

List of Publications

Articles in Refereed Journals

47. M. Hentschel, *Billards für Licht*, Physik Journal **10**, 39-43 (2011).
Prize winner article: Hertha-Sponer-Preis of the German Physical Society. Article in German.
46. J. Wiersig, A. Eberspächer, J.-B. Shim, J.-W. Ryu, S. Shinohara, M. Hentschel, and H. Schomerus, *Nonorthogonal pairs of copropagating optical modes in deformed microdisk cavities*, Phys. Rev. A **84**, 023845(1-10) (2011).
45. G. Röder, G. Tkachov, and M. Hentschel, *Photoabsorption spectra and the X-ray edge problem in graphene*, Europhys. Lett. **94**, 67002(1-6) (2011).
44. S. Shinohara, T. Harayama, T. Fukushima, M. Hentschel, S. Sunada, and E. E. Narimanov, *Chaos-assisted emission from asymmetric resonant cavity microlasers*, Phys. Rev. A **83**, 053837(1-8) (2011).
43. J.-W. Ryu and M. Hentschel, *Designing coupled microcavity lasers for high-Q modes with unidirectional light emission*, Opt. Lett. **36**, 1116-1118 (2011).
42. J. Unterhinninghofen, U. Kuhl, J. Wiersig, H.-J. Stöckmann, and M. Hentschel, *Measurement of the Goos-Hänchen shift in a microwave cavity*, New J. Phys. **13**, 023013(1-11) (2011).
41. S. Bandopadhyay and M. Hentschel, *Modified Anderson orthogonality catastrophe power law in the presence of shell structure*, Phys. Rev. B **83**, 035303(1-13) (2011).
40. J. Haase, H. Fröb, V. G. Lyssenko, K. Leo, S. Shinohara, M. Hentschel, P. Mundra and A. Eychmüller, *Hemispherical resonators with embedded nanocrystal quantum dot emitters*, Appl. Phys. Lett. **97**, 211101(1-3) (2010).
39. G. Röder and M. Hentschel, *Orthogonality catastrophe in ballistic quantum dots: Role of level degeneracies and confinement geometry*, Phys. Rev. B **82**, 125312(1-10) (2010).
38. J.-W. Ryu and M. Hentschel, *Ray model and ray-wave correspondence in coupled optical microdisks*, Phys. Rev. A **82**, 033824(1-8) (2010).
37. M. Hentschel, Q. J. Wang, C. Yan, F. Capasso, T. Edamura, and H. Kan, *Emission properties of electrically pumped triangular shaped microlasers*, Optics Express **18**, 16437-16442 (2010).
36. R. Bedrich, S. Burdin, and M. Hentschel, *The Mesoscopic Kondo Box: A Mean-Field Approach*, Phys. Rev. B **81**, 174406(1-5) (2010).
35. S. Shinohara, T. Harayama, T. Fukushima, M. Hentschel, T. Sasaki, and E. E. Narimanov, *Chaos-assisted directional light emission from microcavity lasers*, Phys. Rev. Lett. **104**, 163902(1-4) (2010).
This article was featured by A. D. Stone in the News & Views section, Nature **465**, 696-697 (2010).
34. J. Wiersig, J. Unterhinninghofen, H. Schomerus, U. Peschel, and M. Hentschel, *Electromagnetic modes in cavities made of negative-index metamaterials*, Phys. Rev. A **81**, 023809(1-7) (2010).
33. S. Shinohara, M. Hentschel, J. Wiersig, T. Sasaki, and T. Harayama, *Ray-wave correspondence in Limaçon-shaped semiconductor microcavities*, Phys. Rev. A **80**, 031801R(1-4) (2009).

