CURRICULUM VITAE and LIST OF PUBLICATIONS

(Sep 2020)

PERSONAL

- **Name:** László ERDŐS
- **Born:** April 14, 1966 in Budapest, Hungary
- **Citizenship:** Hungarian, German
- **Home address:**
  Albrechtstr 83-85, No. 10
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DEGREES

2001 Habilitation, University of Vienna
Title: *Asymptotic analysis of complex quantum problems*

1994 Ph.D. in Mathematics, Princeton University
Thesis advisor: Professor Elliott H. Lieb.
Title: *Magnetic Schrödinger operators and estimates on stochastic oscillatory integrals.*

1990 Diploma in Mathematics, Loránd Eötvös University
Diploma thesis advisor: Professor Domokos Szász.
Title: *A mechanical model of the Brownian motion: the Rayleigh gas.*

POSITIONS

2013–	Professor, Institute of Science and Technology, Austria
2003–2013	Universitätsprofessor (C4/W3), Ludwig-Maximilians-Univ., Munich
2003–2004	Full Professor Georgia Inst. Technology (On leave)
2001–2003	Tenured Associate Professor Georgia Inst. Technology
1998–2001	Assistant Professor Georgia Inst. Technology
1995–1998	Courant Instructor/Assistant Prof. (including one year Visiting Membership) Courant Institute, NYU
1994-1995	Postdoctoral fellow, Forschungsinstitut für Mathematik, ETH.

RESEARCH INTEREST

- Mathematical Physics
- Quantum Dynamics
- Spectral Analysis of Schrödinger Operators
- Stochastic Analysis and Disordered Systems
- Random Matrices

GRANTS, FELLOWSHIPS

- Fellowship of the Hungarian Republic, 1987-1990.
- Alfred P. Sloan Foundation Dissertation Fellowship 1993-1994.
- NSF grant (DMS-9970323), 1999-2002
- NSF grant (DMS-0200235), 2002-2005
- Start-up fund (Munich University), 2003-2007
- Participant: Elite Graduate Program TMP (2007-2017)
- PI in SFB TR12, Symmetries and Universality (2007-2016)
- ERC Advanced Grant (2014-2019) 1,755K Euro

PRIZES, AWARDS

• Member of the Hungarian team at the $XXIV^{th}$ and XXV^{th} International Mathematical Olympiade in Paris, 1983 and Prague, 1984. Silver and bronze medals.

• Member of the Hungarian team at the XV^{th} International Physics Olympiade in Sigtuna, Sweden, 1984. Bronze medal.

• Three prizes (third, second and first) in the M. Schweitzer Memorial Mathematical Competition in 1986, 1988 and 1989. (national contest for university students in Hungary).

• First prize three times in the F. Riesz Memorial Mathematical Competition in 1986, 1987 and 1988. (national contest for younger university students in Hungary).

• Géza Grünwald Prize, 1995. This is a prize of the J. Bolyai Math. Society for outstanding young researchers.

• Annales Henri Poincaré Distinguished Paper Award for the paper No. 44 on the list of publications.

• Aisenstadt Chair, Centre Recherche de Math. (CRM) Montreal (2012).

• Annales Henri Poincaré Distinguished Paper Award for the paper No. 67 on the list of publications.

• ICM Invited Speaker, 2014 Seoul

• Elected corresponding member of the Austrian Academy of Sciences (2015)

• Elected member of the Academia Europaea (2015)

• Elected foreign member of the Hungarian Academy of Sciences (2016)

• Leonard Eisenbud Prize of the American Mathematical Society (2017)

• ISI Highly Cited Researcher (2017)

• ISI Highly Cited Researcher (2018)

LONG TERM INVITATIONS

- Schrödinger Institute, Vienna, 1994, 1998 and 2001.
- ETH, Zürich, 1997,
- University of Aarhus, 1997.
- Center for Theoretical Studies, Hsinchu, Taiwan; 1998, 1999, 2000, 2002.
- Professeur invite, Institut Fourier, Grenoble, 2000.
- Academica Sinica, Taiwan, 2001
- University of Copenhagen, 2003
- Courant Institute, 2003
- Stanford University, 2003, 2004, 2005
- Harvard University, 2005-2006 (sabbatical)
- Harvard University, 2009-2010 (sabbatical)
- Harvard University, 2011-2012 (sabbatical)
- Member, Institute for Advanced Studies 2013-2014

DEPARTMENTAL ADMINISTRATION

- Member of the Graduate Committee (Georgiatech 1999-2001)
- Member and temporary chair of the Hiring Committee (Georgiatech 2001-2003)
- Member of the Vorstand (governing body of the department) (Munich, 2003–2008)
- Colloquium Chair (Munich 2004 – 2013)
- Chair of the Budget Committee (Munich 2004 –2008)
- Elected member of the Fachbereichsrat (faculty council) (Munich 2004–2007)
- Director of the Institute at LMU (2007-2008)

EDITORIAL DUTIES

- Member of the Editorial Board, Journal of Statistical Physics (2008 – 2013)
- Member of the Editorial Advisory Board, Journal of Math. Physics (2012 – 2020)
- Member of the Editorial Board, Communications Mathematical Physics (2013 –)
- Member of the Editorial Board, Probability Theory Related Fields (2015 –)
- Member of the Scientific Advisory Board of EMSPress (2020–2022)
- Member of the Editorial Board, Journal of Functional Analysis (2021 –)

PROFESSIONAL ADMINISTRATION

- Session organizer, AMS Meeting, Gainesville, FL, 1999
- Session organizer, AMS-DMV Meeting, Mainz, Germany, 2005
- Co-organizer of a 3 month program at ESI, Vienna (2006 May-Jul)
- Co-organizer, Boltzmann Memorial Meeting, Munich (2006 Oct)
- Co-organizer, Oberwolfach Seminar, Oberwolfach (2008 May)
- Co-organizer, Spectral Days 2012, Munich (2012 May)
- Elected member of the Executive Committee and Treasurer of the IAMP International Association of Mathematical Physics (2009 –2014)
- Panel Member ERC Consolidator Grant, Mathematics PE1 (2014–2018)
- Co-organizer of a 3 month program at ESI, Vienna (2015 May-Jul)
- Co-organizer, Young Researcher Symposium Fields Institute, Toronto (2016 Aug)
- Member of the Scientific Program Committee of SPA-2017 (Moscow)
- Co-organizer: Summer school on Probability, MathPhys. (IST Austria, 2018 Jun)
- Member of the Advisory Board, QMath 14 (Aarhus 2019)
- Co-organizer: From Many Body Problems to Random Matrices. Conference in honor of H.-T. Yau's 60th birthday (Banff, Canada, 2019 August)
- Co-organizer: Oberwolfach conference on Random Matrices, Dec 2019.

LIST OF PUBLICATIONS

Review papers and conference proceedings are marked with (*)

1. L. Erdős and D. Q. Tuyen, *Ergodic properties of the multidimensional Rayleigh gas with semipermeable barrier.* J. Stat. Phys. **59, 5/6** 1589-1602 (1990).

2. L. Erdős, *On some problems of P. Turán concerning power sums of complex numbers.* Acta Math. Hung. **59 (1-2)**, 11-24 (1992).

3. L. Erdős and D. Q. Tuyen, *Central limit theorems in the one-dimensional Rayleigh gas.* Commun. Math. Phys. **143**, 451-466 (1992).

4. L. Erdős, *Ground state density of the Pauli operator in the large field limit.* Lett. Math. Phys. **29**, 219-240 (1993).

5. L. Erdős, *Estimates on stochastic oscillatory intergrals and on the heat kernel of the magnetic Schrödinger operator.* Duke Math. Journal **76**, No.2, 541-566 (1994).

6. L. Erdős, *Magnetic Lieb-Thirring inequalities.* Commun. Math. Phys. **170**, 629-668 (1995).

7. (*) L. Erdős, *Magnetic Lieb-Thirring inequalities and stochastic oscillatory integrals.* pp. 127-133 in Operator Theory Advances and Applications, Vol. **78**, Eds. M. Demuth and B.-W. Schulze, Birkhäuser, 1995.

8. L. Erdős, *Gaussian decay of the magnetic eigenfunctions.* Geom. Funct. Anal. (GAFA), **6** No.2, 231-248 (1996).

9. L. Erdős, *Rayleigh-type isoperimetric inequality with a homogeneous magnetic field.* Calc. Var. and PDE. **4**, 283-292 (1996).

10. L. Erdős and J. P. Solovej, *Semiclassical eigenvalue estimates for the Pauli operator with strong non-homogeneous magnetic fields. I. Non-asymptotic Lieb-Thirring type estimate.* Duke J. Math. **96 (1)** 127-171 (1999)

11. L. Erdős and J. P. Solovej, *Semiclassical eigenvalue estimates for the Pauli operator with strong non-homogeneous magnetic fields. II. Leading order asymptotic estimates.* Commun. Math. Phys. **188**, 599-656 (1997).

12. L. Erdős, *Dia- and paramagnetism for nonhomogeneous magnetic fields.* Journal of Math. Phys. **38**(3), 1289-1317 (1997).

13. L. Erdős, *Lifschitz tail in a magnetic field: the nonclassical regime.* Prob. Theor. Rel. Fields, **112** 321-371 (1998).

14. L. Erdős and H.-T. Yau, *Linear Boltzmann equation as scaling limit of quantum Lorenz gas.* Advances in Differential Equations and Mathematical Physics. Contemporary Mathematics **217**, 137-155 (1998).

15. (*) L. Erdős, *Linear Boltzmann equation as the weak coupling limit of the random Schrödinger equation* Operator Theory Advances and Applications, Vol. **108**, 233-242. Eds. J. Dittrich, P. Exner and M. Tater, Birkhäuser (1999).

