

Department of Pure Mathematics  
School of Mathematical Sciences  
Tel Aviv University

**Zeév RUDNICK, Ph.D.**

## **CURRICULUM VITAE**

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email:	rudnick@post.tau.ac.il
Date and place of birth:	1.1.1961 Haifa
ZAHAL (Israeli) Military Service:	July 1979-September 1982
Marital status:	married
No. of children:	2

## **EDUCATION**

1982-83	B.Sc., Mathematics (Summa Cum Laude) Bar Ilan University Date of award: 1984
1983-85	M.Sc., Mathematics (Summa Cum Laude) The Hebrew University of Jerusalem Date of award: 1985 Name of Supervisor: Professor Alex Lubotzky
1985-90	Ph.D., Mathematics Yale University Date of award: 1990 Title of Doctoral Dissertation: Poincaré Series Name of Supervisor: Professor Ilya Piatetski-Shapiro

## **ACADEMIC EXPERIENCE**

Sep 1990-Aug 1992 G. Szego Assistant Professor, Stanford University, USA  
Sep 1992-Aug 1996 Assistant Professor, Princeton University, USA  
Feb 1995-Feb 1998 Senior Lecturer, Tel Aviv University  
Feb 1998-2002 Associate Professor, Tel Aviv University.  
2002-present Professor, Tel Aviv University.

## **OTHER ACADEMIC EXPERIENCE**

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1996-1998            Consultant, Physics Department, Weizmann Institute  
2003-4                Leverhulme Trust visiting Professor, Bristol University

### **VISITING POSITIONS**

1992                    M.S.R.I., Berkeley  
August 1995            Max-Planck Institut, Bonn  
Sep.-Oct. 1995        Institut Henri Poincare, Paris, France  
August 1997            Newton Institute for Mathematical Sciences, Cambridge, England  
October 1998          I.H.E.S., Bures-sur-Yvette, France  
October 1999          Institute of Advanced Studies, Princeton, USA.  
February 2003         M.S.R.I., Berkeley  
2003-4                 Department of Mathematics, Bristol University, UK  
January-July 2004    Newton Institute for Mathematical Sciences, Cambridge, England

### **AWARDS**

1989-1990            Sloan Foundation Doctoral Dissertation Fellowship  
1995                    Alon Fellow  
1997                    Outstanding Teacher Award, Faculty of Exact Sciences, Tel Aviv University.  
2001                    Erdos prize  
2003/4                 Leverhulme Visiting Professorship, Bristol University.

### **EDITORIAL BOARD**

2002-                    Geom. and Funct. Analysis  
2008-                    International Mathematics Research Notices (IMRN) and International  
                              Mathematics Research Papers (IMRP)

### **SERVICE**

various                 Panel chair and member, Israel Science Foundation  
2007-2010             Panel member, European Research Council

### **GRANTS**

1991-92                National Science Foundation, postdoctoral associate

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1993-95	National Science Foundation, Principal Investigator
1995-present	U.S.-Israel Bi-National Science Foundation
1996-present	Israeli Academy of Sciences
2000-04	European Union Research Training Network

### Program Committees

1991	Co-organizer, M.S.R.I. workshop, Berkeley, CA.
1996	Organizer of special session in Number Theory, A.M.S. Eastern section meeting in New York, April 13-14 1996.
1998	Organizer, special session on Number Theory, annual meeting of the Israel Mathematical Union, Hebrew University, Israel, May 1998.
2000	Organiser and principal lecturer, German Math. Society Summer School on "The Riemann Zeta Function and Random Matrix Theory" Oberwolfach, October 2000.
2002	Organiser, Quantum Chaos Day, Tel Aviv, August 6, 2002
2002	Organiser, Algebra section of the annual meeting of the Israel Mathematical Union, May 2003
2004	Organiser, Workshop on Random Matrix Theory and Arithmetic aspects of Quantum Chaos, Newton Institute, Cambridge, June 2004.
2005	co-director, NATO summer school on equidistribution in number theory, Montreal, July 2005.
2008	Organiser, Workshop on Mathematical aspects of Quantum Chaos, Montreal, June 2008.

### REVIEWER

Annales Henri Poincaré, Annals of Math., Comm. Math. Phys., Documenta Math., Duke Journal of Mathematics, International Math. Research Notices, Inventiones Math., Israel Journal of Mathematics, Jour. für die reine & angewandte Math., Nonlinearity, Physica D., Publicationes de l'I.H.E.S., Review in Math. Phys., Selecta Math., National Science Foundation, Israeli Academy of Sciences, Austrian Science Fund, European Research Council.