32. Q. J. Wang, C. Yan, L. Diehl, M. Hentschel, J. Wiersig, N. Yu, C. Pflügl, M. A. Belkin, T. Edamura, M. Yamanishi, H. Kan, and F. Capasso, *Deformed microcavity quantum cascade lasers with directional emission*, New J. Phys. **11**, 125018 (1-17) (2009).
31. J.-B. Shim, M. S. Hussein, and M. Hentschel, *Numerical Test of Born-Oppenheimer Approximation in Chaotic Systems*, Phys. Lett. A **373**, 3536-3540 (2009).
30. G. Tkachov and M. Hentschel, *Spin-orbit coupling, edge states and quantum spin Hall criticality due to Dirac fermion confinement: The case study of graphene*, Eur. Phys. J. B **69**, 499-504 (2009).
29. C. Yan, Q. J. Wang, L. Diehl, M. Hentschel, J. Wiersig, N. Yu, C. Pflügl, M. A. Belkin, T. Edamura, M. Yamanishi, H. Kan, and F. Capasso, *Directional emission and universal far-field behavior from semiconductor lasers with Limaçon-shaped microcavity*, Appl. Phys. Lett. **94**, 251101(1-3) (2009).
28. M. Hentschel, T.-Y. Kwon, M. A. Belkin, R. Audet, and F. Capasso, *Angular emission of quantum cascade spiral microlasers*, Optics Express **17**, 10335(1-9) (2009).
27. A. Bäcker, R. Ketzmerick, S. Löck, J. Wiersig, and M. Hentschel, *Quality factors and dynamical tunneling in annular microcavities*, Phys. Rev. A **79**, 063804(1-6) (2009).
26. G. Tkachov and M. Hentschel, *Coupling between chirality and pseudospin of Dirac fermions: Non-analytical particle-hole asymmetry and a proposal for a tunneling device*, Phys. Rev. B **79**, 195422(1-8) (2009).
25. M. Hentschel and T.-Y. Kwon, *Designing and understanding directional emission from spiral microlasers*, Opt. Lett. **34**, 163-165 (2009).
This article was featured in Press Releases and in the member magazine of OSA, Optics and Photonics News **20**, issue 4, page 9 (2009).
24. M. Hentschel, *Optical microcavities as quantum-chaotic model systems: Openness makes the difference*, Adv. Sol. St. Phys. **48**, 293-304 (2009).
23. J. Wiersig, S. W. Kim, and M. Hentschel, *Asymmetric scattering and non-orthogonal mode patterns in passive optical micro-spirals*, Phys. Rev. A **78**, 053809(1-8) (2008).
22. E. G. Altmann, G. Del Magno, and M. Hentschel, *Non-Hamiltonian dynamics in optical microcavities resulting from wave-inspired corrections to geometric optics*, Europhys. Lett. **84**, 10008(1-6) (2008).
21. J. Unterhinninghofen, J. Wiersig, and M. Hentschel, *Goos-Hänchen shift and localized modes in optical microcavities*, Phys. Rev. E **78**, 016201(1-8) (2008).
20. J. Wiersig and M. Hentschel, *Combining unidirectional light output and ultralow loss in deformed microdisks*, Phys. Rev. Lett. **100**, 033901(1-4) (2008).
19. M. Hentschel, D. Ullmo, and H. U. Baranger, *Fermi-edge singularities in the mesoscopic regime: Photo-absorption spectra*, Phys. Rev. B **76**, 245419(1-16) (2007).
18. M. Hentschel, D. C. B. Valente, E. R. Mucciolo, and H. U. Baranger, *Improving intrinsic decoherence in multi-quantum-dot charge qubits*, Phys. Rev. B **76**, 235309(1-12) (2007).
17. M. Hentschel and F. Guinea, *Orthogonality catastrophe and Kondo effect in graphene*, Phys. Rev. B **76**, 115407(1-7) (2007).
16. T. Tanaka, M. Hentschel, T. Fukushima, and T. Harayama, *Classical phase space revealed by coherent light*, Phys. Rev. Lett. **98**, 033902(1-4) (2007).

