

January 2020

**Name:** Eliahu Cohen

**Date of Birth:** 13/07/86

**Place of Birth:** Israel

**Home pages:**

<http://www.eng.biu.ac.il/cohenel4/>

[https://scholar.google.co.uk/citations?user=lw\\_SyOUAAAAJ&hl=en](https://scholar.google.co.uk/citations?user=lw_SyOUAAAAJ&hl=en)

[https://www.researchgate.net/profile/Eliahu\\_Cohen](https://www.researchgate.net/profile/Eliahu_Cohen)

**Professional experience:**

2018-Now: Senior Lecturer, Faculty of Engineering, Bar-Ilan University. Member of the Institute for Nanotechnology and Advanced Materials. Member of the Center for Quantum Entanglement Science&Technology.

2018: Research associate at the University of Ottawa (The Structured Quantum Optics group headed by Prof. Ebrahim Karimi).

2015-2018: Post-doctoral research associate at the University of Bristol (The quantum information and foundations group headed by Prof. Sandu Popescu, FRS).

**Education:**

2012-2015: PhD in Tel-Aviv University (School of Physics and Astronomy) under the supervision of Profs. Yakir Aharonov and Lev Vaidman. Thesis title: "Time and Nonlocality in Quantum Mechanics".

2008-2012 (during military service): MSc in physics from Tel-Aviv University under the supervision of Prof. Yakir Aharonov. Thesis title: "Weak Measurements and the Two-State-Vector Formalism: Foundations and Frontiers".

2004-2007: BSc in Physics and Mathematics from Tel-Aviv University, *Magna Cum Laude*.

**Prizes and Honors:**

2017: Poster presentation prize in Foundations of Quantum Mechanics and Technology 2017, Sweden (I also presented an invited plenary talk within this conference).

2015: Included in the Rector's list of excellent teaching assistants (TAU).

2015: Excellent teaching assistant (School of Physics, TAU).

2014: Included in the Rector's list of excellent teaching assistants (TAU).

2014: Shulamith Goldhaber Excellency scholarship in research (TAU).

2013: Pitowsky Prize (HUJI).

2012: Dothan Prize (TAU).

2008: Dean's excellency prize (TAU).

**Teaching:**

1. Undergraduate courses on applied thermodynamics and applied quantum mechanics, Bar-Ilan University, Spring 2020.
2. Graduate course on Quantum Computation, Bar-Ilan University, Fall 2018, Fall 2019.
3. Graduate mini-course on black hole physics, University of Bristol 2016.
4. Teaching assistant in "Introductory Mathematics for Physicists 2" During Semester B 2014-2015 and Semester B 2013-2014, School of Physics and Astronomy, Tel-Aviv University.
5. Teaching assistant in "Introductory Mathematics for Physicists 1" During Semester A 2014-2015 and Semester A 2013-2014, School of Physics and Astronomy, Tel-Aviv University.
6. Guest lecturer in: "The Thermodynamic Foundations of Life sciences", Feinberg Graduate School, Weizmann Institute, 2012-2013.

**Other professional experience:**

1. 2014 - 2019: Occasional consultation for the Ministry of Defense through "Rabatit".
2. September 2012- October 2014: Collaborated with a group of researchers in Ben-Gurion University studying Scalable Video Coding (SVC).
3. November 2011 - October 2013: An officer (captain) in a research and development unit named "Hatal". I was in charge of developing combined electro-optical systems for surveillance as an algorithms development leader, system engineer and the project manager.
4. April 2008 - November 2010: An officer in a unit called "Atal". I performed simulations and plans for resources allocation and maintenance of ordnance systems.

**Editing:**

Member of the editorial board of "Quanta".

Guest Editor for "Entropy".

**Referee:**

I have submitted reviews to ISF, Austrian Academy of Sciences, NRC, Springer, Taylor&Francis Group, Science, Advances, Physical Review Letters, Optica, Scientific Reports, Physical Review Applied, Physical Review A, New Journal of Physics, Quantum Information Processing, Quantum, Journal of Physics A, Optics Express, Europhys. Lett., Annals of Physics (Outstanding Reviewer 2015), AIP advances, Physics Letters A, Entropy, Sensors, Universe, Quantum Reports, Quantum Studies, Foundations of Physics, International Journal of Quantum Information, International Journal of Theoretical Physics, Canadian Journal of Physics, SciPost, Optical Engineering, International Journal of Quantum Foundations, Studies in History and Philosophy of Modern Physics.

## **Conferences and talks:**

### a. Organization of international conferences or workshops

1. Member of the program committee "Optical, Opto-Atomic, and Entanglement-Enhanced Precision Metrology II" (Photonics West), San-Francisco, February 2020.
2. Co-organizer of "The Second Quest Workshop", Bar-Ilan University, December 2019.
3. Member of the program committee "Optical, Opto-Atomic, and Entanglement-Enhanced Precision Metrology" (Photonics West), San-Francisco, February 2019.
4. Member of the scientific advisory board, "Time and Fundamentals of quantum mechanics", Weizmann Institute of Science, January 2019.
5. Main organizer, Workshop on "Quantum Information and Quantum Foundations – Theory and Experiment" within the 7th International Conference on New Frontiers in Physics, Crete, July 2018.
6. Main organizer, Workshop on "Quantum Information and Quantum Foundations – Theory and Experiment" within the 6th International Conference on New Frontiers in Physics, Crete, August 2017.

