

Department of Mathematics  
University of Chicago

Ronny Hadani

## CURRICULUM VITAE

- **Citizenship.** Israeli
- **Marital status.** Married
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## Research Interests

- Representation theory, the theory of  $D$ -modules.
- Applications to harmonic analysis and signal processing.

## Education

**1993-1996** B.A., Open University, Israel. Date of award: 1996.

**1996-1998** M.Sc., Computer Science and Applied Mathematics, Weizmann Institute, Israel. Title of Master Dissertation: "*Multi-scale Drawing Graphs Algorithm*" (With Distinction). Supervisor: Prof. David Harel. Date of award: 1998.

**1999-2006** Ph.D., Pure Mathematics. Tel-Aviv University, Title of Ph.D. Dissertation: The Geometric Weil representation and its applications. Submitted in Aug. 2006. Supervisor: Prof. Joseph Bernstein.

**2001-2002** Ph.D., Associated student, Pure Mathematics, UC Berkeley, USA.

**2001-2002** Ph.D., Associated student, Pure Mathematics MSRI, Berkeley, USA. Programs: Integral Geometry, Mathematical physics, Modular forms and Stacks.

## Employment

**1991-1994** Mandatory military service in the Israeli army.

**2000-2006** Lecturer and teaching assistant, Department of Pure Mathematics, Tel Aviv University.

**July 2005** Teaching assistant (Lecturer - Prof. Joseph Bernstein), Summer School on "Perverse Sheaves", Beijing, China.

**Present** L.E. Dickson Instructor, Department of Mathematics, University of Chicago.

## Awards

**1998** Prize for distinguished M.Sc. thesis, Weizmann Institute, Israel.

**2003** Emmy Noether Fellow.

## Visiting Positions

**2001-2002** Visiting member, MSRI, Berkeley, USA.

**Aug. 2002** Visiting member, IHES, Bures sur Yvette, France.

**June. 2003** Visiting member, Fields Institute, Toronto, Canada.

**Aug. 2003** IHES, Bures sur Yvette, France.

**Sep. 2003** Visiting member, Chalmers University, Gothenburg, Sweden.

**July-Aug. 2004** Visiting member, Max Planck Institute and Bonn University, Bonn, Germany.

**Sep.-Oct. 2004** Visiting member, Courant Institute, NY, USA.

## Workshops and Conferences

**2001** Midrasha on Automorphic forms , Jerusalem , Israel.

**2002** Summer School on Renormalization Theory, Lumini, Marseille, France.

**2002** IAS/PCMI Summer Session 2002, Automorphic forms, Park City, Utah, USA.

**2002** School on representation theory of p-adic reductive groups, Münster, Germany, October 9-12, 2002.

**2003** Clay Mathematics Institute Summer School on Harmonic Analysis, The Trace Formula and Shimura Varieties, June 2-27, 2003, The Fields Institute, Toronto, Canada.

- 2004** An Isaac Newton Institute Workshop, Random Matrix Theory and Arithmetic Aspects of Quantum Chaos, June 28 - July 2, 2004, Cambridge University, England.
- 2005** Conference on Number Theory, Random Matrix Theory and Quantum Chaos, May 21-23, Bielefeld University, Germany.
- 2005** 2nd International Conference on p-Adic Mathematical Physics, Sep. 15-21, Belgrade, Serbia and Montenegro.
- 2006** Arithmetic and Geometry Around Quantization, Istanbul, June 2006, (invited lecture).
- 2006** HASSIP06, harmonic analysis and signal processing, Sep. 2006, Munich Germany.
- 2008** Codes invariants and modular forms, July 2008, Bonn Germany (plenary lecture).
- 2008** EUSIPCO2008 16th European signal processing conference, Aug. 2008, Lausanne - Switzerland (two lectures at special session).
- 2008** SETA08 International conference on sequences and their applications, Sep. 2008, University of Kentucky, Lexington USA (invited lecture).

## Lectures

- 2004** Tel-Aviv University, Tel-Aviv, Israel, Number Theory Seminar: "*Proof of the Kurlberg-Rudnick Rate Conjecture*".
- 2004** Tel-Aviv University, Tel-Aviv, Israel, Symplectic Geometry Seminar: "*Proof of the Kurlberg-Rudnick Rate Conjecture*".
- 2004** Courant Institute, NYU, NY, USA, number theory seminar.
- 2004** Princeton University, Princeton, USA, number theory seminar.
- 2005** Max Planck Institute, Bonn, Germany, Oberseminar: "*Proof of the Kurlberg-Rudnick Rate Conjecture*".
- 2005** Hebrew University, Jerusalem, Israel, number theory seminar.
- 2005** Bielefeld University, Bielefeld, Germany, Conference on Number Theory, Random Matrices and Quantum Chaos.
- 2005** 2nd International Conference on p-Adic Mathematical Physics, Sep. 15-21, Belgrade, Serbia and Montenegro.
- 2005** Technion, Haifa, Israel, physics department, mathematical physics seminar: "*Eigenstates in the quantum Hannay-Berry model*".

- 2006** Arithmetic and Geometry Around Quantization, Istanbul, June 2006, (invited lecture).
- 2006** Geometric Langlands seminar, "The geometric Weil representation and Applications", Oct. 2006, University of Chicago, (three lectures).
- 2008** Applied mathematics seminar, "The finite harmonic oscillator with applications to radar and communication", Feb. 2008, Stanford University.
- 2008** Northern California symplectic geometry seminar, "Quantization of symplectic vector spaces - algebra geometric approach", Feb. 2008, Stanford University.
- 2008** Algebraic geometry seminar, "The geometric Weil representation with applications to digital signal processing", Feb. 2008, UC Berkeley.
- 2008** Scientific computation seminar, "On the diagonalization of the discrete Fourier transform", Feb. 2008, UC Berkeley.
- 2008** Number theory seminar, "Quadratic reciprocity and sign of Gauss sum via the finite Weil representation", Feb 2008, UC Berkeley.
- 2008** Networking communications and DSP seminar, "The finite harmonic oscillator with applications to radar and communication", Feb 2008, EECS, UC Berkeley.
- 2008** Representation theory and mathematical physics seminar, "Quantization of symplectic vector spaces - algebra geometric approach", March. 2008, Northwestern University.
- 2008** Number theory seminar, "Quadratic reciprocity and sign of Gauss sum via the finite Weil representation", April 2008, UIC University.
- 2008** Minicourse on applications of representation theory to signal processing, July 2008, TU Berlin.
- 2008** Conference on codes, modular forms and invariant theory, "The finite harmonic oscillator with applications to radar and communication", July 2008, MPI Bonn.