15. J. Wiersig and M. Hentschel, *Unidirectional light emission from high-Q modes in optical microcavities*, Phys. Rev. A **73**, 031802R(1-4) (2006).
14. H. Schomerus and M. Hentschel, *Correcting ray optics at curved dielectric microresonator interfaces: Phase-space unification of Fresnel filtering and the Goos-Hänchen shift*, Phys. Rev. Lett. **96**, 243903(1-4) (2006).
13. M. Hentschel, D. Ullmo, and H. U. Baranger, *Fermi-edge singularities in the mesoscopic regime: Anderson orthogonality catastrophe*, Phys. Rev. B **72**, 035310(1-11) (2005).
12. M. Hentschel, D. Ullmo, and H. U. Baranger, *Fermi-edge singularities in the mesoscopic x-ray edge problem*, Phys. Rev. Lett. **93**, 176807(1-4) (2004).
11. H. Schomerus, J. Wiersig, and M. Hentschel, *Optomechanical probes of resonances in amplifying microresonators*, Phys. Rev. A **70**, 012703(1-8) (2004).
10. D. Frustaglia, M. Hentschel, and K. Richter, *Aharonov-Bohm physics with spin II: Spin-flip effects in two-dimensional ballistic systems*, Phys. Rev. B **69**, 155327(1-11) (2004).
9. M. Hentschel, H. Schomerus, D. Frustaglia, and K. Richter, *Aharonov-Bohm physics with spin I: Geometric phases in one-dimensional ballistic rings*, Phys. Rev. B **69**, 155326(1-14) (2004).
8. M. Hentschel, H. Schomerus, and R. Schubert, *Husimi functions at dielectric interfaces: Inside-outside duality for optical systems and beyond*, Europhys. Lett. **62**, 636-642 (2003).
7. M. Hentschel and K. Richter, *Quantum chaos in optical systems: The annular billiard*, Phys. Rev. E **66**, 056207(1-13) (2002).
6. M. Hentschel and H. Schomerus, *Fresnel laws at curved dielectric interfaces of microresonators*, Phys. Rev. E **65**, 045603R(1-4) (2002).
5. D. Frustaglia, M. Hentschel, and K. Richter, *Quantum transport in nonuniform magnetic fields: Aharonov-Bohm ring as a spin switch*, Phys. Rev. Lett. **87**, 256602(1-4) (2001).
4. M. Hentschel and M. Vojta, *Multiple beam interference in a quadrupolar glass fiber*, Opt. Lett. **26**, 1764-1766 (2001).
3. M. Hentschel, M. Bobeth, G. Diener, and W. Pompe, *On the short-time compositional stability of periodic multilayers*, Thin Solid Films **354**, 267-275 (1999).
2. B. Kämpfer, O. P. Pavlenko, A. Peshier, M. Hentschel, and G. Soff, *Thermal open charm signals versus hard initial yields in ultrarelativistic heavy-ion collisions*, J. Phys. G **23**, 2001-2011 (1997).
1. M. Hentschel, B. Kämpfer, O. P. Pavlenko, K. Redlich, and G. Soff, *Diphoton rates from thermalized matter resulting in ultrarelativistic heavy-ion collisions*, Z. Phys. C **75**, 333-339 (1997).

Refereed Proceedings and Book Chapters

11. J. Wiersig, J. Unterhinninghofen, Q. Song, H. Cao, M. Hentschel, and S. Shinohara, *Review on unidirectional light emission from ultralow-loss modes in deformed microdisks*, in: Trends in Nano- and Micro-Cavities (Editors: : O'Dae Kwon, Byounggho Lee, Kyungwon An), Bentham Science Publishers Ltd., pp. 109-152 (2011).