16. L. Erdős and H.-T. Yau, *Linear Boltzmann equation as the weak coupling limit of the random Schrödinger equation.* Commun. Pure Appl. Math, Vol. LIII. 667-735 (2000).

17. L. Erdős, M. Loss and V. Vougalter, *Diamagnetic behavior of sums of Dirichlet eigenvalues.* Ann. Inst. Fourier (Grenoble), Vol **50**, no. 3. 891-907 (2000).

18. F. Castella, L. Erdős, F. Frommlet and P. A. Markowich, *Fokker-Planck equations as scaling limits of reversible quantum systems.* J. Stat. Phys. **100** no. (3/4) 543-601, (2000).

19. (*) L. Erdős, J. P. Solovej, *The kernel of Dirac operators on S^3 and $\mathbf{R}^3$.* In: Differential equations and mathematical physics (Birmingham, AL, 1999), AMS/IP Stud. Adv. Math. **16**, 111-119 (2000)

20. L. Erdős, J. P. Solovej, *The kernel of Dirac operators on S^3 and $\mathbf{R}^3$.* Rev. Math. Phys. **13** No. 10, 1247-1280 (2001)

21. L. Erdős, *Lifschitz tail in a magnetic field: coexistence of classical and quantum behavior in the borderline case.* Prob. Theor. Rel. Fields **121** 219-236 (2001)

22. (*) L. Erdős, *Long time dynamics of an electron in a weakly coupled phonon field.* Proceedings of the XIII-th International Congress on Mathematical Physics (London, 2000), pp. 273-281 (2001), International Press

23. L. Erdős, *Spectral shift and multiplicity of the first eigenvalue of the magnetic Schrödinger operator in two dimensions.* Ann. Inst. Fourier (Grenoble) **52** (2002), 6, 1833-1874.

24. L. Erdős, V. Vougalter, *Pauli operator and Aharonov-Casher theorem for measure valued magnetic fields.* Commun. Math. Phys. **225**, 399-421 (2002)

25. L. Erdős, *Linear Boltzmann equation as the long time dynamics of an electron weakly coupled to a phonon field.* J. Stat. Phys., **107**, 1043-1128 (2002)

26. C. Bardos, L. Erdős, F. Golse, N. Mauser and H.-T. Yau, *Derivation of the Schrödinger-Poisson equation from the quantum N-body problem.* C. R. Acad. Sci. Ser. I. **334**, 515-520 (2002)

27. L. Erdős and H.-T. Yau, *Derivation of the nonlinear Schrödinger equation from a many body Coulomb system.* Adv. Theor. Math. Phys. **5**, 1169-1205 (2001).

28. (*) L. Erdős, V. Vougalter, *Two dimensional Pauli operator via scalar potential.* (Proceedings of QMath-8 Conference, Taxco, Mexico, 2001. Eds: R. Weder, P. Exner, B. Grebert) Contemporary Math. **307**, p. 129-133 (2002)

29. (*) L. Erdős, *Scaling limits of Schrödinger Quantum Mechanics.* In: "Dynamical semigroups: dissipation, chaos, quanta: Proceedings of the 38-th Winter School of Theor. Physics, Ladek Zdroj, Poland, 2002" Lecture Notes in Physics **597**. Springer, Berlin, 2002

30. L. Erdős and J. P. Solovej, *Uniform Lieb-Thirring inequality for the three dimensional Pauli operator with a strong non-homogeneous magnetic field.* Ann. Inst. H. Poincaré **5**, 671-741 (2004)

31. L. Erdős, M. Salmhofer and H.-T. Yau, *On the quantum Boltzmann equation.* J. Stat. Phys. **116**, 367-380 (2004).

32. L. Erdős and J. P. Solovej, *Magnetic Lieb-Thirring inequalities with optimal dependence on the field strength.* J. Stat. Phys. **116** (1-4), 475-506 (2004)

33. A. Elgart, L. Erdős, B. Schlein and H.-T. Yau, *Nonlinear Hartree equation as the mean field limit of weakly coupled fermions.* J. Math. Pures Appl. **83**, 1241-1273 (2004)

34. L. Erdős, D. Hasler and J. P. Solovej, *Existence of the D0-D4 Bound State: a detailed Proof.* Ann. Inst. H. Poincaré **6**, 247-267 (2005)

35. L. Erdős, B. Schlein and H.-T. Yau, *Derivation of the Gross-Pitaevskii Hierarchy for the Dynamics of Bose-Einstein Condensate.* Comm. Pure Appl. Math. **59** (2006), no.12, 1659-1741.
`(xxx.lanl.gov/abs/math-ph/0410005)`

36. A. Elgart, L. Erdős, B. Schlein and H.-T. Yau, *Gross-Pitaevskii Equation as the Mean Field Limit of Weakly Coupled Bosons.* Arch. Ration. Mech. Anal. **179**, No. 2, 265-283 (2006)
`(xxx.lanl.gov/abs/math-ph/0410038)`

37. D. Eng and L. Erdős, *The Linear Boltzmann Equation as the Low Density Limit of a Random Schrödinger Equation.* Rev. Math. Phys, Vol. 17, No. 6 (2005) 669-743. (xxx.lanl.gov/abs/math-ph/0412044)

38. (*) L. Erdős, M. Salmhofer and H.-T. Yau, *Towards the quantum Brownian motion.* Lecture Notes in Physics, **690**, Mathematical Physics of Quantum Mechanics, Selected and Refereed Lectures from QMath9. Eds. Joachim Asch and Alain Joye. pp. 233-258 (2006) (xxx.lanl.gov/abs/math-ph/0503001)

39. L. Erdős, B. Schlein, H.-T. Yau, *Derivation of the Cubic Non-linear Schrödinger Equation from Quantum Dynamics of Many-Body Systems.* Invent. Math. **167**, 515-614 (2007) (xxx.lanl.gov/abs/math-ph/0508010)

40. (*) L. Erdős, *Recent developments in quantum mechanics with magnetic fields.* Proc. of Symposia in Pure Math. Vol **76.** Spectral Theory and Mathematical Physics: A Festschrift in Honor of Barry Simon's 60th Birthday. Part 2. pp. 401-428, Amer. Math. Soc. 2006
(xxx.lanl.gov/abs/math-ph/0510055)

41. L. Erdős, M. Salmhofer, H.-T. Yau, *Quantum diffusion of the random Schrödinger evolution in the scaling limit.* Acta Math. **200**, no.2, 211-277 (2008)
(xxx.lanl.gov/abs/math-ph/0512014)

42. L. Erdős, M. Salmhofer, H.-T. Yau, *Quantum diffusion of the random Schrödinger evolution in the scaling limit II. The recollision diagrams.* Commun. Math. Phys. **271**, 1-53 (2007) (xxx.lanl.gov/abs/math-ph/0512015)

43. L. Erdős, M. Salmhofer, *Decay of the Fourier transform of surfaces with vanishing curvature.* Math. Z. **257** no 2., 261-294 (2007) (xxx.lanl.gov/abs/math-ph/0604039)

44. L. Erdős, M. Salmhofer, H.-T. Yau, *Quantum diffusion for the Anderson model in scaling limit.* Ann. Inst. H. Poincaré **8** no. 4, 621-685 (2007) (xxx.lanl.gov/abs/math-ph/0502025)

45. L. Erdős, B. Schlein, H.-T. Yau, *Derivation of the Gross-Pitaevskii equation for the dynamics of Bose-Einstein Condensate.* Ann. Math. (2) **172**, no.1, 291–370 (2010)
(xxx.lanl.gov/abs/math-ph/0606017)

46. (*) L. Erdős, B. Schlein, H.-T. Yau, *Rigorous Derivation of the Gross-Pitaevskii Equation.* Phys. Rev. Lett. **98**, 040404 (2007)
(xxx.lanl.gov/abs/math-ph/0612028)

47. L. Erdős, B. Schlein, H.-T. Yau, *Semicircle law on short scales and delocalization of eigenvectors for Wigner random matrices.* Ann. Probab. **37**, No. 3, 815–852 (2009) (xxx.lanl.gov/abs/0711.1730)

48. R. Adami, L. Erdős, *Rate of decoherence for an electron weakly coupled to a phonon gas.* J. Statis. Physics **132**, no. 2, 301–328 (2008) (xxx.lanl.gov/abs/0802.1229)

49. L. Erdős, B. Schlein, H.-T. Yau, *Local semicircle law and complete delocalization for Wigner random matrices.* Comm. Math. Phys. **287**, 641–655 (2009) (xxx.lanl.gov/abs/0803.0542)

50. L. Erdős, B. Schlein, H.-T. Yau, *Rigorous Derivation of the Gross-Pitaevskii Equation with a Large Interaction Potential.* J. Amer. Math. Soc. **22** (2009), no. 4, 1099–1156. (xxx.lanl.gov/abs/0802.3877)

51. L. Erdős, B. Schlein, *Quantum dynamics with mean field interactions: a new approach.* J. Statis. Physics **134**, 859–870 (2009) (xxx.lanl.gov/abs/0804.3774)

52. (*) L. Erdős, M. Salmhofer, H.-T. Yau, *Feynman graphs and renormalization in quantum diffusion.* In: Quantum Field Theory and Beyond. Proceedings of the conference in honor of the 80th birthday of Wolfhart Zimmermann, World Scientific, 2011, pp. 167-183, (http://arxiv.org/abs/0806.4751)

53. L. Erdős, B. Schlein , H.-T. Yau, *The ground state energy of a low density Bose gas: a second order upper bound.* Phys. Rev. A. **78**, no. 5, 053627 (2008) (http://arxiv.org/abs/0806.4873)

