.

2015: Received the Dean's award for excellent BSc students.

Volunteering and Educational work

Present: TA - mathematical methods for physicists.

2017-present: Mentoring three undergraduate students in a research project in my field. Two projects have been summarized into papers, while the third is ongoing.

2018: TA - introductory course to quantum computation.

2017: TA - Physics for medicine students.

2016-2017: TA – Physics for pharmacy students.

Publication list

- Tuvia Gefen, Daniel Cohen, Itsik Cohen, Alex Retzker, Enhancing the fidelity of two-qubit gates by measurements, *Phys. Rev. A*, **95**, 032314 (2017).
- Daniel Cohen, Maxim Khodas, Oded Kenneth, Alex Retzker, Sensing nano-NMR diffusion spectra using a nitrogen vacancy center, Proceedings Volume 10934, Optical, Opto-Atomic, and Entanglement-Enhanced Precision Metrology; 109340Q (2019).
- Daniel Cohen, Ramil Nigmatullin, Oded Kenneth, Fedor Jelezko, Maxim Khodas, Alex Retzker, Utilising NV based quantum sensing for velocimetry at the nanoscale. *Sci Rep* **10**, 5298 (2020). <https://doi.org/10.1038/s41598-020-61095-y>
- Daniel Cohen, Tuvia Gefen, Laura Ortiz and Alex Retzker, Achieving the ultimate precision limit with a weakly interacting quantum probe, *npj Quantum Inf* **6**, 83 (2020). <https://doi.org/10.1038/s41534-020-00313-x>.
- Daniel Cohen, Ramil Nigmatullin, Matan Eldar, Alex Retzker (2020), Confined nano-NMR spectroscopy using NV centers. *Adv. Quantum Technol.* doi:10.1002/qute.202000019.

Poster and Oral Presentations at Conferences

Invited talks:

- Physics seminar of Mcquarie University, Sydney (Aug 19).
- Complex systems group seminar of Sydney University, Sydney (Aug 19).
- “Photonics West” (Feb 19).
- MicroQ grant meeting (Nov 18).

Contributed talks:

- HUJI QT workshop (June 18).
- BGU-QST conference (May 18).