10. M. Hentschel and T.-Y. Kwon, *Optical microcavities of spiral shape: From quantum chaos to directed laser emission*, in: Complex phenomena in nanoscale systems, Springer NATO Science for Peace and Security Series (Editors: : G. Casati and D. Matrasulov), Springer, Berlin, pp. 15-24 (2009).
9. T.-Y. Kwon, J. Wiersig, and M. Hentschel, *Directional light output from a circular microdisk laser*, in: ICTON 2007 – 9th International Conference on Transparent and Optical Networks, IEEE (New York), Transparent Optical Networks 2007 **4**, 194-196 (2007).
8. M. Hentschel, G. Röder, and D. Ullmo, *Many-body effects in the mesoscopic x-ray edge problem*, Prog. Theor. Phys. Suppl. **166**, 143-151 (2007).
7. T. Tanaka, M. Hentschel, T. Fukushima, and T. Harayama, *Directional emission patterns from the oval-billiard microcavity laser diodes*, in: ICTON 2006 – 8th International Conference on Transparent and Optical Networks, IEEE (New York), Transparent Optical Networks 2006 **4**, 121-123 (2006).
6. M. Hentschel and J. U. Nöckel, *The sequential reflection model in deformed dielectric cavities*, in: Quantum Optics of Small Structures (Editors: D. Lenstra, T.D. Visser, K.A.H. van Leeuwen), Edita KNAW Amsterdam, pp. 217-233 (2000).
5. M. Bobeth, M. Hentschel, G. Diener, W. Pompe, and A. Ullrich, *Theoretical investigation of the thermal stability of nanoscale layered systems*, Mater. Sci. Forum **294-296**, 613-616 (1999).
4. M. Hentschel, M. Bobeth, G. Diener, and W. Pompe, *Theoretical analysis of the evolution of composition profiles in nanoscale multilayers*, Mater. Sci. Forum **287-288**, 473-476 (1998).
3. B. Kämpfer, O. P. Pavlenko, A. Peshier, M. Hentschel, and G. Soff, *Electromagnetic and charmed probes of deconfined matter*, in: Proceedings of International Workshop XXV on Gross Properties of Nuclei and Nuclear Excitations, Hirschegg, pp. 97-104 (1997).
2. B. Kämpfer, A. Peshier, M. Hentschel, G. Soff, and O. P. Pavlenko, *Electromagnetic signals from deconfined matter resulting from ultrarelativistic heavy-ion collisions*, in: Structure of vacuum & Elementary matter (Editors: H. Stöcker, A. Gallmann, J. H. Hamilton), World Scientific Singapore, pp. 483-490 (1997).
1. B. Kämpfer, O. P. Pavlenko, A. Peshier, M. Hentschel, and G. Soff, *Estimates of dilepton and photon yields from deconfined matter produced in ultrarelativistic heavy-ion collisions*, in: Advances in Nuclear Dynamics (Editors: W. Bauer and G. Westfall), Plenum Press New York, pp. 285-290 (1996).

Other Proceedings and Articles

6. M. Hentschel, *Three Ways to Achieve Directional Emission from Optical Microcavities and Microlasers*, in: Scientific Report of the MPIPES Dresden 2007-2008 (Editors: J.-M. Rost, S. Flach, and U. Gneiß), pp. 107-108 (2009).
5. G. Tkachov and M. Hentschel, *Dirac fermions on graphene edges: Parity violation and quantum Hall physics*, in: Scientific Report of the MPIPES Dresden 2007-2008 (Editors: J.-M. Rost, S. Flach, and U. Gneiß), pp. 108-109 (2009).
4. S. Bandopadhyay, G. Röder, and M. Hentschel, *Many-body effects in the mesoscopic x-ray edge problem*, in: Scientific Report of the MPIPES Dresden 2005-2006 (Editors: F. Jülicher, S. Flach, and U. Gneiß), pp. 147-150 (2007).
3. M. Hentschel, *Auf die Größe kommt es an*, in: Jahrbuch der Max-Planck-Gesellschaft 2007, (Editor: Generalverwaltung der Max-Planck-Gesellschaft München), pp. 491-495 (2007).

