

## **Paul David Lett**

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### Employment

Physicist, Laser Cooling Group, Atomic Physics Division,  
National Institute of Standards and Technology (formerly the National Bureau of  
Standards) (1989-present)  
Fellow of the NIST/U. Maryland. Joint Quantum Institute and Adjunct Professor  
of Physics, University of Maryland (2006 - present)  
Postdoctoral Fellow, Electricity Division, National Bureau of Standards (1986-89)

### Education

Ph.D., Physics, University of Rochester, Rochester, NY, 1986  
M.A., Physics, University of Rochester, Rochester, NY, 1982  
B.S., Physics and Math, Marquette University, Milwaukee, WI, 1980

### Research

My present research activities involve the cooling and trapping of neutral atoms, the study of ultracold atomic collisions, photoassociation spectroscopy, and the use of neutral atoms for quantum information processing. In addition to laser cooling and atom optics studies, we have developed the technique of ultracold photoassociation spectroscopy in ultracold atomic vapors and Bose-Einstein condensates. Experiments in nonlinear optics and squeezed-light/correlated photon generation and the interaction of these light sources with cold atoms are also underway. The Ph.D. degree was obtained under the supervision of Professor Leonard Mandel in the field of experimental quantum optics. It concerned the theory and measurement of photon statistics and intensity fluctuations in cw dye lasers.

### Honors

- 2004 Bourke Lectureship awarded by the Faraday Division of the Royal Society of Chemistry, UK
- Fellow of the Optical Society of America 2003
- 1999 Arthur S. Flemming Award for service to the Federal Government
- 1999 NIST Equal Employment Opportunity/Diversity Award
- Fellow of the American Physical Society, 1996
- Department of Commerce Silver Medal, 1996
- NIST Sigma Xi Outstanding Young Scientist Award, 1993

### Professional Activities

- Member of the editorial board of *Quantum and Semiclassical Optics*, the Journal of the European Optical Society - B (1997-9).
- Visiting Professor, Laboratoire Aime Cotton, Orsay, France, March-April, 1997.
- Member of National Research Council Committee on Atomic, Molecular, and Optical Science (CAMOS), 1999-2000
- Quantum Electronics and Laser Science 2007 conference Program co-chair (with M. Segev)
- Co-director of the "SURFing the Physics Laboratory" program at NIST, a summer undergraduate research fellowship program that is part of the NSF Research Experiences for Undergraduates (REU) network (1997-present).