### ACTIVE PARTICIPATION IN SCIENTIFIC MEETINGS

1991	Workshop on Diophantine Geometry "the density of integral points on affine varieties", Stanford University
1991	M.S.R.I. Workshop "Binary forms" M.S.R.I., Berkeley
1992	Workshop on Automorphic Forms, "Integer points on homogeneous varieties", Institute for advanced studies at the Hebrew University
1993	Analysis on Manifolds, "Lattice points on symmetric spaces", Mathematisches Forschungsinstitut, Oberwolfach

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- 1993 Zeta Functions in Spectral theory and Dynamics, “Non-scarring for arithmetic hyperbolic surfaces”, Johns Hopkins University
- 1993 Spectral Theory, Scattering Theory and Geometry in honor of Ralph Phillips, “Hardy-Littlewood systems”, Stanford University
- 1994 A.M.S. special session in analytic number theory “ $n$ -level correlations of zeros of  $L$ -functions”, Brooklyn, N.Y.
- 1994 Workshop on Spectral Theory of Automorphic Forms and Number Theory, M.S.R.I., Berkeley “Selberg’s eigenvalue conjecture”.
- 1995 Joint A.M.S.-I.M.U. meeting in Givat Ram, Israel, special session on Automorphic Forms “Local statistics of zeros of  $L$ -functions”
- 1995 Lecture series “Number Theory and Quantum Chaos” in the special semester “Chaos and Quantization” at the Institut Henri Poincare, Paris, October 1995.
- 1996 Plenary lecture, “Zeros of the Riemann zeta function”, A.M.S. Eastern section meeting in New York April 13-14 1996.
- 1996 Workshop on number theoretic aspects of ergodic theory and quantum chaos, St. Andreasberg, Germany June 1996 “The length spectrum of hyperbolic surfaces”.
- 1996 Program in Emerging Applications of Number Theory at the Institute of Mathematics and its applications in Minneapolis, July 15-20 1996.
- 1997 Quantum Chaos Days, Technion, Haifa, Israel, April 7-8 1997 “level spacings for integrable systems”.
- 1997 Plenary address, annual meeting of the Israel Mathematical Union, Bar Ilan, Israel, May 1997. “Spectral Statistics in Diophantine problems”.
- 1997 Conference in Number Theory in honor of A. Schinzel, Poland June 30-July 9 1997. “Diophantine approximation and spacing statistics”.
- 1997 Disordered Systems and Quantum Chaos, Isaac Newton Institute for Mathematical Sciences, Cambridge, England, August 1997. “level spacings for integrable systems”.
- 1997 Workshop on  $p$ -adic analysis and arithmetic algebraic geometry, The Weizmann Institute of Science, October 1997 “Diophantine approximation and spacing statistics”.
- 1997 “Zeta Functions and Spectra”, Spitalfields Day, organized by the London Mathematical Society, 28 November 1997, Isaac Newton Institute for Mathematical Sciences, Cambridge, England.
- 1998 Workshop on exponential sums, January 11-15 1998, the Hebrew University, Israel “Diophantine approximation and spacing statistics”.
- 1998 workshop on Spectral geometry and its applications, Erwin Schrodinger Institute, Vienna, June 15-19 1998 “Level spacing distribution for integrable systems”.

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- 1998 Conference on the Riemann zeta function, Erwin Schrodinger Institute, Vienna, September 20, 1998. “Poisson statistics in number theory and mathematical physics”
- 1999 Miniconference on Quantum Chaos, Dissipation and Adiabaticity 2-3 June 1999, Technion “The quantized cat map”.
- 1999 Workshop on Random matrices and their applications, MSRI, Berkeley, June 7-11 1999. “The quantized cat map and primitive roots”
- 1999 Number theory and Quantum Chaos, Keio University (Japan), July 2. “The quantized cat map and primitive roots”
- 1999 Workshop on Random Matrix Theory and Quantum Chaos, Tokyo, July 5-11 1999. i) “Zeros of principal L-functions and Random Matrix theory”. ii) “Eigenfunction statistics for the quantized cat map”.
- 1999 Journee arithmetique, Rome July 12-16 1999 “The quantized cat map and primitive roots”.
- 1999 Institute of Advanced study, special year on analytic theory of automorphic forms and L-functions, October 1999. i) “Some number theoretic problems in quantum chaos” ii) “Quantum maps”.
- 2000 Workshop on classical and quantum ergodicity Balubeuren (Germany), May 2000. “Quantum ergodicity for torus maps”
- 2000 Workshop on Quantum spectra and Dynamics, Jerusalem, June 2000 “Quantum ergodicity for torus maps”
- 2000 European Congress of Mathematics, July 2000, Barcelona “Quantum ergodicity for torus maps”
- 2000 German Math. Society Summer School on “The Riemann Zeta Function and Random Matrix Theory” Oberwolfach, October 2000. (Organiser and principal lecturer).
- 2001 Israel Mathematical Union meeting, May 2001, Erdos prize lecture
- 2001 Workshop on high energy eigenstates. CRM, Montreal, August 2001. Lecture series on quantum maps and their arithmetic
- 2001 Summer school on quantum maps, Bologna, September 2001. Lecture series on the quantized cat map.
- 2002 Canadian Number Theory Association meeting, Montreal, Canada, May 2002, “Torsion points on curves and common divisors of  $a^k - 1$  and  $b^k - 1$ .”
- 2002 Park City Mathematical Institute, Park City, Utah, July 2002 Lecture series on Quantum Chaos
- 2002 Quantum Chaos day, Tel Aviv, August 2002, “A central limit theorem for the spectrum of the modular group”.