2. M. Hentschel, *Mesoscopic physics of electronic and optical systems*, in: Second IUPAP International Conference on Women in Physics (Editors: B. K. Hartline and A. Michelman-Ribeiro), AIP Conference Proceedings **795**, 205 (2005).
1. M. Hentschel, D. Frustaglia, and K. Richter, *Aharonov-Bohm ring as a spin switch*, in: Scientific Report of the MIPPKS Dresden 2000-2001, pp. 131-134 (2002).

Patents

1. H. Heidrich, M. Hentschel, D. G. Rabus, M. Hamacher, and K. Richter, "Monolithisch integrierter Mikrolaser mit einem nur eine Spiegelebene aufweisenden Zirkularresonator", Patent application filed at 3rd of July, 2001 under filing number DE 101 32 479.0 (Deutsches Patent- und Markenamt, Germany)
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Invited Talks on International Conferences

15. International Workshop on Microcavities and their Applications, Seoul, Korea, August 2011.
14. International Lorentz Workshop "Beam shifts: Analogies between light and matter waves", Leiden, The Netherlands, March 2011.
13. M. Hentschel, *Honey, I shrunk the laser!*, Invited Plenary Talk (Hertha Sponer Prize Talk), 75. Physikertagung der DPG, Dresden, Germany (March 15, 2011).
12. International Summer School "Mesoscopic Physics in Complex Media", Institute of Scientific Studies in Cargèse (IESC), Corsica, France, July 12-16, 2010 (*not accepted*).
11. International Conference "Nonlinear Dynamics in Quantum Systems", Siberian Federal University, Krasnoyarsk, Russia, July 6-10, 2009 (*not accepted*).
10. 7th International Christmas Symposium, CAMTP Maribor, Slovenia, December 11-13, 2008 (*not accepted*).
9. M. Hentschel, *Fermi-edge singularities in the photoabsorption spectra of mesoscopic systems*, International Workshop "Nonequilibrium Nanostructures", MPIPKS Dresden, Germany (December 5, 2008).
8. M. Hentschel, *Localization of modes and directional emission from optical microcavities*, International Conference "Nice Days of Waves in Complex Media", Université Sophia Antipolis de Nice, France (November 27, 2008).
7. M. Hentschel, *Quantum chaos and non-Hamiltonian dynamics in optical microcavities*, NATO Advanced Workshop "Recent Advances in Nonlinear Dynamics and Complex System Physics: From Natural to Social Sciences and Security", Tashkent, Uzbekistan (October 9, 2008).
6. International Conference "From Nanodevices to Biomolecules: 50 years after Anderson and Landauer", Córdoba, Argentina, September 8-12, 2008 (*not accepted*).
5. M. Hentschel, *Incorporating wave effects in ray billiards: Challenging ray-wave correspondence in open systems*, International Workshop "Chaos and Collectivity in Many-Body Systems", MPIPKS Dresden, Germany (March 8, 2008).
4. M. Hentschel, *From the phase-space representation of optical microcavities to an improved ray dynamics*, Invited Talk (Hauptvortrag), 72. Physikertagung der DPG, Berlin, Germany (February 28, 2008).
3. M. Hentschel, *Lessons from the phase-space representation of optical microresonators*, International Conference "Chaos and Complex Systems 2006", Monastery of Novacella/Kloster Neustift, Brixen, Italy (October 9, 2006).
2. M. Hentschel, *Many-body effects in mesoscopic systems – The x-ray edge problem from metals to quantum dots*, International Conference "Quantum Mechanics and Chaos" (QMC 2006), Osaka City University, Osaka, Japan (September 19, 2006).

1. M. Hentschel, *Optical Microresonators: News from the Theoretician for the Experimentalist*, International Workshop “Microlasers”, Advanced Telecommunication Research Institute (ATR), Kyoto, Japan (September 15, 2006).