54. L. Erdős, A. Michelangeli, B. Schlein, *Dynamical formation of correlations in a Bose-Einstein condensate.* Comm. Math. Phys. **289** (2009), no. 3, 1171–1210. (http://arxiv.org/abs/0808.0207)

55. L. Erdős, B. Schlein , H.-T. Yau, *Wegner estimate and level repulsion for Wigner random matrices.* Int. Math. Res. Notices. **2010**, No. 3, 436-479 (2010) (http://arxiv.org/abs/0811.2591)

56. L. Erdős, J.P. Solovej, *Ground state energy of large atoms in a self-generated magnetic field.* Commun. Math. Phys. **294**, No. 1, 229–249 (2010) (http://arxiv.org/abs/0903.1816)

57. L. Erdős, J. Ramirez, B. Schlein , H.-T. Yau, *Universality of sine-kernel for Wigner matrices with a small Gaussian perturbation.* Electr. J. Prob. **15**, Paper 18, 526–604 (2010)
(http://arxiv.org/abs/0905.2089)

58. L. Erdős, S. Péché, J. Ramirez, B. Schlein , H.-T. Yau, *Bulk Universality for Wigner Matrices.* Comm. Pure Appl. Math. **63**, No. 7, 895–925 (2010)
(http://arxiv.org/abs/0905.4176)

59. L. Erdős, J. Ramirez, B. Schlein , T. Tao, V. Vu, H.-T. Yau, *Bulk Universality for Wigner Hermitian matrices with subexponential decay.* Math. Res. Lett. **17** (2010), no. 4, 667–674.
(http://arxiv.org/abs/0906.4400)

60. L. Erdős, B. Schlein , H.-T. Yau, *Universality of Random Matrices and Local Relaxation Flow.* Invent. Math. **185** (2011), no.1, 75–119.
(http://arxiv.org/abs/0907.5605)

61. (*) L. Erdős, *Universality of Wigner Random Matrices.* Proceedings of the XVI-th ICMP, Prague, World Scientific, 99–105, (2010)
(http://arxiv.org/abs/0909.2691)

62. L. Erdős, B. Schlein, H.-T. Yau, J. Yin, *The local relaxation flow approach to universality of the local statistics for random matrices.* Annales Inst. H. Poincaré (B), Probability and Statistics **48**, no. 1, 1–46 (2012)
(http://arxiv.org/abs/0911.3687)

63. L. Erdős, H.-T. Yau, J. Yin, *Bulk universality for generalized Wigner matrices.* Prob. Theor. Rel. Fields, **154**, no. 1-2., 341–407 (2012) (http://arxiv.org/abs/1001.3453)

64. L. Erdős, A. Knowles, *Quantum Diffusion and Eigenfunction Delocalization in a Random Band Matrix Model.* Commun. Math. Phys. **303** no. 2, 509–554 (2011)
(http://arxiv.org/abs/1002.1695)

65. L. Erdős, H.-T. Yau, J. Yin, *Universality for generalized Wigner matrices with Bernoulli distribution.* J. of Combinatorics, **1** (2011), no. 2, 15–85
(http://arxiv.org/abs/1003.3813)

66. (*) L. Erdős, *Universality of Wigner Random Matrices: a Survey of Recent Results.* Russian Math. Surveys **66** (3) 67–198 (2011).
(http://arxiv.org/abs/1004.0861)

67. L. Erdős, A. Knowles, *Quantum Diffusion and Delocalization for Band Matrices with*

General Distribution. Annales Inst. H. Poincaré, **12** (7), 1227-1319 (2011) (http://arxiv.org/abs/1005.1838)

68. L. Erdős, H.-T. Yau, J. Yin, *Rigidity of Eigenvalues of Generalized Wigner Matrices.* Adv. Math. **229**, no. 3, 1435–1515 (2012) (http://arxiv.org/abs/1007.4652)

69. (*) L. Erdős, *Lecture Notes on Quantum Brownian Motion. In:* Quantum Theory from Small to Large Scales. École de Physique des Houches, Session XCV. Edited by J. Fröhlich, M. Salmhofer, V. Mastropietro, W. de Roeck, L.F. Cugliandolo. Oxford University Press, 2012, pp. 3–98. (http://arxiv.org/abs/1009.0843)

70. L. Erdős, D. Hasler, *Wegner estimate and Anderson localization for random magnetic fields.* Commun. Math. Phys. **309,** No. 2, 507–542 (2012) (http://arxiv.org/abs/1012.5185)

71. L. Erdős, D. Hasler, *Wegner estimate for random magnetic Laplacian on Z^2.* Annals Henri Poincaré **13**, no. 8, 1719–1731 (2012) (http://arxiv.org/abs/1101.2139)

72. L. Erdős, A. Knowles, H.-T. Yau, J. Yin, *Spectral Statistics of Erdős-Rényi Graphs I: Local Semicircle Law.* Ann. Probab. **41**, no. 3B, 2279–2375 (2013) (http://arxiv.org/abs/1103.1919)

73. L. Erdős, A. Knowles, H.-T. Yau, J. Yin, *Spectral Statistics of Erdős-Rényi Graphs II: Eigenvalue Spacing and the Extreme Eigenvalues.* Comm. Math. Phys. **314** no. 3. 587–640 (2012) (http://arxiv.org/abs/1103.3869)

74. L. Erdős, D. Hasler, *Anderson Localization at Band Edges for Random Magnetic Fields.* J. Statis. Phys. **146**, No. 5, 900–923 (2012) (http://arxiv.org/abs/1103.3744)

75. P. Bourgade, L. Erdős, H.-T. Yau: *Universality of General β-Ensembles.* Duke Math. J. **163**, no. 6, 1127–1190, (2014) (http://arxiv.org/abs/1104.2272)

76. L. Erdős, S. Fournais, J.P. Solovej: *Stability and semiclassics in self-generated fields.* J. Eur. Math. Soc. **15**, 2093-2113 (2013) (http://arxiv.org/abs/1105.0506)

77. L. Erdős, S. Fournais, J.P. Solovej: *Second order semiclassics with self-generated magnetic fields.* (http://arxiv.org/abs/1105.0512) Ann. Inst. H. Poincare, **13** No. 4 (2012), 671–730.

78. L. Erdős, S. Fournais, J.P. Solovej: *Scott correction for large atoms and molecules in a self-generated magnetic field.* Comm. Math. Phys. **312** no. 3 (2012), 847–882. (http://arxiv.org/abs/1105.0521)

79. (*) L. Erdős, H.-T. Yau: *Universality of local spectral statistics of random matrices.* Bull. Amer. Math. Soc. **49**, no.3 (2012), 377–414. (http://arxiv.org/abs/1106.4986)

80. L. Erdős, S. Fournais, J.P. Solovej: *Relativistic Scott correction in self-generated magnetic fields.* J. Math. Phys. **53**, 095202 (2012) (http://arxiv.org/abs/1112.0673)

81. P. Bourgade, L. Erdős, H.-T. Yau: *Bulk Universality of General β-Ensembles with Non-convex Potential.* J. Math. Phys. **53**, 095221 (2012) (http://arxiv.org/abs/1201.2283)

82. L. Erdős, H.-T. Yau: *A comment on the Wigner-Dyson-Mehta bulk universality conjecture for Wigner matrices.* Electron. J. Probab. **17**, no 28. 1–5 (2012) (http://arxiv.org/abs/1201.5619)

83. L. Erdős, A. Knowles, H.-T. Yau, J. Yin, *Delocalization and Diffusion Profile for Random Band Matrices.* Comm. Math. Phys. **323**, 367–416 (2013) (http://arxiv.org/abs/1205.5669)

84. L. Erdős, A. Knowles, H.-T. Yau, *Averaging Fluctuations in Resolvents of Random Band Matrices.* Ann. H. Poincare, **14**, no. 8 (2013), 1837-1926. (arxiv:1205.5664)

85. L. Erdős, B. Farrell, *Local Eigenvalue Density for General MANOVA Matrices.* J. Statis. Phys. **152** no.6 (2013), 1003–1032 (http://arxiv.org/abs/1207.0031)

86. L. Erdős, H.-T. Yau, *Gap Universality of Generalized Wigner and β-Ensembles.* Journal of Eur. Math. Soc. **17** no. 8, 1927–2036 (2015) (http://arxiv.org/abs/1211.3786)

87. L. Erdős, A. Knowles, H.-T. Yau, J. Yin, *The Local Semicircle Law for a General Class of Random Matrices.* Electron. J. Probab. **18** no. 59, 1–58. (2013) (http://arxiv.org/abs/1212.0164)

88. L. Erdős, *Universality for random matrices and log-gases. In:* Current Developments in Mathematics 2012, Ed. D. Jerison, M. Kisin, T. Mrowka. R. Stanley, H.-T. Yau, S.-T. Yau, International Press, 59–132 (2013) (http://arxiv.org/abs/1212.0839)

89. P. Bourgade, L. Erdős, H.-T. Yau: *Edge universality of beta ensembles.* Commun. Math. Phys. **332** no. 1, 261–354 (2014), (http://arxiv.org/abs/1306.5728)

90. A. Bloemendal, L. Erdős, A. Knowles, H.-T. Yau, J. Yin: *Isotropic local laws for sample covariance and generalized Wigner matrices.* Elect. J. Probab. **19**, Article 33, 1-53 (2014), (http://arxiv.org/abs/1308.5729)

91. L. Erdős, A. Knowles: *The Altshuler-Shklovskii formulas for random band matrices I: the unimodular case.* Commun. Math. Phys. **333** no. 3, 1365–1416 (2015) arxiv:1309.5106

92. L. Erdős, A. Knowles: *The Altshuler-Shklovskii formulas for random band matrices II: the general case.* Annals Henri Poincaré, **16**, 709–799 (2015), arxiv:1309.5107

93. O. Ajanki, L. Erdős, T. Krüger, *Local semicircle law with imprimitive variance matrix.* Elect. Comm. Prob. **19** (2014), no. 33, 1–9. arxiv:1311.2016

94. L. Erdős, D. Schröder, *Phase transition in the density of states of quantum spin glasses.* Mathematical Physics, Analysis and Geometry **17** (2014) no. 3-4, 441-464, arxiv:1407.1552

95. (*) L. Erdős, *Random matrices, log-gases and Hölder regularity.* Proceedings of ICM 2014, Seoul, Vol. III. 213–236 (2015) arxiv:1407.5752

96. P. Bourgade, L. Erdős, H.-T. Yau, J. Yin, *Fixed energy universality for generalized Wigner matrices.* Comm. Pure Appl. Math. **69**, no. 10. 1815–1881 (2016) arxiv:1407.5606

97. Z. Bao, L. Erdős, *Delocalization for a class of random block band matrices.* Prob. Th. Rel. Fields, **167**(3), 673-776 (2016), arxiv:1503.07510.

