

Biographical Information — Ulrich D. Jentschura

(a) Professional Preparation

Undergraduate Institution

Munich University M.Sc. (“Diplom” in Physics) “Highest Honors” (1996)

Graduate Institution

Tech. University Dresden Ph.D. in Physics “Summa Cum Laude” (1999)

Postdoctoral Institution

Tech. University of Dresden Habilitation (Theor. Phys.) Obtained in 2003

Chronological Postdoctoral Institutions

Tech. University of Dresden QED and Field Theory (1999–2002)

University of Freiburg Laser Physics (2002–2004)

MPI Heidelberg QED and Nuclear Physics (2004–2008)

(b) Appointments

- Full Professor of Physics, Missouri S & T, Rolla, Missouri, 2015–present
- Associate Professor of Physics, Missouri S & T, Rolla, Missouri, 2013–2015
- Title of Adjunct Professor of Physics, Heidelberg University, Germany, 2009–present
- Assistant Professor of Physics, Missouri University of Science and Technology, Rolla, Missouri, 2009–present
- Heisenberg Fellow and Group Leader, Max–Planck–Institute for Nuclear Physics, Heidelberg, 2004–2008
- Postdoctoral Research Associate, University of Freiburg, 2002–2004
- Postdoctoral Research Associate, Technical University Dresden, 1999–2002

(c) Publications

(i) *Some Important Recent Publications*

1. U. D. Jentschura, “Non–Resonant Two–Photon Transitions in Length and Velocity Gauges”, *Phys. Rev. A* **94**, 022117 (2016).
2. J. H. Joble and U. D. Jentschura, “Dirac Hamiltonian and Reissner–Nordström Metric: Coulomb Interaction in Curved Space–Time”, *Phys. Rev. A* **93**, 032108 (2016).
3. U. D. Jentschura, G. Lach, M. De Kieviet and K. Pachucki, “One–Loop Dominance in the Imaginary Part of the Polarizability: Application to Blackbody and Non–Contact Quantum Friction”, *Phys. Rev. Lett.* **114**, 043001 (2015).
4. U. D. Jentschura, “Long-range atom-wall interactions and mixing terms: Metastable hydrogen”, *Phys. Rev. A* **91**, 010502(R) (2015).
5. U. D. Jentschura, “Gravitational Correction to Vacuum Polarization”, *Phys. Rev. A* **91**, 022112 (2015).

(ii) *Other Important Publications*

1. U. D. Jentschura and J. H. Noble, “Nonrelativistic Limit of the Dirac–Schwarzschild Hamiltonian: Gravitational Zitterbewegung and Gravitational Spin–Orbit Coupling,” *Phys. Rev. A* **88**, 022121 (2013).
2. E. Lötstedt and U. D. Jentschura, “Triple Compton effect: A photon splitting into three upon collision with a free electron,” *Phys. Rev. Lett.* **108**, 233201 (2012).
3. G. Lach, U. D. Jentschura and M. DeKieviet, “Enhancement of Blackbody Friction due to the Finite Lifetime of Atomic Levels,” *Phys. Rev. Lett.* **108**, 043005 (2012).
4. U. D. Jentschura, “Relativistic Reduced–Mass and Recoil Corrections to Vacuum Polarization in Muonic Hydrogen, Muonic Deuterium and Muonic Helium Ions,” *Phys. Rev. A* **84**, 012505 (2011).
5. U. D. Jentschura and V. G. Serbo, “Generation of High–Energy Photons with Large Orbital Angular Momentum by Compton Backscattering,” *Phys. Rev. Lett.* **106**, 013001 (2011) (*title page*).

Since 1996, the PI has published a total of 200 refereed articles, and 17 refereed articles in proceedings volumes, as documented at the URL <http://web.mst.edu/~jentschurau>.

(d) **Synergistic Activities and Awards**

Service to the American Physical Society as a Reviewer and Member of the Editorial Board of *Physical Review A* (2011–2016), which is the standard international scientific journal for experimental and theoretical atomic physics. Member of the Editorial Board of the Journal “Atoms” (MDPI Publishing, Basel, Switzerland).

Reviewer for *Physical Review A*, *B*, *D*, and *Letters*, and for the Institute of Physics (UK), for the *Journal of Physics A*, and for *Europhysics Letters*,

Development of algorithms for problem solving: A brief, readable account of convergence acceleration methodology is given in the *preprint math.NA/0202009*, which was published as U. D. Jentschura, S. V. Aksenov, P. J. Mohr, M. A. Savageau and G. Soff, “Convergence Acceleration Techniques,” Proceedings of the Nanotech–2003 Conference in San Francisco (USA), Vol. II, pp. 535–537. See also *Compu. Phys. Commun.* **116**, 28 (1999) and *Compu. Phys. Commun.* **150**, 1 (2003), and *Comput. Phys. Commun.* **183**, 506 (2012).

Member of the International Advisory Board of PSAS–2008 (Precision Physics of Simple Atomic Systems), Windsor, Canada, 2008, and of International Advisory Board of PSAS–2012 (Precision Physics of Simple Atomic Systems), Eltville, Germany, 2012; Member of the Organization Committee of the High–Precision Physics Conference in Cargèse, Corsica, France (2017).

Georg–Helm–Prize of the University of Technology, Dresden, for the PhD thesis (2000); Heisenberg Award by Deutsche Forschungsgemeinschaft (2005); Outstanding Referee Award of the APS (2009); Fellow of the American Physical Society (2013); Faculty Research and Faculty Excellence Awards (Missouri S & T University).