Invited Seminar and Colloquium Talks

36. M. Hentschel, *Quantum chaos in optical microcavities: From the Goos-Hänchen shift to non-Hamiltonian dynamics and directional light emission*, Seminar, Institute for Solid State and Materials Research (IFW), Dresden, Germany (April 30, 2010).
35. M. Hentschel, *Mesoscopic systems between quantum chaos and many-body effects*, Invited talk, Fachbereich Physik, Freie Universität Berlin, Germany (October 12, 2009).
34. M. Hentschel, *Statt MeV mal meV: Ein Exkurs ins Mesoskopische*, Invited talk (Honorary colloquium for B. Kämpfer), Forschungszentrum Dresden, Germany (June 3, 2009).
33. M. Hentschel, *Mesoskopische Systeme: Zwischen Quantenchaos und Vielteilchenphänomenen*, Invited talk, Department Physik, Universität Hamburg, Germany (February 11, 2009).
32. M. Hentschel, *Mesoskopische Effekte in Quantenpunkten und optischen Kavitäten*, Invited talk, Fakultät für Physik, Universität Erlangen-Nürnberg, Germany (February 3, 2009).
31. M. Hentschel, *Mesoskopische Systeme: Zwischen Quantenchaos und Vielteilchenphänomenen*, Invited talk, Fakultät für Physik und Astronomie, Ruhr-Universität Bochum, Germany (January 14, 2009).
30. M. Hentschel, *Optical microcavities: From quantum chaos with non-Hamiltonian dynamics to directional emission*, Seminar, Institut für Optik, Information und Photonik (Max-Planck-Forschergruppe), Universität Erlangen, Germany (December 9, 2008).
29. M. Hentschel, *The mesoscopic x-ray edge problem: From chaotic to integrable quantum dots and to graphene*, Seminar, Centro Atomico Bariloche, Argentina (November 12, 2008).
28. M. Hentschel, *Quantum chaos in optical microcavities: From the Goos-Haenchen shift to non-Hamiltonian dynamics and directional light emission*, Seminar, Laboratorio Tandar (Quantum Chaos Group), CNEA, Buenos Aires, Argentina (November 10, 2008).
27. M. Hentschel, *Incorporating wave effects in ray billiards: Non-Hamiltonian dynamics in optical microcavities*, Colloquium Quantum Dynamics, Universität Heidelberg, Germany (June 4, 2008).
26. M. Hentschel, *Fermi-edge singularities in mesoscopic systems: From quantum dots to graphene*, Seminar, Imperial College London, London, Great Britain (April 29, 2008).
25. M. Hentschel, *When small is different: An excursion into the mesoscopic world*, Colloquium of the Physics Department, University of St. Andrews, St. Andrews, Great Britain (April 25, 2008).
24. M. Hentschel, *Optische Mikroresonatoren: Erkenntnisse aus der Phasenraumdarstellung*, Talk, Freie Universität Berlin, Germany (December 7, 2007).
23. M. Hentschel, *Fermi-edge singularities in mesoscopic systems: From quantum dots to graphene*, Seminar, Instituto de Ciencia de Materiales, Madrid, Spain (November 13, 2007).
22. M. Hentschel, *Many-body effects in mesoscopic systems: From quantum dots to graphene*, Colloquium, Martin-Luther-Universität Halle-Wittenberg, Germany (October 24, 2007).