98. L. Erdős, K. Schnelli, *Universality for Random Matrix Flows with Time-dependent Density.* Annals Inst. H. Poincare (B) **53** no.4. 1606–1656 (2017), arxiv:1504.00650

99. O. Ajanki, L. Erdős, T. Krüger, *Quadratic vector equations on complex upper half-plane.* Memoirs of Amer. Math. Soc. vol. **261** No. 1261 (2019), arxiv:1506.05095.

100. O. Ajanki, L. Erdős, T. Krüger, *Universality for general Wigner-type matrices.* Prob. Theor. Rel. Fields **169** no. 3-4, 667–727 (2017), arxiv:1506.05098

101. Z. Bao, L. Erdős, K. Schnelli, *Local stability of the free additive convolution.* J. Funct. Anal. **271** (2016), no. 3, 672–719. arxiv:1508.05905.

102. Z. Bao, L. Erdős, K. Schnelli, *Local law of addition of random matrices on optimal scale.* Comm. Math. Phys. **349(3)**, 947–990, 2016. DOI 10.1007/s00220-016-2805-6

arxiv:1509.07080.

103. O. Ajanki, L. Erdős, T. Krüger, *Local spectral statistics of Gaussian matrices with correlated entries.* J. Stat. Phys. **163** (2016), no.2, 280–302. arxiv:1510.01147. DOI 10.1007/s10955-016-1479-y

104. O. Ajanki, L. Erdős, T. Krüger, *Singularities of solutions to quadratic vector equations on complex upper half-plane.* Comm. Pure Appl. Math. **70**(9), 1672–1705 (2017) arxiv:1512.03703

105. P. Bourgade, L. Erdős, H.-T. Yau, J. Yin, *Universality for a class of band matrices.* Preprint. arxiv:1602.02312. Adv. Theor. Math. Phys. **21** no. 3, 739–800 (2017)

106. O. Ajanki, L. Erdős, T. Krüger, *Stability of the Matrix Dyson Equation and Random Matrices with Correlations.* Prob. Th. Rel. Fields, **173**, no.1–2, 293–373 (2019) DOI: 10.1007/s00440-018-0835-z, arxiv:1604.08188

107. Z. Bao, L. Erdős, K. Schnelli, *Convergence Rate for Spectral Distribution of Addition of Random Matrices.* Adv. Math. **319**, 251–291 (2017), DOI: 10.1016/j.aim.2017.08.028, arxiv:1606.03076.

108. J. Alt, L. Erdős, T. Krüger, *Local law for random Gram matrices.* Electron. J. Prob. **22.** no. 25, 1–41. (2017), arxiv:1606.07353

109. L. Erdős, D. Schröder, *Fluctuations of Rectangular Young Diagrams of Interlacing Wigner Eigenvalues.* Int. Math. Res. Notices, rnw330, DOI: 10.1093/imrn/rnw330 (2017), arxiv:1608.05163

110. L. Erdős, D. Schröder, *Fluctuations of functions of Wigner matrices.* Electr. Comm. Probab. **21**, paper no. 86, 1-15. arxiv:1610.07084.

111. Z. Bao, L. Erdős, K. Schnelli, *Local single ring theorem on optimal scale.* Ann. Prob. **47**, No. 3, 1270–1334 (2019), arxiv:1612.05920.

112. J. Alt, L. Erdős, T. Krüger, *Local inhomogeneous circular law.* Ann. Applied Prob. **28**, No. 1, 148-203 (2018), DOI: 10.1214/17-AAP1302, arxiv:1612.07776

113. L. Erdős, T. Krüger, D. Schröder, *Random matrices with slow correlation decay.* Forum of Mathematics Sigma (2019), **7**, e8. doi:10.1017/fms.2019.2, arxiv:1705.10661

114. J. Alt, L. Erdős, T. Krüger, Y. Nemish, *Location of the spectrum of Kronecker random matrices.* Ann. Inst. H. Poincaré Probab. Statist. **55**, no 2. 661-696 (2019). arxiv:1706.08343

115. L. Erdős, T. Krüger, D. Renfrew, *Power law decay for systems of random coupled*

differential equations. SIAM J. Math. Anal. **50**, no. 3, 3271–3290 (2018), DOI: 10.1137/17M1143125, arxiv:1708.01546.

116. Z. Bao, L. Erdős, K. Schnelli, *Spectral rigidity for addition of random matrices at the regular edge.* Preprint. arxiv:1708.01597. Accepted to J. Funct. Anal.

117. (*) L. Erdős, H.-T. Yau: *A dynamical approach to random matrix theory.* Courant Lecture Notes in Mathematics, **28**. Courant Institute of Mathematical Sciences, NY; American Mathematical Society, Providence, RI, 2017. ISBN: 978-1-4704-3648-3

118. L. Erdős, P. Mühlbacher, *Bounds on the norm of Wigner-type random matrices.* Preprint. arxiv:1802.05175. Random Matrices Theory and Applications (RMTA) Vol. **8** No. 3.

119. J. Alt, L. Erdős, T. Krüger, D. Schröder, *Correlated random matrices: band rigidity and edge universality.* Ann. Probab. **48**(2), 963–1001 (2020), arxiv:1804.07744.

120. J. Alt, L. Erdős, T. Krüger, *The Dyson equation with linear self-energy: spectral bands, edges and cusps.* Preprint. arxiv:1804.07752. Accepted to Doc. Math.

121. Z. Bao, L. Erdős, K. Schnelli, *On the support of the free additive convolution.* Preprint. arxiv:1804.11199. Accepted to Journal d'Analyse Mathématique

122. L. Erdős, T. Krüger, Y. Nemish, *Local laws for polynomials of Wigner matrices.* J. Funct. Anal. **278** (2020), no. 12, DOI: 10.1016/j.jfa.2020.108507; arxiv:1804.11340.

123. G. Cipolloni, L. Erdős, *Fluctuations for linear eigenvalue statistics of sample covariance random matrices.* Random Matrices, Theory and Applications (RMTA), Vol. **9**, No. 3 (2020), 2050006, DOI: 10.1142/S2010326320500069; arxiv:1806.08751.

124. L. Erdős, T. Krüger, D. Schröder, *Cusp universality for random matrices I: local law and the complex Hermitian case.* Commun. Math. Physics **378**, 1203–1278 (2020), DOI: 10.1007/s00220-019-03657-4; arxiv:1809.03971.

125. G. Cipolloni, L. Erdős, T. Krüger, D. Schröder, *Cusp universality for random matrices II: the real symmetric case.* Pure and Applied Analysis **1-4** (2019), 615–707. DOI 10.2140/paa.2019.1.615 arxiv:1811.04055.

126. (*) L. Erdős, *The matrix Dyson equation and its applications for random matrices. in* Random matrices, 75–158, IAS/Park City Math. Ser., 26, Amer. Math. Soc., Providence, RI, 2019. arxiv:1903.10060.

127. J. Alt, L. Erdős, T. Krüger, *Spectral radius of random matrices with independent entries.* Preprint. arxiv:1907.13631.

128. G. Cipolloni, L. Erdős, D. Schröder, *Edge universality for non-Hermitian random matrices.* Preprint. arxiv:1908.00969. Accepted to PTRF

129. G. Cipolloni, L. Erdős, D. Schröder, *Optimal lower bound on the least singular value of the shifted Ginibre ensemble.* Preprint. arxiv:1908.01653. Accepted to Prob. Math. Physics

130. L. Erdős, T. Krüger, D. Renfrew, *Randomly coupled differential equations with correlations.* Preprint. arxiv:1908.05178.

131. L. Erdős, T. Krüger, Y. Nemish, *Scattering in quantum dots via noncommutative rational functions.* Preprint. arxiv:1911.05112.

132. G. Cipolloni, L. Erdős, D. Schröder, *Central limit theorem for linear eigenvalue statistics of non-Hermitian random matrices.* Preprint. arxiv:1912.04100.

133. G. Cipolloni, L. Erdős, D. Schröder, *Fluctuation around the circular law for random matrices with real entries.* Preprint. arxiv:2002.02438.

134. Z. Bao, L. Erdős, K. Schnelli, *Equipartition principle for Wigner matrices.* Preprint. arxiv:2008.07061.

SELECTED CONFERENCE CONTRIBUTIONS

• *Central limit theorem for the one-dimensional Rayleigh gas*, 64^{th} Statistical Mechanics Meeting, Rutgers University, Dec. 1990.

