

BIOGRAPHICAL SKETCH

KIMBALL ALAN MILTON

Current Position. George Lynn Cross Research Professor of Physics, Emeritus, University of Oklahoma 2017–

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Previous Positions.

George Lynn Cross Research Professor of Physics, University of Oklahoma 2007–16
Professor of Physics, University of Oklahoma 1986–2007
E. T. Jaynes Visiting Professor, Washington University, 2005–6
Senior Visiting Fellow, Theoretical Physics Group, Imperial College 1995
Visiting Professor, Department of Physics, Ohio State University 1989
Associate Professor and Professor, Department of Physics, Oklahoma State 1981–86
Visiting Associate Professor, Department of Physics, Ohio State University 1979–81
Adjunct Assistant and Associate Professor, Department of Physics, UCLA 1971–81

Education.

Ph.D., Harvard University 1971
A.M., Harvard University 1968
B.S., University of Washington 1967

Honors and Grants.

Principal Investigator, NSF Grants for Casimir-Polder Interactions 2017–25
Fellow, American Physical Society 2014–
Simons Fellow, Laboratoire Kastler Brossel, Paris 2013–14
Principal Investigator, Julian Schwinger Foundation grant 2012–15
Foreign member, Royal Norwegian Society of Sciences and Letters Academy 2011–
Principal Investigator, NSF grants for Quantum Vacuum Energy 2006–2013
Fellow, UK Institute of Physics 2004–
Principal Investigator, NSF Collaborative Grant (with I. Solovtsov, Dubna) 1996–00
UK PPARC Senior Visiting Fellowship 1995
Principal Investigator, Theory Task, Department of Energy Grant 1987–13
Co-Principal Investigator, Department of Energy Grant 1981–86
Regents' Award for Superior Research 1991
Associates Distinguished Lecturer 1988–89
NSF Predoctoral Fellow 1967–71
Woodrow Wilson Fellow 1967–68

SELECTED RECENT RESEARCH PAPERS AND BOOKS (TOTAL PUBLICATIONS=313)

- *Classical Electrodynamics, Second Edition*, (K. A. Milton and J. Schwinger) CRC Press, 2024.
- Vacuum torque, propulsive forces, and anomalous tangential forces: Effects of nonreciprocal media out of thermal equilibrium, (K. A. Milton, X. Guo, G. Kennedy, N. Pourtolami, and D. M. DelCol) *Phys. Rev. A* **108**. 022809 (2023).
- Negativity of the Casimir self-entropy in spherical geometries (Y. Li, K. A. Milton, P. Parashar, and L. Hong), *Entropy* **23**, 214 (2021).
- Quantum Electromagnetic Stress Tensor in an Inhomogeneous Medium (P. Parashar, K. A. Milton, Y. Li, H. Day, X. Guo, S. A. Fulling, I. Cervero-Peláez), *Phys. Rev. D* **97**, 125009 (2018),

- Casimir-Polder repulsion: Three-body effects (K.A. Milton, E.K. Abalo, P. Parashar, N. Pourtolami, I. Brevik, S. Ellingsen, S.Y. Buhmann, and S. Scheel), *Phys. Rev. A* **91**, 042510 (2015).
- The Casimir Force: Feeling the Heat, *Nature Physics*, **7**, 190–191 (2011).
- Exact results for Casimir interactions between dielectric bodies (with P. Parashar and J. Wagner), *Phys. Rev. Lett.* **101**, 160402 (2008).
- Theoretical and Experimental Status of Magnetic Monopoles, *Rep. Prog. Phys.* **69**, 1637–1711 (2006).
- *Electromagnetic Radiation: Variational Principles, Waveguides, and Accelerators* (with J. Schwinger), Springer, Berlin, 2006.
- *The Casimir Effect: Physical Manifestations of Zero-Point Energy*, World Scientific, Singapore, 2001.
- *Climbing the Mountain: The Scientific Biography of Julian Schwinger* (with J. Mehra), Oxford University Press, 2000.