

Curriculum Vitae: Mordechai Botton-Dascal

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Academic Degrees

- B.Sc.** 1984 Elect. Eng. Dept.; Technion IIT; (Suma Cum Laude)
- M.Sc.** 1986 Elect. Eng. Dept.; Technion IIT; Advisor: Prof. D. Schieber
(With distinction)
- D.Sc.** 1989 Technion IIT; Advisor: Prof. A. Ron

Academic Appointments

- 5/2011- Senior Lecturer, Racah Inst. of Physics, Hebrew University of
Jerusalem, Israel
- 2008 - 2011 Research Scientist, High Intensity Laser Lab., Racah Inst. of Physics,
Hebrew University of Jerusalem, Israel.
- 2006 –2008 Visiting Senior Research Scientist; Institute for Research in
Electronics and Applied Physics (Formerly the IPR); University of
Maryland
- 1995 –1998 Visiting Research Scientist; Institute for Plasma Research (IPR);
University of Maryland
- 1989 –2008 Senior Research Scientist; Israel Defense Research Establishment
(IDRE)

Research Interests

- **Ultra-short pulse high intensity laser matter interaction:**
 - Electromagnetic energy absorption by highly structured nano-structures
 - Acceleration of protons and light ions by ultra-short ultra-intense laser light and Snow-nano-targets
 - High harmonic generation from periodic plasma structures
- **Vacuum electronics:**
 - Novel schemes of coherent electromagnetic radiation sources based on electron beams in photonic band-gap materials and periodic nano-structures.
 - Miniature sheet-beam based microwave sources
 - Efficiency optimization and long pulse (up to CW) operation of relativistic gyrotrons.
- **Mechanics of living cells**

- Mechanical and structural influence of the environment on cell shape formation
- Cell-cell mechanical interaction
- **Numerical simulations:**
 - Electromagnetics: Efficient FDTD methods.
 - Particle In Cell

Other Activities

- 1. Referee for the leading journals in Plasma Physics:
Physics of Plasmas, Physical Review Letters, IEEE Trans. Plasma Science, Applied Physics Letters, International Journal of Electronics.
- 2. Member of review panel of M. Sc. And Ph. D. students at the Technion and Tel-Aviv University.
- 3. Referee for the Israel Academy of Sciences and Humanities.