• *Magnetic Lieb-Thirring inequalities*, Conference on Mathematical Quantum Theory, Vancouver, Aug. 1993.

• *Magnetic Lieb-Thirring inequalities*, Conference on Schrödinger Operators, Vienna, Dec. 1993.

• *Estimates on the magnetic heat kernel*, International Conference on PDE and Mathematical Physics, Birmingham AL, 1994.

• *Magnetic Lieb-Thirring inequalities*, Mathematics of Many-Body Quantum Theory, AMS meeting, Lexington KY, March 1994.

• *Stochastic oscillatory integrals*, Conference on PDE, Holzhau, 1994.

• *Ground state density of the Pauli operator*, Workshop on Mathematical Physics, Clausthal, 1994.

• *Magnetic Lieb-Thirring inequalities*, International Congress on Mathematical Physics, Paris, 1994.

• *Gaussian decay of the magnetic eigenfunctions*, Workshop on Schrödinger operators, Oberwolfach, 1995.

• *Gaussian decay of the magnetic eigenfunctions*, Special Session on Math. Physics at the AMS Meeting No. 908, Orlando, FL 1996.

• *Semiclassics and Lieb-Thirring inequality for the Pauli operator in a strong nonhomogeneous magnetic field*, Conference on "Mathematical Results in Quantum Mechanics", Ascona, Switzerland, 1996.

• *Semiclassics in strong nonhomogeneous magnetic fields*, Satellite conference to European Congress of Mathematics on "Aspects of spectral theory", Vienna, 1996.

• *Paramagnetism, diamagnetism*, PCMI Summer School, IAS, Princeton, 1996.

• *Uniform semiclassical eigenvalue estimates in a strong nonhomogeneous magnetic field*, International Congress on Mathematical Physics, Brisbane, Australia, 1997.

• *Lifschitz tail in a magnetic field: the nonclassical regime* Third Joint Meeting AMS-SMM, Oaxaca, Mexico, 1997

• *Uniform semiclassical eigenvalue estimates in a strong nonhomogeneous magnetic field*, Journees Semi-classiques VII. Institute Fourier, Grenoble, France 1998.

• *Rayleigh-type isoperimetric inequality with a homogeneous magnetic field* AMS Western Section Meeting, Davis, CA, 1998.

• *Lifschitz tail in a magnetic field: the nonclassical regime*, Workshop on Quantum Mechanics of Magnetic fields, ESI, Vienna, 1998.

• *Linear Boltzmann equation as the weak coupling limit of the random Schrödinger equation*, QMath7 International conference on Quantum Mechanics, Prague, 1998.

• *Dia- and paramagnetism in nonhonogeneous magnetic fields*, Oberwolfach, 1998.

• *Linear Boltzmann equation as the weak coupling limit of the random Schrödinger equation*, GIT-UAB International Conference on Differential Equations and Mathematical Physics, Birmingham, AL, 1999.

• *Linear Boltzmann equation as the weak coupling limit of the random Schrödinger equation* 16-th International Conference on Transport Theory, Atlanta, 1999.

• *Linear Boltzmann equation as the weak coupling limit of the random Schrödinger equation (invited)* IMS Conference on Differential Equations from Mechanics, Chinese University of Hongkong, 1999.

• *Linear Boltzmann equation as the weak coupling limit of the random Schrödinger equation (invited)* Conference on "Open classical and dynamical systems", Lille, France, 1999.

• *Derivation of Macroscopic Kinetic Equations from Microscopic Quantum Mechanics.* 3 hour lecture series at "International Summer School on Schrödinger operators", Shonan Village Center, Japan, 1999.

• *Uniform magnetic Lieb-Thirring inequality for the Pauli operator with a general potential and a strong magnetic field* Meeting on "Large Coulomb Systems", Oberwolfach, 1999.

• *Fokker-Planck equation as scaling limits of reversible quantum systems.*, AMS Meeting, Austin, 1999.

• *Lifschitz tail in a magnetic field: the threshold case.* Meeting on "Stochastic Analysis", Oberwolfach, 1999.

• *Derivation of Boltzmann equations from Schrödinger Quantum Mechanics.* 19th Annual Western States Mathematical Physics Meeting; Caltech, Pasadena, February, 2000.

• *On the derivation of quantum kinetic equations from Schrödinger equation.* **Invited talk at the Int. Congress on Mathematical Physics;** London, July 2000.

• *Pauli operator and Aharonov Casher theorem for measure valued magnetic fields.* Special Session on Analytical Problems in Mathematical Physics, 960-th AMS Meeting, Birmingham, AL, 2000 Nov.

• *How does Boltzmann equation emerge from quantum mechanics* 3 hour lecture in the Spring School on "Stochastic models from statistical physics", Blaubeuren, Germany, 2001 Apr.

• *Scaling limits of quantum dynamics* Invited talk at the Mini-workshop on "Multiscale methods in nonlinear PDE", Cambridge, 2001 Apr.

• *Pauli operator and Aharonov Casher theorem for measure valued magnetic fields.*

Meeting on Schrödinger Operators, Oberwolfach, 2001 May.

• *Spectral shift and multiplicity of the first eigenvalue of the magnetic Schrödinger operator in two dimensions.* Invited speaker at the conference on "PDE and quantum mechanics", Cardiff, 2001 Jul.

• *Quantum dynamics of an electron in a phonon field* Invited talk, AMS-SMF Joint Meeting, Probability and Statistical Physics Section, Lyon, 2001 Jul.

• *Long time evolution of an electron weakly coupled to a phonon field.* Meeting on "Relativistic quantum systems and QED", Oberwolfach, 2001 Aug.

• *Scaling limits of Schrödinger quantum mechanics.* 3 lectures given at the Karpacz Winter School of Theoretical Physics in Poland, 2002 Feb.

• *Derivation of the nonlinear Hartree equation from many body Coulomb dynamics.* International Conference on PDE and Math. Phys., UAB, Birmingham, AL, 2002 March.

• *Derivation of the nonlinear Hartree equation from many body Coulomb dynamics.* Conference on the occasion of E. Lieb 70th birthday, Vienna, 2002 July.

• *Long time evolution of an electron in a weakly coupled phonon field* [Invited] Conference on Multiscale Methods in Quantum Mechanics, Theory and Applications, Rome, Italy, 2002 Dec.

• *Classical evolution equations derived from quantum dynamics with many degrees of freedom.* Conference on "Frontiers of PDEs and Dynamical Systems", Rutgers University, 2003 May

• *Quantum Diffusion of Random Schrödinger Evolution in a Scaling Limit.* Conference on "Transport properties of quantum systems in disordered media", Lille, France, 2003 June

• *Quantum dynamics of many degrees of freedom.* Conference on "Randomness in space and time", Budapest, Hungary, 2003 June

• *Multiplicity of magnetic ground states.* Satellite conference to ICMP on Mathematical Problems of Quantum mechanics, Lisbon, Portugal, 2003 July

• *Mean field limits of quantum many body systems.* Meeting on Classical and Quantum Mechanical Models of Many-Particle Systems. Oberwolfach, 2003 Nov.

• *Towards the Quantum Brownian Motion.* Plenary lecture at the Einstein Memorial conference of the German Physical Society, Ulm, 2004 March.

• *Quantum Diffusion* Invited talk at the "Workshop on Kinetic Theory" at Fields Institute, Toronto, Canada, 2004 Apr.

• *Towards the Quantum Brownian Motion.* Meeting on Disordered Systems. Oberwolfach, 2004 May.

• *Nonlinear Hartree equation as the mean field limit of weakly coupled fermions.* Invited talk at the "Workshop on N-particle Systems" in Rennes, France, 2004 May.

• *Kinetic and diffusive scaling limits of random Schrodinger evolution.* Minicourse at the "Workshop: Dynamics in Statistical Mechanics", CRM, Montreal, Canada, 2004 Aug

• *Towards the Quantum Brownian Motion.* Minicourse at Workshop "Quantum dynamics and quantum transpor", Warwick, UK, 2004 Sep.

• *Towards the Quantum Brownian Motion.* Plenary talk at the QMath9 conference, Giens, France, 2004 Sep.

• *Scaling limits of quantum dynamics* Plenary talk at the annual meeting of the German Mathematical Society, Heideberg, 2004 Sep.

• *Uniform magnetic Lieb-Thirring inequalities* Oberwolfach, 2004 Dec.

• *The Gross-Pitaevskii equation from the modified dynamics of the Bose-Einstein condensate* Invited talk at the conference "Mathematical Methods in Quantum Mechanics" in Bressanone, Italy. 2005 Feb.

• *Multiplicity of the magnetic ground state.* Conference on Spectral Theory and Geometry, Matrei, Austria, 2005 Jul.

• *Quantum diffusion: subtleties of the discrete model.* Conference on "Order, Disorder and Transport: Recent Advances in Schrodinger operator theory". Banff, Canada, 2005 Sep.

• *Towards the quantum Brownian motion.* 6-hour lecture series at the Winter School "Singular phenomena and scaling in mathematical models". Bonn, 2006 Feb

• *Recent developments in quantum mechanics with magnetic fields.* Barry Simon's birthday conference, Caltech, 2006 Mar

• *Effective dynamics of many-body quantum systems.* Conference in honor of Yves Colin de Verdiere, Grenoble, 2006 May

• *Classical and quantum Brownian Motion.* 4-hour lecture series at the PASI Summer school, Chile, 2006 Jul.