### b. Conference talks

7. Plenary talk, the second Quest workshop, Bar-Ilan University, December 2019.
8. Invited plenary talk at the Third Time Machine Factory, Turin, September 2019.
9. Invited plenary and contributed talks at Quantum 2019, Turin, May 2019.
10. Two Invited talks in Photonics West 2019, San-Francisco, February 2019.
11. Invited talk in Time and Fundamentals of quantum mechanics, Weizmann Institute of Science, January 2019.
12. Contributed talk in International Conference on Laser Applications in Life Sciences (LALS), Israel, November 2018.
13. Invited plenary talk in the 7th International Conference on New Frontiers in Physics, Crete, July 2018.
14. Invited plenary talk in Toward Ultimate Quantum Theory, Vaxjo, Sweden, June 2018.
15. Invited plenary talk in New Directions in the Foundations of Physics, Viterbo, June 2018.
16. Invited plenary talk in the 6th International Conference on New Frontiers in Physics, August 2017.
17. Invited plenary talk (and a poster presentation) in Foundations of Quantum Mechanics and Technology, Vaxjo, Sweden, June 2017.
18. Invited plenary talk in SANDU International Conference on Quantum Physics, Crisan, Romania, May 2017.

19. Contributed plenary talk in Quantum 2017, Torino, May 2017.
20. Contributed parallel talk in OASIS 2016, Tel-Aviv, February 2016.
21. Invited talk in Causal Horizons, Bristol, January 2017.
22. Contributed parallel talk in IPS 2016, Tel-Aviv, December 2016.
23. Two invited plenary talks in the Eighth International Workshop DICE2016, Spacetime - Matter - Quantum Mechanics, Castiglione, Italy, September 2016.
24. Invited plenary talk in Concepts and Paradoxes in a Quantum Universe, Perimeter Institute, June 2016.
25. Three contributed plenary talks in the 97<sup>th</sup> Annual Meeting of the AAAS Pacific Division, University of San-Diego, June 2016.
26. Invited plenary talk, Workshop on Quantum Foundations and the Problems of Time, University of Bristol, January 2016.
27. Invited plenary talk, The Time Machine Factory, Turin, October 2015.
28. Invited plenary talk in Free Will and Retrocausality in the Quantum World, Cambridge, UK July 2014.
29. Contributed parallel talk in Quantum2014, Turin, May 2014.
30. Contributed parallel talk, ICIS2014, Tel-Aviv, May 2014.
31. Contributed plenary talk in International Conference on New Frontiers in physics 2013, Crete, August 2013.
32. Invited plenary talk in The Time Machine Factory, Turin, October 2012.
33. Contributed plenary and parallel talks, International Conference on New Frontiers in Physics 2012, Crete, June 2012.
34. Contributed parallel talk in Optical Engineering, Bar-Ilan, April 2012.
35. Contributed parallel talk in Electronic Imaging of IS&T/SPIE, San-Francisco, January 2012.

c. Seminars

36. Quantum seminar at Tel-Aviv University, January 2020.
37. Optics seminar at Ben-Gurion University, April 2019.
38. CERC seminar, University of Ottawa, April 2018.
39. Technion (Solid state seminar), January 2018.
40. Bar-Ilan University (Quantum optics seminar), January 2018.
41. Tel-Aviv University (CMP seminar), January 2018.
42. The Hebrew University of Jerusalem (CMP seminar), December 2017.
43. The Weizmann Institute of Science (Physics+Chemistry special seminar), December 2017.
44. Ben-Gurion University of the Negev (Physics Colloquium), November 2017.

45. Bar-Ilan University (Quantum optics seminar), November 2017.
46. University College London, June 2017.
47. TU Wien, Vienna, January 2017.
48. Bar-Ilan University (Quantum optics seminar), November 2016.
49. University of Bristol (Quantum Information and Quantum Foundations seminar), February 2016
50. University of Bristol (Quantum Information group meeting), December 2015.
51. Ben-Gurion University of the Negev (Atom Chip Group), December 2015.
52. University of Bristol (Quantum Information and Foundations), October 2015.
53. Tel-Aviv University (particles seminar), June 2015.
54. INRiM, Turin, October 2014.
55. Technion (solid state), September 2014.
56. INRiM, Turin, May 2014.
57. INRiM, Turin, February 2013.
58. University of Vienna, January 2013.
34. d. Poster presentations
59. Physics, Art, Mathematics, Science: Hidden Connections. A conference marking Sir Michael Berry's 75th Birthday University of Bristol, University of Bristol, April 2016.
60. 2nd Quantum Thermodynamics conference, Mallorca, Spain, April 2015.
61. IPS 2014, December 2014.
62. Coherence and Control in the Quantum World, The Weizmann Institute of Science, December 2014.
63. MEDIAN workshop, Dresden, March 2014.