

Curriculum Vitae and List of Publications

Ruth Shir

Personal Details

Full Name: Ruth Shir

Date of Birth: February 14, 1988

Place of Birth: Tel Aviv, Israel

Education

2012-Present: Physics Ph.D. student at The Hebrew University of Jerusalem.

2009-2012: M.Sc. Physics, The Hebrew University of Jerusalem.

2004-2009: B.Sc. Sciences (cum laude), The Open University of Israel.

Physics Research Experience

Sep 2013-present: The Hebrew University of Jerusalem, Racah institute of Physics

I am currently working with Prof. Barak Kol on Scattering Amplitudes.

Jan 2012-Jul 2013: The Hebrew University of Jerusalem, Racah institute of Physics

I worked with Prof. Barak Kol on computing 3-loop diagrams in the two-body effective action of General Relativity in the Post-Newtonian limit. We published a paper presenting the results.

Jan 2011-Dec 2011: The Hebrew University of Jerusalem, Racah institute of Physics

I worked with Prof. Shmuel Elitzur and Dr. Merav Hadad on extending Ted Jacobson's approach of deriving General Relativity field equations from thermodynamic equations, to more general theories of gravity. I wrote my Master's thesis: "Gravitation from Thermodynamics".

Sep 2008-Sep 2009: The Open University of Israel

I worked with Prof Gady Golan from the Holon Institute of Technology on simulating the behavior of a solar cell he has invented.

Other interests

I am an artist. My paintings have been showcased in several exhibitions in Israel and on July 2013 some of my paintings were displayed in an international exhibition at the Museum of History of Minsk in Minsk, Belarus. I also play the piano and participate in concerts.

Publications

- 1) Barak Kol and Ruth Shir, "Perturbative gauge theory and $2+2=4$ ", arXiv:1404.1064[hep-th].
- 2) Barak Kol and Ruth Shir, "Color structures and permutations", arXiv:1403.6837[hep-th].
- 3) Baral Kol and Ruth Shir, "Classical 3-loop 2-body diagrams", JHEP **1309**, 069 (2013).

Talks

- 1) "Symmetries of Tree-Level Scattering Amplitudes", Oxford-Humboldt Mathematical Physics Summit Meeting, University of Oxford. March 28, 2014.
- 2) "Classical 3-loop 2-body diagrams", Prof. Barak Kol and Ruth Shir, High Energy Seminar at the Racah Institute of Physics, The Hebrew University of Jerusalem. June 5, 2013.

Awards and Fellowships

Dalia and Dan Maydan Fellowship, 2013-2014.