• *Derivation of the Gross-Pitaevskii equation for the dynamics of the Bose-Einstein condensate.* Conference in honor of Domokos Szász, Budapest, 2006 Aug

• *Derivation of Brownian motion from quantum mechanics.* BIRS Conference on Evolution of microscopic and macroscopic fields. Banff, Canada, 2006 Sep

• *Scaling limits of N-body systems.* Conference on Multiscale Problems, TU Munich, 2006 Oct

• *Gross Pitaevski equation for the dynamics of the Bose condensate.* Oberwolfach, 2006 Dec.

• *Limit equations for N-particle quantum systems.* 6-hour lecture series at the winter school "Mathematical Methods in Quantum Mechanics", Bressanone, 2007 Feb.

• *Gross Pitaevski equation for the dynamics of the Bose condensate.* Workshop on "Analysis and Stochastics in Quantum Many-Body Systems", Leipzig, May 2007

• *Derivation of the time-dependent Gross Pitaevski equation for the dynamics of the Bose condensate.* 33d Journees Equations aux derivees partielles, Evian-les-Bains, Jun 2007.

• *Derivation of nonlinear evolution equations from the dynamics of interacting quantum particles. (2 hour)* Conference on Stochastic and Quantum Dynamics, Milan, Oct 2007

• *Derivation of Brownian motion from quantum mechanics.* Conference on Microscopic Origins of Dissipation and Noise, Leipzig, Nov 2007.

• *Quantum Brownian motion as a scaling limit of random Schrodinger evolution.* Conference on "Applications of the renormalization group", ESI, Vienna, Nov 2007.

• *Semicircle law on short scales and delocalization for Wigner random matrices* Mathematical Physics Days at Weizmann Institute, Rehovot, Israel, Dec 2007.

•*Classical and Quantum Brownian Motion.* Conference on Open Classical and Quantum Dynamical Systems, III. Lille, March 2008

• *Semicircle law on short scales and delocalization of eigenvectors for Wigner random matrices..* Fritz Fest, Budapest, March 2008

• *Derivation of the Gross-Pitaevskii equation for the dynamics of the Bose-Einstein condensate.* **Invited lecture at the 5th European Congress of Mathematics,** Amsterdam, July 2008.

• *Quantum Brownian motion as a scaling limit of random Schrodinger evolution.* 4-hour Lecture series at the Summer School "Current topics in Mathematical Physics", ESI, Vienna, July 2008.

• *Gross-Pitaevskii equation and dynamical formation of correlations in the Bose-Einstein condensate.* Seminar in the framework of the special semester "Anderson Localization and Related Phenomena", Newton Institute, Cambridge, Aug 2008.

• *Local semicircle law and complete delocalization of eigenvectors for Wigner random matrices..* Oberwolfach Workshop, Sep 2008

• *Dynamical formation of correlations in a Bose-Einstein condensate.* Conference on Quantum Many-Body Systems: Bose-Einstein condensation. CRM Montreal, Oct 2008

• *Quantum Brownian motion as a scaling limit of random Schrodinger evolution.* 4-hour Lecture series at the SFB TR 12 meeting, Langeoog, Germany, Nov 2008 .

• *Local semicircle law, Wegner estimate and level repulsion for Wigner matrices.* Oberwolfach, Dec 2008.

• *Local semicircle law, Wegner estimate and level repulsion for Wigner matrices.* Cambridge, Dec 2008.

• *Local semicircle law, Wegner estimate and level repulsion for Wigner matrices.* Conference in honor of M. Aizenman's honorary degree. Cergy-Pontoise, 2009 Jan.

• *Dynamical formation of correlations in a Bose-Einstein condensate.* Conference on kinetic equations. Luminy, 2009 Feb.

• *Wegner estimate, level repulsion and sine-kernel for Wigner matrices.* Conference on random Schrodinger operators, Banff, 2009 Apr.

• *Local semicircle law, level repulsion and sine-kernel for Wigner matrices.* Conference on Spectral Theory. Schrödinger Institute, Vienna, 2009 May.

• *Bulk universality for Wigner random matrices.* Berlin-Leipzig Analysis/Probability Seminar. Berlin, Jun 2009

• *Bulk universality for Wigner random matrices.* **Plenary talk at the 16-th Int. Congress of Mathematical Physics.** Prague, Aug 2009.

• *Bulk universality for Wigner random matrices.* SFB-TR12 Meeting, Symmetries and Universality in Mesoscopic Systems. Gdansk, Sep 2009.

• *Universality for Wigner random matrices.* 4 hour lecture series at the Arizona School of Analysis with Applications, Tucson, AZ, 2010 March

• *Quantum Diffusion and Eigenfunction Delocalization in a Random Band Matrix Model.* Conference on Random Schrödinger Operators, Lausanne, 2010 Jun.

• *Universality of Wigner random matrices.* 10 hour lecture series at the Summer School of the Berlin-Zurich Graduate School in Probability, Disentis (Switzerland), 2010 Jul.

• *Quantum dynamics with many degrees of freedom.* 10 hour lecture series at the Summer School "Quantum Theory from Small to Large Scales" in Les Houches, France, 2010 Aug.

• *Universality of Wigner random matrices: Local semicircle law.* Conference on random matrices, American Institute of Mathematics, Palo Alto, 2010 Dec.

• *Quantum Brownian Motion.* Conference on "Trails in non-commutative land" at SISSA, Trieste, 2011 May.

• *Universality of local spectral statistics of random matrices.* Conference on the occasion of D. Szasz 70th birthday. Budapest, 2011 Aug.

• *1. Universality of Spectral Statistics for Random Matrices. 2. The local version of Wigner's semicircle law and Dyson's Brownian motion. 3. Quantum diffusion and random band matrices.* Lecture series as **Aisenstadt Chair** at Centre de recherches mathematiques (CRM) Montreal, 2012 March

• *Quantum diffusion and delocalization for random band matrices.* Workshop on SUSY and random matrices in honour of Tom Spencer, Paris, 2012 April.

• *Delocalization for random band matrices.* 107th Statistical Physics Meeting, Rutgers, 2012 May.

• *Quantum diffusion and delocalization for random band matrices.* Workshop on Random Matrices, Bonn, 2012 May

• *Universality of local spectral statistics of random matrices.* Abel Symposium, Oslo, 2012 Aug.

• *Universality of random matrices and log-gases.* Two lectures at the Current Developments in Mathematics conference at Harvard University, 2012 Nov.

• *Universality of random matrices and log-gases.* AMS Short Course at the joint AMS-MAA Meeting, San Diego, Jan 2013.

• *Universality for random matrices and log-gases.* Encounters of continuous and discrete mathematics, Budapest, May 2013.

• *Rigorous results on random band matrices.* SFB TR12 meeting, Bad Honnef, Jun 2013.

• *Universality for random matrices and log-gases.* Conference on A. Kramli's 70th birthday, Szeged, Jul 2013.

• *Random matrices and log-gases.* 6 hour lecture series at the Advanced school on Random Matrices and Growth Models, ICTP, Trieste, Sep 2013.

• *Universality for log-gases.* **Plenary talk** QMath 12, Berlin, Sep 2013

• *New corrections to mesoscopic level statistics for random band matrices.* Workshop on nonequilibrium dynamics and random matrices, IAS, Princeton, Nov 2013.

• *Hölder regularity theory in random matrices.* Probability, Analysis, Dynamics conference, Bristol, Apr 2014.

• *Spectral universality for a general class of matrices.* **Plenary talk** 37-th SPA Conference, Buenos Aires, Aug 2014.

• *Random matrices, log gases and Hölder regularity.* **Invited talk** ICM 2014, Seoul, Aug 2014.

• *Hölder regularity theory for random matrices.* Maxwell Symposium, Edinburgh, Apr 2015.

• *Spectral statistics of random band matrices: some old and new results.* Balint Toth 60 birthday conference, Budapest, 2015 Jul.

• *Diffusion in random band matrices.* AIHP Distinguished Paper Award ceremony at ICMP 2015, Santiago de Chile, 2015 Jul.

• *Universality of random matrices and log-gases.* Joint Austro-Hungarian Mathematics conference, Győr, Hungary, 2015 Aug.

• *Spectral statistics of random band matrices: old and new results.* Random Matrices, Random Growth Processes and Statistical Physics. Conference in honor of C. Tracy 70-th birthday. Stony Brook, 2015 Sep.

• *Local laws for eigenvalues of random matrices.* **Ising Lecture** 12th German Probability and Statistics Days, Bochum, Germany, 2016 March.

• *Local law of addition of random matrices.* Conference on Hyperbolic Dynamics and Statistical Physics (dedicated to 75th birthday of Domokos Szász) Erwin Schrödinger Institute, Vienna, 2016 May.

• *Short introduction to random matrices and random Schrodinger operators.* Young Researcher Symposium, Fields Institute, Toronto, Aug 2016.

• *The matrix Dyson equation in random matrix theory.* Conference on Frontiers in Mathematical Physics in honor of Barry Simon's 70th birthday. Montreal, Aug 2016.

• *The matrix Dyson equation in random matrix theory.* Synergies between Mathematical and Computational Approaches to Quantum Many-Body Physics. ESI, Vienna, Oct 2016.

• *The matrix Dyson equation in random matrix theory.* 3 hour lecture at the Summer school on Mathematical Aspects of Disordered Systems, ETH, Zürich, Jun 2017.

• *The matrix Dyson equation in random matrix theory.* 4 hour lecture at the Park City Summer school on Random Matrices, Park City, Utah, Jul 2017.

• *The matrix Dyson equation in random matrix theory.* Heinzfest, Herrsching, Germany, May 2018.

• *Random matrices and disordered quantum systems.* 6 hour lectures at Vienna Doctoral Summer School, Weissensee, Austria, Sep 2018.

• *Random matrices.* 3 hour lectures at the conference on *Random physical systems*, Puerto Natales, Chile, Dec 2018.

