

Name: Erez Ribak

Contact Details: eribak@physics.technion.ac.il

Department of Physics, and Asher Space Research Center, Technion - Israel Institute of Technology

Previous employment in academic and other institutions:

University of Arizona, Steward Observatory

University of Arizona, College of Optical Sciences

Jet Propulsion Laboratory, California Institute of Technology

National University Ireland, Galway

Education, qualifications and professional experience:

B. Sc., Physics, Technion, Haifa

M. Sc., Physics, Technion, Haifa

Ph. D., Physics and Astronomy, Tel Aviv University

Past and current research interests:

1. Coherence and speckle.
 - a. Astronomical longitudinal coherence by interferometry for bio-lines on extrasolar planets
 - b. Increasing the spatial coverage in stellar interferometry: multiple beam combination
 - c. Long base-line stellar interferometry in space
 - d. Simulated annealing for space telescopes
 - e. Understanding complex structures from return speckle statistics: the human retina
2. Imaging through distorting media
 - a. Characterisation of ocular surfaces and their distortions; novel measurement methods and statistics
 - b. Tomographic probing of atmospheric turbulence for extremely large telescopes
 - c. In-depth adaptive correction of atmospheric turbulence
 - d. Measurement and tomographic adaptive correction of ocular surfaces
3. General physics
 - a. Cosmological simulations of the early universe
 - b. Atmospheric radiometry
 - c. Analysis of Josephson junctions
 - d. Removing redundancy in silicon for actuation
 - e. Employing quantum imaging to surpass the diffraction limit

Supervision: 20 Research Masters students, 4 PhD students,

Teaching: advanced optics and advanced student laboratories

Previous grants: Ministries of Science, Defense, and Health, Israeli Academy of Sciences, European Funds.

Publications: Over 230 papers, including book chapters, and 68 refereed papers (**all links are [here](#)**)