

Biographical Information for Georg A. Raithel

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Professional Preparation:

- 7/86 - 12/87 : Diploma of Physics (grade 0.7 = best possible grade) at the University of Munich. Advisor: Prof. H. Walther.
- 2/88 - 3/90 : Scientific assistant and graduate education at the University of Munich, Am Coulombwall 1, 85748 Garching, Germany. Ph. D. in Physics (summa cum laude). Advisor: Prof. H. Walther.
- 4/90 - 8/95 : Scientific assistant and Habilitation at the University of Munich, Am Coulombwall 1, 85748 Garching, Germany.
- 9/95 - 8/97 : Post-doctoral research, experimental atomic physics, NIST, Gaithersburg, MD.

Appointments:

- 9/04 - : Professor of Physics, University of Michigan.
- 9/02 - 8/04 : Associate Professor of Physics, University of Michigan.
- 9/97 - 8/02 : Assistant Professor of Physics, University of Michigan.

Ten recent publications:

1. "Angular-momentum couplings in long-range Rb₂ Rydberg molecules," D. A. Anderson, S. A. Miller, G. Raithel, Phys. Rev. **A 90**, 062518 (2014).
2. "Photoassociation of long-range nD Rydberg molecules," D. A. Anderson, S. A. Miller, and G. Raithel, Phys. Rev. Lett. **112**, 163201 (2014).
3. "Atom trapping and spectroscopy in cavity-generated optical potentials," Yun-Jhih Chen, Stefan Zigo, and Georg Raithel, Phys. Rev. **A 89**, 063409 (2014).
4. "Sub-Wavelength Imaging and Field Mapping via EIT and Autler-Townes Splitting In Rydberg Atoms," C. L. Holloway, J. A. Gordon, A. Schwarzkopf, D. A. Anderson, S. A. Miller, N. Thaicharoen and G. Raithel, Appl. Phys. Lett. **104**, 244102 (2014).
5. "Pressure-driven evaporative cooling in atom guides," S. E. Olson, G. Raithel, A. J. Christlieb, Phys. Rev. **A 90**, 043612 (2014).
6. "Ionisation of Rydberg atoms by standing-wave light fields," Sarah E. Anderson and G. Raithel, Nature Communications **4**, Article number 2967 (2013).
7. "Dependence of Rydberg-Atom Optical Lattices on the Angular Wave Function," S. E. Anderson and G. Raithel, Phys. Rev. Lett. **109**, 023001 (2012).
8. "Trapping Rydberg atoms in an optical lattice," S. E. Anderson, K. C. Younge, and G. Raithel, Phys. Rev. Lett. **107**, 263001 (2011).
9. "Spatial correlations between Rydberg atoms in an optical dipole trap," A. Schwarzkopf, D. A. Anderson, N. Thaicharoen, and G. Raithel Phys. Rev. **A 88**, 061406(R) (2013).

10. “Production and trapping of cold circular Rydberg atoms,” D. Anderson, A. Schwarzkopf, R. Sapiro, and G. Raithel, Phys. Rev. **A 88**, 031401 (2013).

Synergistic Activities:

Regular teaching activities and supervision of undergraduate and graduate students. Classes taught include graduate and undergraduate classical mechanics, electromagnetism and quantum mechanics, a graduate course on Advanced Topics in AMO Physics (team-taught course), undergraduate introductory courses, modern physics, and labs.

Associate Chair for Research at the Physics Department (2009-2012), University of Michigan.

Regular participation in the NSF REU program.

Teaching of a course in the Michigan Math and Science Scholars (MMSS) program, which is a series of two-week summer courses for high-school students (www.math.lsa.umich.edu/mmss).

Organizer, movie producer and webmaster for the Michigan Physics Olympiad (<http://olympiad.physics.lsa.umich.edu/>).

Collaborators and Other Affiliations:

Recent collaborators: Dr. Chris Holloway, NIST (Boulder, Colorado). Prof. Jianming Zhao, Shanxi University, Taiyuan, China.

PI’s thesis advisor: Prof. Herbert Walther, Ludwig-Maximilians-Universität München, Am Coulombwall 1, D-85748 Garching, Germany. (Passed away.)

PI’s post-graduate sponsor: Prof. William D. Phillips, National Institute of Standards and Technology, Gaithersburg, MD 20899-0001.

5 post-docs sponsored: J. R. Guest, University of Michigan, B. K. Teo, University of Michigan, M. Shah, University of Kansas, Betty Slama, Columbia University, Rachel Sapiro, University of Michigan.

28 graduate students sponsored: David Anderson, Sarah Anderson, Yun-Jih Chen, Jae-Hoon Choi, David Feldbaum, Brenton Knuffman, Tara Cubel Liebisch, Subrata Dutta, Cornelius Hempel, Rahul Mhaskar, Stephanie Miller, Kailin Moore, Melinda Morang, Natalya Morrow, Eric Paradis, Spencer Olson, Andira Ramos, Aaron Reinhard, Rachel Sapiro, Andrew Schwarzkopf, Boonkeng Teo, Nithiwadee Thaicharoen, Mallory Traxler, Alisa Walz-Flannigan, Caglar Yavuz, Kelly Younge, Rui Zhang, Xuhuai Zhang, all at the University of Michigan.