• *From Wigner-Dyson to Pearcey.* 2 hour lectures at *Workshop on statistical mechanics*, Les Diablerets, Switzerland, Feb 2019.

• *The matrix Dyson equation in random matrix theory.* 8 hour lectures at the Focus Program on Applications of Noncommutative Functions, Fields Institute, Toronto, June 2019.

• *From Wigner-Dyson to Pearcey: Universality of Local Eigenvalue Statistics of Random Matrices at the cusp.* Invited lecture at *Conference on Dynamics, Equations and Applications*, AGH UST Krakow, Poland, Sep 2019.

• *Edge universality for non-Hermitian random matrices.* Invited talk at School and Workshop on Random Matrix Theory and Point Processes, ICTP, Trieste, Sep 2019

• *Edge universality for non-Hermitian random matrices.* Invited talk at the XV Brunel-Bielefeld Workshop on Random Matrix Theory, ZIF Bielefeld, Dec 2019

• *Fluctuations in the circular law: CLT for i.i.d. random matrices.* Conference on Random Schrödinger operators and related topics. Florence, Feb 2020.

• *Quantum Brownian motion as a scaling limit.* Conference on Calculus of Variations,

Homogenization and Disorder. MIT 2020. (online)

• *Magnetic Schrödinger operator and stochastic oscillatory integrals* Statistical Physics Seminar, Rutgers University, NJ, 1994

• *Magnetic Lieb-Thirring inequalities* Analysis Seminar, Univ. of Michigan, MI, 1994.

• *Magnetic Schrödinger operator and stochastic oscillatory integrals* Analysis Seminar, University of Grenoble, France, 1994.

• *Estimates on stochastic oscillatory integrals* Probability Seminar, Federal Institute of Technology, Zürich, Switzerland, 1994.

• *Magnetic Schrödinger operator and stochastic oscillatory integrals* Theoretical Physics Seminar, Federal Institute of Technology, Lausanne, Switzerland, 1994.

• *Semiclassical eigenvalue estimates* Analysis Seminar, Federal Institute of Technology, Zürich, Switzerland, 1995.

• *Magnetic Schrödinger operator and stochastic oscillatory integrals* Mathematical Seminar, University of Erlangen, Germany, 1995.

• *Properties of the magnetic Schrödinger operator with probabilistic techniques* 5 hour short course given at University of Bochum, Germany, 1995.

• *Lieb-Thirring inequalities and probability* Analysis Seminar, University of Sussex, England, 1995.

• *Magnetic Schrödinger operator with probabilistic methods* Physics Colloquium, University of Geneva, Switzerland, 1995

• *Gaussian decay of magnetic eigenfunctions* Probability Seminar, New York University, 1995.

• *Gaussian decay of magnetic eigenfunctions* Analysis Seminar, Northeastern University, Boston, 1996.

• *Magnetic isoperimetric inequality* Math. Coll., Aarhus University, Denmark, 1996.

• *Lifschitz tail in a magnetic field: the nonclassical regime* Probability Seminar, Federal Institute of Technology, Zurich, Switzerland, 1997.

• *Lifschitz tail in a magnetic field: the nonclassical regime* Workshop on External Fields, Aarhus University, Denmark, 1997.

• *Lifschitz tail in a magnetic field: the nonclassical regime* Mathematical Institute of Hungarian Academy of Science, 1998.

• *Linear Boltzmann equation as scaling limit of quantum Lorenz gas.* Math. Colloquium, University of Copenhagen, Denmark, 1998.

• *Linear Boltzmann equation as scaling limit of quantum Lorenz gas.* Math. Colloquium, Ecole Polytechnique, Palaiseau, France, 1998.

• *Linear Boltzmann equation as scaling limit of quantum Lorenz gas.* Applied Math. Seminar New York University, 1998.

• *Lifschitz tail in a magnetic field: the nonclassical regime* Math. Colloquium, University of Copenhagen, Denmark, 1998.

• *Some spectral properties of the magnetic Schrödinger operator.* Lecture series at National Tsing-Hua University, Taiwan, 1998.

• *Weak coupling limit of the quantum Lorenz gas*, Lecture series at the Technical University of Berlin. 1998.

• *Weak coupling limit of the quantum Lorenz gas*, Applied Math. Seminar, Georgiatech. 1998

• *Stochastic methods in quantum mechanics of magnetic fields* Probability Seminar, Georgiatech. 1998.

• *Pauli operator with a strong inhomogeneous magnetic field* Mathematical Physics Seminar, University of Tokyo, 1999.

• *Stochastic oscillatory integrals, dia- and paramagnetism* Probability Seminar, Kyoto University, 1999.

• *Linear Boltzmann equation as the weak coupling limit of the random Schrödinger equation* Lecture Series at CTS, National Tsing-Hua University, Taiwan, 1999.

• *Fokker-Planck equation as scaling limits of reversible quantum systems.* Analysis seminar, Georgiatech, 1999.

• *Derivation of Boltzmann equation from Schrödinger quantum dynamics* Mathematical Physics Seminar, Univ. of Texas, 1999

• *Fokker-Planck equation as scaling limits of reversible quantum systems.* Seminar at Erwin Schrödinger Institute, Vienna, 1999

• *Derivation of quantum kinetic equations from Schrodinger equation* Colloquium at Univ. of Virginia, 2000 March

• *Magnetic Lieb-Thirring inequalities in a strong field.* Math. Phys. Seminar at Univ. of Virginia, 2000 March

• *How classical Boltzmann equation emerges from quantum mechanics.* Lecture series at Math. Phys. Seminar at Georgiatech, 2000 March.

• *Derivation of Boltzmann equation from Schrödinger quantum dynamics* Mathematical Physics Seminar, University Paris-Sud, Orsay, 2000 May.

• *Lifschitz tail in a magnetic field: the threshold case.* Mathematical Physics Seminar, University Paris-Nord, 2000 May

• *Classical Boltzmann equation from quantum mechanics.* Lecture series at University of Grenoble, France, 2000 May-June.

• *Quantum mechanics in strong magnetic fields.* Mathematical Physics Seminar, University of Grenoble, France, 2000 June.

• *Quantum mechanics in strong magnetic fields.* Lectures series at CTS, National Tsing-Hua University, Taiwan, 2000 June,

• *Pauli operator and Aharonov Casher theorem for measure valued magnetic fields.* Mathematical Physics seminar, Georgiatech, 2000 Sep.

• *Multiplicity of the magnetic ground state.* Analysis Seminar, Courant Institute, NYU, 2000 Dec.

• *Quantum kinetic equations from first principles.* Probability Seminar, Technical University, Budapest, 2001 Jan.

• *Scaling limits of quantum evolutions.* Habilitation defense, University of Vienna, 2001 Jan.

• *Derivation of kinetic equations from Schrödinger quantum mechanics.* Applied Math. Seminar, University of Chicago, 2001 Apr.

• *Rayleigh-type isoperimetric inequality with a homogeneous magnetic field.* Analysis Seminar, Max-Planck Institute, Leipzig, 2001 Jun.

• *How does Boltzmann equation emerge from quantum mechanics? (I-II).* Mathematical Physics Seminar, Max-Planck Institute, Leipzig, 2001 Jun.

• *Quantum mechanics of the Pauli operator in a strong magnetic field.* 3 lectures, Academia Sinica, Taipei, Taiwan, 2001 Jul.

• *Zero modes of the 3D Pauli operator.* Geometry Seminar, Georgiatech, 2002 Jan.

• *Scaling limits of the dynamics of random Schrödinger operators.* Eurandom Seminar, Eindhoven, 2002 March

• *Zero modes of the 3D Pauli operator.* Mathematical Physics Seminar, Warwick, UK, 2002 March

• *Magnetic isoperimetric inequality.* Analysis Seminar, Warwick, UK, 2002 March

• *Quantum dynamics of many degrees of freedom.* Mathematics Colloquium, Warwick, UK, 2002 March

• *Magnetic isoperimetric inequality and Lifschitz tail* Mathematical Physics seminar, Munich, 2002, May

• *Derivation of the nonlinear Hartree equation from many body Coulomb dynamics.* Mathematics Colloquium, Munich, 2002 May

• *Derivation of the nonlinear Hartree equation from many body Coulomb dynamics.* Math. Phys. seminar, Tech. Univ. Budapest, 2002 May.

Quantum dynamics with many degrees of freedom. MaPhySto Seminar, Aalborg University, Denmark, 2003 Feb.

• *Derivation of the nonlinear Schrödinger equation from a many body Coulomb system.* Oresund Seminar, Lund University, Sweden, 2003 Feb.

• *Quantum diffusion of the random Schrodinger evolution in a scaling limit.* Mathematical Colloquium, UAB, Birmingham, AL, 2003 Apr.

• *Quantum dynamics of many degress of freedom* Math. Physics Seminar, UC Davis, CA, 2003 Sep.

• *Quantum dynamics of many degress of freedom* Mathematical Colloquium, University of Stuttgart, 2003 Nov.

• *Quantum dynamics of many degress of freedom* Mathematical Colloquium, University of Bonn, 2003 Nov.

• *Quantum Diffusion* Analysis Seminar, Technical University, Munich, 2004 Jun

• *Uniform Lieb Thirring inequalities*, PDE Seminar, Berkeley, 2004 Oct.

• *Uniform Lieb Thirring inequalities*, Analysis Seminar, Stanford, 2004 Oct.

• *Towards the quantum Brownian motion*, Math. Colloquium, Univ. of Erlangen, 2004 Nov.

• *Towards the quantum Brownian motion*, Math. Physics Seminar, UC Irvine, 2005 Apr.

