

Curriculum Vitae

Rafi Weill

Rafael, Zur-Shalom industrial zone, Acco Rd. PO box 2250, Haifa, Israel.

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Academic Degrees:

2011: Ph.D., Electrical Engineering, Technion.

2005: M.Sc., Electrical Engineering, Technion.

2003: B.Sc. (Cum Laude), Electrical Engineering and Physics, Technion.

Academic Appointments

2013-2014: Adjunct lecturer.

Honors and Awards

2011: Katsir scholarship (Rafael).

2008: Gutwirth scholarship.

2003: Excellent tutor prize.

2003: Gutwirth scholarship.

2002: Excellence scholarship Dean Funding.

Publications - Rafi Weill

Papers in scientific journals:

1. B. Vodonos, R. Weill, A. Gordon, A. Bekker, V. Smulakovsky, O. Gat, B. Fischer. "Formation and annihilation of laser light pulse quanta in a thermodynamic-like pathway". **Physical Review Letters** 93(15), 153901, 2004.
2. R. Weill, A. Rosen, A. Gordon, O. Gat, B. Fischer. "Critical Behavior of Light in Mode-Locked Lasers". **Physical Review Letters** 95(1), 013903, 2005.

3. R. Weill, B. Vodonos, A. Gordon, O. Gat, B. Fischer. "Statistical light-mode dynamics of multipulse passive mode locking". **Physical-Review-E** 76 (3), 031112, 2007.
4. A. Rosen, R. Weill, B. Levit, V. Smulakovsky, A. Bekker, B. Fischer. "Experimental observation of critical phenomena in a laser light system". **Physical Review Letters** 105 (1), 013905, 2010.
5. R. Weill, O. Gat, B. Fischer. "Light-Mode condensation in actively-mode-locked lasers". **Physical Review Letters** 104 (17), 173901, 2010.
6. R. Weill, B. Levit, A. Bekker, O. Gat, B. Fischer. "Laser light condensate: Experimental demonstration of light-mode condensation in actively mode locked laser". **Optics Express** 18 (16), 16520-16525, 2010.
7. R. Weill, A. Bekker, V. Smulakovsky, B. Fischer, O. Gat. "Spectral sidebands and multipulse formation in passively mode-locked lasers". **Physical Review A** 83 (4), 043831, 2011.
8. B. Fischer, R. Weill. "When does single-mode lasing become a condensation phenomenon?". **Opt. Express** 20 (24), 26704-26713, 2012.
9. R Weill, and B. Fischer, "Casimir-like light pulse interaction by amplified noise in lasers"; to be Submitted.
10. A. Rosen, R. Weill, A. Bekker, V. Smulakovsky, and B. Fischer, "Pulse Quasi-Crystal Formation in Mode-Locked Lasers; to be Submitted.
11. A. Rosen, R. Weill, A. Bekker, V. Smulakovsky, and B. Fischer, "Pulse Quasi-Crystal Formation in Mode-Locked Lasers. In preparation.
12. A.Rosen, R.Weill, A. Bekker, V.Smulakovsky,Bekker, and B. Fischer, "Pulse-bunching statistics in mode-locked fiber lasers". In preparation.

Conference Papers:

1. A. Rosen, B. Levit, V. Smulakovsky, A. Bekker, A. Feldster, R. Weill and B. Fischer, "First Experimental Observation of Critical Phenomena in a Mode-Locked Laser", Conf. on Lasers and Electro-Optics (CLEO), Long Beach, May 2006.
2. A. Rosen, R. Weill, A. Bekker, V. Smulakovsky, N. K. Berger, O. Gat and B. Fischer, Pulse-Quasi-Crystal Formation in Mode-Locked Lasers; Conf. on Lasers and Electro-Optics (CLEO), Baltimore, May 2007.

3. R. Weill , A. Rosen, , M. Katz, A. Bekker, V. Smulakovsky, B. Levit, O. Gat and B. Fischer, "Long Range Soliton Interaction Related to Sidebands Generation in Mode-Locked lasers"; Conf. on Lasers and Electro-Optics (CLEO), Baltimore, May 2007.
4. R. Weill , O. Gat and B. Fischer, "Condensation of Light in Actively Mode-Locked Lasers", Conf. on Lasers and Electro-Optics (CLEO), Baltimore, May 2009.
5. R. Weill , O. Gat and B. Fischer, "Light Condensation in Actively Mode-Locked Lasers", Nonlinear Optics (NLO) Conference, Honolulu, Hawaii, July 12, 2009.
6. A. Schwartz, R. Weill, M. Katz, A. Bekker, V. Smulakovsky, B. Fischer, "Formation, sprinkling, trapping and annihilation of pulses in passively mode-locked fiber lasers with modulated noise", Conf. on Lasers and Electro-Optics (CLEO), San-Jose, May 2010.
7. B. Fischer and R. Weill, "Light Condensation in Actively Mode-Locked Lasers", Nonlinear Optics (NLO) Conference, Honolulu, Hawaii, July 12, 2009.
8. A. Schwartz, R. Weill, M. Katz, A. Bekker, V. Smulakovsky, B. Fischer,, Conf. on Lasers and Electro-Optics (CLEO), San-Jose, May 2010.
9. R. Weill, O. Gat, and B. Fischer, "Noise Induced Pulse Interaction: The Casimir Effect in Mode Locked Lasers", SIAM Conference on Nonlinear Waves and Coherent Structures, Philadelphia, Pennsylvania, Aug. 16-19, 2010. Invited.
10. R. Weill, O. Gat, and B. Fischer, "Noise-induced Pulse Interaction in Mode-locked Lasers", Progress in Electromagnetics Research Symposium (PIERS), Marrakesh, Morocco, March 20-23, 2011; Invited
11. G. Oren, A. Schwartz, A. Bekker, B. Levit and B. Fischer, "Multi-dimensional laser mode combs via active mode-locking", IEEE 27-th Convention of Electrical and Electronics Engineers in Israel, Eilat November 14-17, 2012 Israel.