

## **2004 PMFC Election Candidates**

**Vice Chair** (two candidates)

- [Siu Au Lee](#)
- [David S. Weiss](#)

**Secretary Treasurer** (two candidates)

- [David A. Church](#)
- [Paul Vetter](#)

**Executive Committee** (four candidates)

- [Dana J. Berkeland](#)
  - [Wonho Jhe](#)
  - [Michael Romalis](#)
  - [Edwin R. Williams](#)
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### ***Vice Chair***

#### **Siu Au Lee**

**Positions:** Professor of Physics, Colorado State University (faculty member since 1982); Senior Research Fellow, Caltech (1980-82); Assistant Physicist, Argonne National Laboratory (1979-80); Postdoctoral Fellow, JILA (1976-78); Ph.D., Stanford University (1976).

**Main Research Interests:** Laser manipulation of atoms with applications to atom interferometry and atom lithography. Precision tests of QED and search for axions.

**Other Activities:** Fellow, American Physical Society - DAMOP, DLS, TG/PMFC, 4 corners; Fellow, Optical Society of America. TG/PMFC Executive committee (99-01) and nominating committee chair (01); DAMOP fellowship committee (03-05) and nomination committee (00); Program committee QELS (03); NRC Committee on Atomic, Molecular and Optical Physics (93-96). NIST Precision measurement grant (96-99).

#### **David S. Weiss**

**Positions:** Associate Professor, Penn State University (2001-present); Assistant Professor, U.C. Berkeley (1994-2001); Postdoc, Ecole Normale Supérieure (1993-4); PhD, Stanford University, 1993 (A precision measurement of the fine structure constant using atom interferometry).

**Main Research Interests:** My primary interest is to develop the methods of laser cooling and atom trapping and apply them to precision measurements and other physical problems. In my group, we are currently using an all-optical BEC to study reduced dimensional systems of bosons (like the Tonks-Girardeau gas) and quantum phase transitions in periodic potentials, conducting a search for the electron

electric dipole moment using Rb and Cs in optical lattices, and developing quantum computing tools using neutral atoms in optical lattices.

**Other Activities and Awards:** Executive Committee Member at Large of APS-GPMFC, 2001-present; Packard Fellow, 1997-2002; Sloan Fellow, 1997-8; N.S.F. CAREER grant, 1996-2001; O.N.R. Young Investigator, 1995-98; Churchill Scholar (1986).

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## ***Secretary Treasurer***

### **David A. Church**

**Positions:** Faculty, Texas A&M University, 1975- present, Professor of Physics 1984 – present; Physicist, LBNL 1972 – 75; Postdoctoral Associate, University of Arizona 1971-72, University of Mainz, Ge 1969-71; University of Bonn, Ge 1969; Ph. D. University of Washington, Seattle 1969.

**Main Research Interests:** laser spectroscopy of cold, confined ions including hfs and bound state electron g-factor of highly-charged H-like ions; lifetime measurements of allowed and forbidden ionic transitions, electron capture by multiply-charged low-energy ions; ion confinement and capture techniques, coherence effects in atomic transitions.

**Other Activities/Awards:** NBS/NIST Precision Measurement Grant 1981-83; Fellow, APS 1986; Member APS DAMOP, DLS, GPMFC

### **Paul Vetter**

**Positions:** Physicist/Staff Scientist, Nuclear Science Division, Lawrence Berkeley National Laboratory (1998-Present); Visiting Postdoctoral Fellow, Nuclear Science Division, LBNL (1995-1998); Ph.D., University of Washington, Seattle (1995).

**Main Research Interests:** Experimental tests of the Standard Model at low energies: atomic parity violation, nuclear beta decay. Precise measurements of beta decay correlations to search for new Weak physics. High precision measurements on superallowed beta decay to test unitarity of the CKM matrix. Tests of QED and discrete symmetries in positronium. Precise spectroscopy of radioactive atoms. Intersection of atomic and nuclear experimental techniques.

**Other Activities/Awards:** APS DAMOP Thesis Prize, 1997; Member, APS DAMOP, APS DNP, APS TG/PMFC; LBNL Outstanding Performance Award, February 2000.

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## ***Executive Committee***

### **Dana J. Berkeland**

**Positions:** Technical Staff Member, LANL (2000-present); J. Robert Oppenheimer Fellow, LANL (1998-2000); National Research Council Fellow, NIST (1995-1998); PhD, Yale (1995); BA, UC Berkeley (1988)

**Main Research Interests:** Tests of fundamental quantum mechanics using single trapped ions, precise laser spectroscopy of trapped ions and neutral atoms, quantum information science and technology, simulation of many-body quantum systems using trapped ions

**Other Activities and Awards:** Member APS (DAMOP, DLS, TG/PMFC); Member OSA; LANL Postdoctoral Publication Prize in Experimental Science; LANL Women's Career Development Mentoring Award; R&D 100 Award

## Wonho Jhe

**Positions:** Prof. of Phys. (1992-present) Seoul National Univ.; Visiting Fellow, JILA (2000-2002); Asso. Mem., Int'l Cent. for Theo. Phys. (ICTP) (1998-2002); Postdoc. Asso., Harvard Univ. (1989-1992, with G. Gabrielse); Visiting scientist, CERN (1990-1992, single p and pbar); Ph.D., Yale Univ. (1989, advisor: S. Haroche and E. A. Hinds).

**Main Research Interests:** Tests of fundamental symmetries using cold antiprotons and antihydrogens. More recent research interests include precision spectroscopy and nonlinear dynamics in trapped atoms, quantum/nano optics, cavity QED.

**Other Activities and Awards:** Program/advisory committee/chair (APS/DLS, IQEC, QELS, ICAP, ICOLS, NFO etc). Member AAAS, DAMOP, APS/TGPMFC. Mildred Jordan Tuttle Fellowship, Yale Univ. (1984 - 1986). National Research Initiative Award, Korean ministry of Sci. & Tech. (1997-present).

## Michael Romalis

**Positions:** Assistant Professor, Princeton University (2002 - ), Assistant Professor, University of Washington (1999-2001), Post-doctoral associate, University of Washington (1997-1999), Ph.D. Princeton University (1997)

**Main Research Interests:** Precision measurements with spin-polarized atoms, searches for a permanent EDM and violation of Lorentz invariance, development of sensitive atomic magnetometers and co-magnetometers, studies of non-linear interaction effects in spin-polarized gases and liquids, interdisciplinary applications of atomic magnetometers.

**Other Activities and Awards:** DOE Young Investigator Award (2000), Packard Fellowship (2001), NIST Precision Measurement grant (2000-2003). Member APS, DAMOP, DNP, TG/PMFC

## Edwin R. Williams

**Positions:** Physicist (1971-present) Quantum Electrical Metrology Division, NIST; Postdoctoral Assoc. Williams College 1970-1971; PhD, Wesleyan Univ. 1970.

**Main Research Interests:** Test Coulomb's law and Photon rest mass. Measure the fine-structure-constant via proton gyromagnetic ratio. Single electron tunneling and Quantum Hall experiments. Presently working to replace the SI artifact kilogram with a quantum realization (watt balance).

**Other Activities/Awards:** Dept. of Commerce, DOC, Silver Metal 1980, DOC Gold metal 1989, NIST Stratton Award for outstanding research 1999. APS Fellow, PMFC Executive Committee 1997-1999. IEEE, Sigma Xi.