• *Detailed proof of the quantum Boltzmann equation*, 6 hour Lecture series, 2005 May, Rome

• *Towards the quantum Brownian motion*, Mathematical Physics Colloquium, Augsburg, 2005 Jun

• *Towards the quantum Brownian motion*, Mathematical Physics seminar, Princeton, 2005 Oct

• *Quantum dynamics of many body systems with a singular mean-field interaction*, Statistical Physics seminar, Princeton, 2005 Oct,

• *The Fourier Transform of surfaces and the four denominator lemma for random Schrödinger evolutions*, Mathematical Physics seminar, Caltech, 2006 Jan

• *The Fourier Transform of surfaces and the four denominator lemma for random Schrödinger evolutions*, Mathematical Physics seminar, UC Irvine, 2006 Jan

• *Mathematical analysis of quantum dynamics with many degrees of freedom*, Math. Colloquium, Columbia Univ, 2006 Feb

• *Quantum dynamics of many body systems with a singular mean-field interaction*, Nonlinear analysis seminar, Univ. Chicago, 2006 Feb,

• *Lieb-Thirring inequalities with magnetic fields*, Analysis Seminar, Harvard Univ. 2006 Feb

• *Towards the quantum Brownian motion*, Theoretical Physics Seminar, ETH, Zurich, 2006 Jun

• *Towards the quantum Brownian motion*, Mathematical Physics Seminar, Univ. Rome I, 2006 Nov

• *Recent developments in quantum mechanics with magnetic fields.* Mathematical Physics Seminar, Univ. Rome I, 2006 Nov

• *Gross-Pitaevskii equation for the dynamics of the Bose condensate* Theoretical Physics Colloquium, Univ. Cologne, 2007 Apr

• *Gross-Pitaevskii equation for the dynamics of the Bose condensate* Mathematical Physics Seminar, Univ. Bonn, 2007 May

• *Derivation of nonlinear evolution equations from the dynamics of interacting quantum particles.* Mathematical Colloquium, Univ Eichstaett, 2007 Nov

• *Semicircle law on short scales and delocalization for Wigner random matrices.* Mathematical Physics Seminar, Univ. Copenhagen, 2008 Jan.

• *Gross-Pitaevskii equation for the dynamics of the Bose condensate* Analysis Seminar, Technical Univ. Budapest, 2008 March

• *Gross-Pitaevskii equation for the dynamics of the Bose condensate* Mathematical Physics Seminar, Inst. Theoretische Physik, Heidelberg, 2008 Nov

• *Local semicircle law, Wegner estimate and level repulsion for Wigner matrices.* Mathematical Physics Seminar, University of Copenhagen, 2009 Feb.

• *Bulk universality for Wigner random matrices.* Mathematics Colloquium University of Copenhagen, 2009 Sep.

• *Universality for Wigner matrices via the local relaxation flow.* Mathematics Colloquium University of Toronto, 2009 Dec.

• *Dynamical formation of correlations in a Bose-Einstein condensate.* Analysis Seminar, Fields Institute, Toronto, 2009 Dec.

• *Bulk universality for generalized Wigner matrices.* Analysis Seminar, Brown University, 2010 Feb

• *Universality for Wigner matrices via the local relaxation flow.* Probability Seminar, University of Wisconsin, 2010 Apr

• *Universality for Wigner matrices via the local relaxation flow.* Probability and Math Physics Seminars, University of Erlangen, 2010 Jul

• *Quantum Diffusion and Eigenfunction Delocalization in a Random Band Matrix Model.* Mathematical Physics Seminar, Caltech, 2010 Dec.

• *Universality for Wigner random matrices.* Mathematics Colloquium, Caltech, 2010 Dec.

• *Universality of local spectral statistics of random matrices.* Mathematics Colloquium, Uni. Geneva, 2011 Dec.

• *Universality of local spectral statistics of random matrices.* Mathematics Seminar, Inst. Science and Techn, Austria, 2011 Dec.

• *Universality of local spectral statistics of random matrices.* Probability Seminar, University of Colorado, Boulder, 2012 Jan.

• *Universality for random matrices and log-gases.* Seymour Sherman Memorial Lecture, Indiana University, 2013 Mar.

• *Delocalization for random band matrices.* Probability Seminar, Indiana University, 2013 Mar.

• *Universality for random matrices and log-gases.* Mathematical Colloquium, University of Vienna, 2013 Apr.

• *New corrections to mesoscopic level statistics for random band matrices.* Mathematical Physics Seminar, University Vienna, Dec. 2013.

• *Universality for random matrices and log-gases.* Mathematical Colloquium, Heidelberg, Jul 2014.

• *Random matrices, log-gases and Hölder regularity.* Mathematical Colloquium, Politecnico Torino, Nov 2014.

• *Véletlen mátrixok spektrumának univerzalitása (Universality of the spectrum of random matrices).* Mathematics Institute Colloquium, ELTE Budapest, Sep 2015.

• *Random matrices and disordered quantum systems.* Lecture on the occasion of the Bolyai Prize ceremony at the Hungarian Academy of Sciences, Jan 2016.

• *Random matrices and log-gases.* Lecture series (4h) at the probability seminar at Institut Henri Poincare, Paris, Feb 2016.

• *Random matrices, log-gases and Hölder regularity.* Mathematical Colloquium, University of Brno, Oct 2016.

• *Random matrices, log-gases and Hölder regularity.* Mathematical Colloquium, Central European University, Budapest, Nov 2016.

• *The matrix Dyson equation in random matrix theory.* Mathematical physics seminar, University of Bristol, Feb 2017.

• *The matrix Dyson equation in random matrix theory.* Probability seminar, Institut Henri Poincare, Paris, May 2017.

• *The matrix Dyson equation in random matrix theory.* Probability seminar, Cambridge University, Oct 2017.

• *Random matrices via the matrix Dyson equation.* Mathematics Colloquium, University of Saarbrücken, Jan 2018.

• *Spectral universality of random matrices.* Leó Szilárd Physics Colloquium, Technical University of Budapest, Feb 2018.

• *Spectral rigidity for addition of random matrices* Probability Seminar, Zürich, Apr 2018.

• *Random matrices and the matrix Dyson equation.* Probability Seminar, Durham University, UK, Nov 2018.

• *Random matrices and the matrix Dyson equation.* Probability Seminar, Queen Mary University, London, UK, Nov 2018.

• *Universality at Criticality: Cusp and circular edge.* Probability Seminar, Lorand Eötvös University, Budapest, Oct 2019.

• *Spectral universality: a journey from heavy nuclei to Riemann zeta function via random matrices.* Seminar of the Master Class Mathematical Physics, Schrödinger Institute, Vienna, Oct 2019.

• Irina Kiba, M.Sc. Aug 2005 LMU. *Anderson localization for weakly correlated random potentials.*

• Dmytro Martynenko, M.Sc. May 2006 LMU. *Das Nelder-Mead-Algorithmus: Die Konvergierung und die Anwendung an der Implementierung von Kriechparametern fuer die Berechnung von Interieurbauteilen mit dem Programm ABAQUS* (Jointly with E. Kreppold, BMW)

• Irina Lade, M.Sc. Jun 2006 LMU. *Optimierungsstrategien für den Motor- und Getriebewarmlauf.* (Jointly with K. Kunze, BMW)

• Michael Reifinger, Diplom. Jul 2006 LMU. *Derivation of Boltzmann equation from a hard ball system.*

• Markus Furtner, Diplom, Jul 2008 LMU. *The Kakeya Problem.*

• Schekeb Sarwari, Diplom, Jul 2009, LMU *Numerical investigations of the long time solution of the Schrödinger equation*

• Markus Zmora, Diplom, Jul 2009, LMU *Elliptische Regularitätstheorie partieller Differentialgleichungen*

• Christian Marius Lemm, Bachelor, Jun 2010, LMU *Stability of matter.*

• Jonas Lührmann, Diplom, May 2011, LMU: *Mean field dynamics with magnetic fields*

• Marin Bukov, Bachelor, May 2011, LMU *Rigorous approach to Bose-Einstein condensation*

• Mikhail Khotyakov, Bachelor, Jun 2011, LMU *Two proofs of the sharp Hardy-Littlewood-Sobolev inequality*

• Anton Mühlmann, Diplom, Aug 2011, LMU *Regularity of eigenfunctions of Schrödinger operators with L^p potentials*

• Mohamed Bary, Diplom Mathematik (TUM), Aug 2012. *Thomas-Fermi-Theorie und Stabilität der Materie.*

• Sebastian Gottwald, Master TMP (LMU), Mar 2013. *Semiclassical quantum dynamics via the method of stationary phase for a rigorous approach to Feynman Path Integrals*

• Benedikt Staffler, Master TMP (LMU), Sep 2013. *Lifshitz tail for a random band matrix model.*

• Dominik Schröder, Master TMP (LMU), Aug 2014. *Phase transition in the density of states of quantum spin glasses.*

• Johannes Alt, Master TMP (LMU), Aug 2014. *The local semicircle law for a class of random matrices with a fourfold symmetry.*

• Torben Kruger, Ph.D (Dr.rer.nat.), LMU, Nov 2015. *Local spectral universality for random matrices with independent entries.*

• Johannes Alt, Ph.D., IST Austria, Jul 2018. *Dyson equation and eigenvalue statistics of random matrices.*

• Dominik Schröder, Ph.D., IST Austria, Mar 2019. *From Dyson to Pearcey: Universal statistics in random matrix theory.*

INTERNS

• Peter Mühlbacher, 2016 Jun-Aug and 2017 Nov–2018 Feb
• Sofiia Dubova, 2018 Jul-Aug
• Tibor Döme, 2018 Aug-Sep