Alexander Adam

Lower education and private information omitted.
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Education

Oct 2018 – **Postdoctoral Fellow**, *Max Planck Institute for Mathematics*, Bonn.

2015 – 2018 **PhD student at IMJ in the group analysis & algebra**, *Sorbonne Université*, Thesis supervised by Prof. Viviane Baladi: Transfer operators and horocycle averages.

2013 – 2015 **Master of Science in Mathematics**, *Georg August University of Göttingen.*

2010 – 2012 **Master of Science in Physics**, *Georg August University of Göttingen.*

Experience

2015-2018 **Attended events and talks**.
I attended several conferences and workshops in China, France, Germany, Great Britain, Poland and Italy. I gave talks at attended events at Bremen, Exeter, Göttingen, Jena, Luminy, Paris and Rennes.

SU 2015 **Student assistant**, *Georg August University of Göttingen.*

Oct 2014 - Oct 2015 Assistant in the class *introductory number theory.* I am concerned with correcting the exercises and leading an exercise group.

Jan 2013 - June 2013 **Research fellow**, *Georg August University of Göttingen*, SFB 755 for *Nanoscale Photonic Imaging.*
Optimization of image reconstruction algorithms under the usage of special purpose libraries such as FFTW and CUDA.

Apr 2010 - Jun 2010 **Student assistant**, *Technical University of Braunschweig.*
Assistant *for Computer Modelling II.*

PhD thesis in Mathematics

Title *Transfer operators and horocycle averages*

Supervisor Prof. Viviane Baladi

Description The study of generic real analytic perturbations of linear toral Anosov diffeomorphisms and the study of horocycle integrals associated to contact Anosov flows.

Master's Thesis in Mathematics

Title *Convergence of transfer operators along a family of Fuchsian lattices*

Supervisors Prof. Anke Pohl, Prof. Ingo Witt

Description The study of convergence of the transfer operators associated to the discretized geodesic flow of the Theta group and the Hecke triangle group family towards the Theta group.

Master's Thesis in Physics

Title *Entanglement entropy of typical quantum states*

Supervisors Prof. Manfred Requardt, Prof. Karl-Henning Rehren

Description The behavior of entanglement entropy of quantum states is examined in bipartite systems under certain restrictions such as degeneracy of the spectrum, non-interacting Hamiltonians and trace condition of the Hamiltonian.

Publications

[1] A. Adam, "Generic non-trivial resonances for Anosov diffeomorphisms," *Nonlinearity*, vol. 30, no. 3, p. 1146, 2017. DOI: 10.1088/1361-6544/aa59a9.

[2] ——, "Horocycle averages on closed manifolds and transfer operators," *ArXiv e-prints*, Sep. 2018. arXiv: 1809.04062 [math.DS].

[3] ——, *Verallgemeinerung des Guggenheim-Quadrates, Appendix C*, https://www.tu-braunschweig.de/Medien-DB/theophys/skript_motschmann_thermo.pdf, [Online; accessed 07-March-2017], 2010.

[4] A. Adam and A. Pohl, "A transfer-operator-based relation between laplace eigenfunctions and zeros of selberg zeta functions," *Ergodic Theory and Dynamical Systems*, Aug. 2018. DOI: 10.1017/etds.2018.51.

[5] A. Adam, A. Pohl, and A. Weiße, "Zero is a resonance of every schottky surface," *ArXiv e-prints*, Aug. 2018. arXiv: 1808.09239 [math.SP].