

Curriculum Vitae

Barbara Maria Hoeling

Personal Information:

Address: Physics Department
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Phone: (909) 869 - 2374

Date of Birth: November 5, 1961

Place of Birth: Saarbruecken, Germany

Nationality: German, Permanent Resident Status in U.S.A.

Marital Status: Married, two children (born 1991 and 1994)

Languages: Fluent in English, French and German

Educational Background:

1972-1980 Marienschule Saarbruecken (High School)

1980-1983 University of Heidelberg, major Physics and Astronomy

1982 Vordiplom in Physics

1983-1984 Exchange Student at Arizona State University, Tempe, Arizona.

1985-1986 Diplom thesis work at the Max Planck Institute for Nuclear Physics in Heidelberg and at CERN in Geneva, Switzerland.
Title of Thesis: "Studies for the construction of a calorimeter target for deep inelastic muon scattering".

1986 Diplom in Physics

1987-1990 Doctoral thesis work at the Max Planck Institute for Quantum Optics in Garching near Munich.
Title of thesis: "A laser gyroscope for a measurement of the Earth's rotation".

1990 Ph.D. in Physics

1991-1994 Postdoc at the University of Southern California, Los Angeles, funded by a 2 year fellowship of the Deutsche Forschungsgemeinschaft.
(11 months on maternity leave).

1996-2001 Assist in research at the Optical Coherence Microscope Project at Harvey Mudd College (HMC), Claremont, CA
Teaching part time at various undergraduate colleges (Pomona College, HMC, Cal Poly Pomona, Azusa Pacific University)

July 2001-July 2002 High-Tec EDV-Systeme, Saarbruecken, Germany:
Computer simulations for an electric Golf cart

Sept 2002-Febr 2004 Research Assistant Professor at the Optical Coherence Microscopy Project at HMC, funded by NSF grant. Teaching at HMC.

Fall 2004-Summer 2007 Visiting Assistant Professor at Pomona College

Fall 2007 – present Assistant Professor at California State Polytechnic University, Pomona

Selected Publications (of 18):

1. B. Hoeling, G. Leuchs, H. Ruder, M. Schneider: "An Argon ion ring laser as a gyroscope", Appl. Phys. B55, p. 46-50 (1992).
2. B. Hoeling, R.J. Knize: "Laser Sisyphus cooling in a Magnetic Trap", Optics Communications 106, 202-206 (1994).
3. B. Hoeling, J.R. Yeh, T. Takekoshi, R.J. Knize, "Measurement of the Lifetime of the Atomic Cesium 5D5/2 State with diode-laser excitation", Optics Letters 21, 74-76 (1996).
4. Barbara Hoeling et al., "An optical coherence microscope for 3-dimensional imaging in developmental biology", Optics Express Vol.6, No.7, 136-146 (March 27, 2000).
5. Barbara M. Hoeling, A.D. Fernandez, R.C. Haskell, and D.C Petersen, "Phase modulation at 100 kHz in a Michelson Interferometer using a piezoelectric stack driven at resonance", Review of Scientific Instruments Vol.72, 1630-1633 (2001).
6. Barbara M. Hoeling, Mary E. Peter, Daniel C. Petersen, and Richard C. Haskell, "Improved Phase Modulation for an *en-face* Scanning 3D Optical Coherence Microscope", Review of Scientific Instruments Vol.75, 3348 (2004).
7. R.C. Haskell, M.E. Williams, D.C. Petersen, B.M. Hoeling, A.J. Schile, J.D. Pennington, M.G. Seetin, J.M. Castelaz, S.E. Frazer, C. Papan, H. Ren, J.F. de Boer, Z. Chen, "Visualizing Early Frog Development with Motion-Sensitive 3-D Optical Coherence Microscopy", Proceedings of the 26th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 5296-5299 (Sept 1-5, 2004).
8. E. J. Orwin, S. Lee, C. Raub, T. Icenogle, M. Arman, A. Cho, R. Lovec, A. Malone, R. C. Haskell, B. M. Hoeling, D. C. Petersen, "Optical Coherence Microscopy for the Evaluation of a Tissue-Engineered Artificial Cornea," Proceedings of the 26th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (Sept 1-5, 2004).
9. Richard C. Haskell, Tera Bell, Brendan R. Haberle, David Liao, Adam E. Pivonka, Barbara M. Hoeling, and Daniel C. Petersen, "Role of beat noise in limiting the sensitivity of optical coherence tomography", Journal of the Optical Society of America A, Vol. 23, Issue 11, pp.2747-2755 (November 2006). Also selected for publication in the November 1, 2006 issue of Virtual Journal of Biological Physics Research. <http://www.vjbio.org>
10. Barbara M. Hoeling, Stephanie Feldman, Daniel T. Strenge, Aaron Bernard, Emily Hogan, Daniel C. Petersen, Scott E. Fraser, Yun Kee, Michael Tyszka, Richard C. Haskell, "A Motion-Sensitive 3-D Optical Coherence Microscope Operating at 1300 nm for the Visualization of Early Frog Development", Proc.of SPIE, Vol. 6429, 64292T-1, 2007.

Affiliations:

- SPIE International Society for Optical Engineering
- Women in Optics
- American Association of Physics Teachers AAPT
- Deutsche Physikalische Gesellschaft DPG