

Curriculum Vitae

Dr. Gil Atar

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Current work place: Soreq NRC, Yavne 81800, Israel.

Education

Technion

B.Sc in Electrical Engineering, Cum Laude 2003

B.A in Physics, Cum Laude 2003

Tel Aviv University

M.Sc in Electrical Engineering 2010

Ph.D in Electrical Engineering 2016

Professional Experience

Leading researcher in a group developing electronic devices at Soreq (2015-today)

- I research the physics of Si-based electronic devices, performs physical calculation (both analytical and numerical) of Poission, continuity and heat transfer equation system.
- I design Si electronic devices like avalanche and fast recovery diodes and fabricate it using microelectronics technology.
- I lead three researchers in developing a transparent electric curtain device for particle transport applications using microelectronics technology.

Scientific advisor for developing optical devices at Soreq (2015-2019)

- I developed a patented technology to fabricate silica-based optical waveguides using modified-chemical-vapor-deposition (MCVD).
- I supervised a post-doctoral student in fabrication and characterization of silica-based waveguides.

- I guided a Ph.D student in performing optical measurements of GaN optical waveguides.

Head of a research and development project for making silica-based optical waveguides at Soreq (2010-2015)

- I demonstrated the first reported optical pitch-converter suitable for high power applications.
- I performed optical design, fabrication and characterization of silica-based optical waveguides.
- I composed a physical model describing the correlation between optical waveguide attenuation and its sidewall roughness for large-core high NA waveguides.

Researcher in a group developing Yb/Al-codoped fused silica waveguides at Soreq (2008-2010)

- I performed a joint research with the companies "Liekki" and "Beneq" from Finland, developing a patented technology for the fabrication of large-core silica waveguides using nanoparticle deposition.
- I developed physical models for glass sintering and laser heating of sintered glass.
- I developed a method for measuring time-dependent 3D high-temperature field evolving inside a glass layer during laser heating, using schlieren imaging and thermal imaging simultaneously.

Officer in the engineering unit for ground forces, laser department, IDF (2003-2008)

- I led a comprehensive review of laser safety calculation methods in IDF
- I composed physical models to consider turbulence and atmospheric effects in calculation of laser safety ranges.
- I set up a lab system for measuring optical parameters for various laser systems
- I researched the characteristics of various optical materials such as silica and chalcogenide glasses.

Awards

- Katzir scholarship for young leading scientists (2016)
- Selected for Junior leaders program at Soreq (2018-2019)

Military Service

- Alumni of the 1st Psagot program for outstanding academics (2000-2003)
- IDF officers course, graduated 1st out of 300 cadets (2004)
- Officer in laser department of the ground forces engineering unit, released at Captain rank (2003-2008)
- I actively serve as a reserve officer in the unit in charge of the welfare of injured soldiers and their families during war.