

Biographical Sketch

David Damanik

a. Professional Preparation

University of Frankfurt, Germany, Mathematics, M. Sc., 1995

University of Frankfurt, Germany, Computer Science, M. Sc., 1996

University of Frankfurt, Germany, Mathematics, Ph. D., 1998

California Institute of Technology, Mathematics, 1999–2000

University of California at Irvine, Mathematics, 2000–2001

California Institute of Technology, Mathematics, 2001–2006

b. Appointments

Robert L. Moody, Sr. Chair in Mathematics, Rice University, Houston, TX, 2015 – present

Department Chair, Rice University, Houston, TX, 2014 – 2017

Wiess Career Development Chair, Rice University, Houston, TX, 2011 – 2016

Professor of Mathematics, Rice University, Houston, TX, 2009 – present

Associate Professor of Mathematics, Rice University, Houston, TX, 2006 – 2009

Sherman Fairchild Senior Research Fellow, Caltech, Pasadena, CA, 2003 – 2006

Sherman Fairchild Postdoctoral Scholar, Caltech, Pasadena, CA, 2001 – 2003

Visiting Assistant Professor, University of California, Irvine, CA, 2000 – 2001

Visiting Associate, Caltech, Pasadena, CA, 1999 – 2000

c. Products

(i) Five products most closely related to the proposed project

1. D. Damanik, M. Goldstein, On the existence and uniqueness of global solutions for the KdV equation with quasi-periodic initial data, *J. Amer. Math. Soc.* **29** (2016), 825–856

2. D. Damanik, M. Goldstein, M. Lukic, The isospectral torus of quasi-periodic Schrödinger operators via periodic approximations, *Invent. Math.* **207** (2017), 895–980

3. D. Damanik, R. Killip, B. Simon, Perturbations of orthogonal polynomials with periodic recursion coefficients, *Ann. of Math.* **171** (2010), 1931–2010

4. D. Damanik, S. Tcheremchantsev, Upper bounds in quantum dynamics, *J. Amer. Math. Soc.* **20** (2007), 799–827

5. D. Damanik, A. Gorodetski, W. Yessen, The Fibonacci Hamiltonian, *Invent. Math.* **206** (2016), 629–692

(ii) Five other significant products

1. D. Damanik, R. Killip, Half-line Schrödinger operators with no bound states, *Acta Math.* **193** (2004), 31–72

2. D. Damanik, M. Goldstein, On the inverse spectral problem for the quasi-periodic Schrödinger equation, *Publ. Math. Inst. Hautes Études Sci.* **119** (2014), 217–401
3. A. Avila, D. Damanik, Absolute continuity of the integrated density of states for the almost Mathieu operator with non-critical coupling, *Invent. Math.* **172** (2008), 439–453
4. D. Damanik, B. Simon, Jost functions and Jost solutions for Jacobi matrices, I. A necessary and sufficient condition for Szegő asymptotics, *Invent. Math.* **165** (2006), 1–50
5. A. Avila, J. Bochi, D. Damanik, Opening gaps in the spectrum of strictly ergodic Schrödinger operators, *J. Eur. Math. Soc.* **14** (2012), 61–106

d. Synergistic Activities

1. Co-organized meetings at MFO/Oberwolfach (2005, 2009, 2011, 2012, 2013, 2014), BIRS/Banff & Oaxaca (2004, 2011, 2015), Isaac Newton Institute/Cambridge (2015) and various other venues
2. Organized spectral theory brown bag seminar at Rice (2007–present); co-organized VIGRE seminar on random matrices at Rice (2010)
3. Supervised undergraduate research projects at Rice (David Baugh 2007–2008, Jon Erickson, Gerhardt Hinkle, Alan Vu 2015) and Caltech (Anael Verdugo 2002, Timothy Nguyen 2005)
4. Designed new courses at Rice (aperiodic order, Schrödinger operators, quantum dynamics)

e. Collaborators & Other Affiliations

(i) Collaborators

1. Artur Avila (CNRS, France and IMPA, Brazil), 2. Michael Baake (Universität Bielefeld, Germany), 3. Mark Embree (Virginia Tech, USA), 4. Jake Fillman (Virginia Tech, USA), 5. Zheng Gan (Rice University, USA), 6. Michael Goldstein (University of Toronto, Canada), 7. Anton Gorodetski (University of California at Irvine, USA), 8. Uwe Grimm (Open University, UK), 9. Marius Lemm (California Institute of Technology, USA), 10. Qing-Hui Liu (Beijing Institute of Technology, China), 11. Milivoje Lukic (University of Toronto, Canada), 12. Paul Munger (Rice University, USA), 13. Darren Ong (University of Oklahoma, USA), 14. Yan-Hui Qu (Tsinghua University, China), 15. Wilhelm Schlag (University of Chicago, USA), 16. Boris Solomyak (University of Washington, USA), 17. Robert Vance (Rice University, USA), 18. Mircea Voda (University of Chicago, USA), 19. William Yessen (Rice University, USA), 20. Peter Yuditskii (Johannes Kepler Universität Linz, Austria), 21. Zhenghe Zhang (Rice University, USA)

(ii) Graduate and Postdoctoral Advisors

1. Joachim Weidmann, Department of Mathematics, University of Frankfurt, Germany
2. Barry Simon, Department of Mathematics, California Institute of Technology, USA
3. Svetlana Jitomirskaya, Department of Mathematics, University of California at Irvine, USA

(iii) Thesis Advisor and Postgraduate-Scholar Sponsor

Thesis Advisor (10): Landon Jennings, Helge Krüger, Janine Dahl, Zheng Gan, Paul Munger, Darren Ong, Jake Fillman, Thomas VandenBoom, Vitalii Gerbuz, Valmir Bucaj

Postgraduate-Scholar Sponsor (4): Sergey Belov, Milivoje Lukic, William Yessen, Zhenghe Zhang