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- 2002 Mathematical Aspects of Quantum Chaos, Institute Poincare, Paris, October 2002, “A central limit theorem for the spectrum of the modular group”.
- 2003 Elementare und Analytische Zahlentheorie, Oberwolfach March 2003.
- 2004 special semester on Random Matrix theory and L-functions, Newton Institute, Cambridge
- 2004 Workshop on spectral theory and automorphic forms, CRM, Montreal August 2004.
- 2004 QMATH9, Giens (France) September 2004
- 2005 Quantum Spectra and dynamics, Weizmann Institute, January 2005
- 2005 Resonances and periodic orbits: spectrum and zeta functions in quantum and classical chaos, Paris, June 2005.
- 2005 NATO summer school: Equidistribution in number theory, Montreal, July 2005.
- 2005 Applications of representation theory to analytic number theory, Technion, December 2005.
- 2006 Random Matrix Theory and its applications to statistics and wireless communications, Institute for Mathematical Sciences, Singapore, March 2006
- 2006 Arithmetic aspects of random matrices and quantum chaos, Bordeaux, April 2006.
- 2006 Asymptotic problems of analysis, mathematical physics and combinatorics, Institut Henri Poincaré, Paris, May 2006
- 2007 Number theory and random phenomena, Bristol, UK, March 2007.
- 2007 School and Conference on Analytic Number Theory, International Centre for Theoretical Physics (ICTP), Trieste, Italy, May 2007.
- 2007 Spectral Analysis in Geometry and Number Theory, Nagoya, Japan, August 2007
- 2007 Analysis and Applications, Tel Aviv, November 28 2007.
- 2008 Analytic Number Theory, Oberwolfach, March 2008.
- 2008 Chaos: Theory and Experiment, Bar Ilan, March 30 2008.
- 2008 Workshop on Mathematical aspects of Quantum Chaos, Centre de Recherches Mathematiques, Montreal, June 2008.

### **Recent seminars and colloquia**

- 2004 Colloquium, University of Sussex, February 2004
- 2004 Colloquium, Herriot Watt University, April 2004
- 2004 Analysis seminar, University College, London, May 2004

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2004	Colloquium, Tel Aviv University, November 2004
2004	Colloquium, Bar Ilan University, November 2004
2005	Colloquium, Hebrew University, March 2005
2005	Colloquium, KTH (Stockhom), April 2005
2005	Colloquium, University of Michigan, Ann Arbor, September 2005
2005	Number theory seminar, University of Michigan, September 2005
2005	Colloquium, Princeton University, September 2005
2005	Colloquium, Ben Gurion University, November 2005
2006	Colloquium, Technion, March 2006
2006	Representation theory and algebraic geometry seminar, Weizmann institute, March 2006
2006	Colloquium de Georgi, Pisa, May 2006
2007	Wiener Lecture, University of Udine , May 2007
2007	Physics Colloquium, Tel Aviv University, June 2007
2007	Colloquium, Tel Aviv University, November 2007.

### **MEMBERSHIP IN PROFESSIONAL SOCIETIES**

1985-present	American Mathematical Society
1997-	Israel Mathematical Union
2000-	European Mathematical Society

### **MASTERS STUDENTS SUPERVISED**

2000-01	Nir Ailon
2000-02	Inbal Gottlieb
2000-02	Igor Wigman
2002-04	Lior Rosenzweig
2005-	Jony Cohen
2005-	Dmitry Faifman
2007-	Alexei Entin
2007-	Lev Eisenberg

### **DOCTORAL STUDENTS SUPERVISED**

2000-2005	Vladimir Lukianov
2001-04	Yossi Cohen (joint advisor with Jack Sonn, Technion)

2003-2006 Igor Wigman  
2003-2007 Dubi Kelmer  
2005- Lior Rosenzweig

**POST-DOCTORAL STUDENTS SUPERVISED**

1997-99 Par Kurlberg, Tel Aviv University  
Topic: Number Theory and Quantum Chaos  
2001-02 Chris Hughes, Tel Aviv University  
Topic: Number Theory and Random Matrix Theory  
2001-02 Ferenc Oravecz, Tel Aviv University  
Topic: Random Matrix Theory

Date: May 2008