21. M. Hentschel, *Optical interfaces: When, and why, curvature matters*, Asian-German Miniworkshop on Optical Microcavities, MPIPKS Dresden, Germany (July 12, 2007).
20. M. Hentschel, *Many-body effects in mesoscopic systems*, Theoriekolloquium des Fachbereichs Physik, Technische Universität Darmstadt, Germany (February 5, 2007).
19. M. Hentschel, *Fermi-edge singularities in the mesoscopic regime*, Seminar, Fachbereich Physik, Universität Frankfurt am Main, Germany (June 22, 2006).
18. M. Hentschel, *The x-ray edge problem: From metals to nanosystems - from rounded to peaked edge*, Seminar, Physics Department, Chiba University, Chiba, Japan (December 14, 2005).
17. M. Hentschel, *Asymmetric optical microcavities: Ray-wave correspondence put to test*, Seminar, Physics Department, Pai Chai University, Daejeon, Korea (November 25, 2005).
16. M. Hentschel, *Many-body effects in mesoscopic systems: Fermi-edge singularities in photoabsorption spectra of chaotic nanosystems*, Quantum Transport Seminar, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea (November 24, 2005).
15. M. Hentschel, *Optical microresonators: Ray-wave correspondence put to test*, Seminar, Physics Department, Busan National University, Busan, Korea (November 23, 2005).
14. M. Hentschel, *Goos-Hänchen effect at curved dielectric interfaces: Effects in the far field radiation characteristics of microlasers*, V. Workshop on Classical and Quantum Billiards, Göttingen, Germany (September 29, 2005).
13. M. Hentschel, *The mesoscopic x-ray edge problem: From rounded to peaked edge*, Seminar, Institut für Theoretische Festkörperphysik, Freie Universität Berlin, Germany (June 2, 2005).
12. M. Hentschel, *Fermi-edge singularities in the mesoscopic regime: From rounded to peaked edge*, Seminar, Instituto de Física, Universidade de Estado do Rio de Janeiro, Rio de Janeiro, Brazil (May 20, 2005).
11. M. Hentschel, *Many-body effects in the mesoscopic regime*, Lecture, Material Science Center, Rijksuniversiteit Groningen, The Netherlands (March 2, 2005).
10. M. Hentschel, *Charge qubits for quantum computation: Chances and limitations*, Seminar, Department of Physics, Duke University, Durham, USA (October 20, 2004).
9. M. Hentschel, *Anderson orthogonality catastrophe and Fermi-edge singularities in mesoscopic photoabsorption spectra*, Workshop and Seminar on Cooperative Phenomena in Optics and Transport in Nanostructures, Max-Planck-Institut für Physik komplexer Systeme, Dresden, Germany (June 18, 2004).
8. M. Hentschel, *Optical microresonators: Rays, waves, and semiclassics*, Colloquium of the Physics Department, University of Missouri at Rolla, USA (October 9, 2003).
7. M. Hentschel, *Quantum chaos and semiclassics in optical microresonators*, Seminar, Institut für Theoretische Physik, Universität Regensburg, Germany (September 26, 2003).
6. M. Hentschel, *The mesoscopic x-ray edge problem*, Seminar, Max-Planck-Institut für Physik komplexer Systeme, Dresden, Germany (September 23, 2003).
5. M. Hentschel, *Anderson orthogonality catastrophe and the x-ray edge problem in mesoscopic systems*, Seminar, Institut für Theoretische Festkörperphysik, Universität Karlsruhe, Germany (September 12, 2003).
4. M. Hentschel, *Optical Microcavities: Rays, Waves, and Semiclassics*, Kolloquium des SFB 513, Fachbereich Physik, Universität Konstanz, Germany (December 19, 2002).

3. M. Hentschel, *Spin-dependent transport in ballistic rings*, Seminar, Institut für Experimentelle und Angewandte Physik, Universität Regensburg, Germany (June 6, 2002).
2. M. Hentschel, *Mesoscopic wave phenomena in electronic and optical ring structures*, Seminar, Institut für Technische Physik, Theoretische Quantenelektronik, DLR Stuttgart, Germany (December 10, 2001).
1. M. Hentschel, *Chaos and regularity in optical systems: Annular billiard as example*, Seminar, Laboratoire de Physique Théorique et Modèles Statistiques (LPTMS), Orsay, France (September 25, 2001).