

Sarah C. McQuaide

violagr1-99@alumni.calpoly.edu

Education:

9/99-6/02
Degree: University of Washington
M.S. Mechanical Engineering

9/00-3/01
Technical University of Berlin
Microsensor and Actuator Technology/MEMS Institute

1994-1999
Degree: California Polytechnic State University, San Luis Obispo
B.S. Mechanical Engineering
Magna Cum Laude

Work Experience:

6/03-present University of Washington Electrical Engineering Department. Staff research engineer, Genomation Lab. Development of microfluidic systems for single-cell analysis. Fabrication of microdevices in class 100 cleanroom environment.

11/02-6/03 UCLA Microfabrication Lab. Research engineer, microfluidic MEMS devices. Contact: Dr. CJ Kim, Mechanical and Aerospace Engineering (310) 825-0267

6/02-11/02 Microvision, Inc. Optical engineer for scanning laser retinal display systems. Contact: Mark Freeman, Microdisplay. (425) 415-MVIS

3/00-6/02 University of Washington Human Interface Technology (HIT) Lab. Research Assistant. Development of 3D variable-focus, dynamically-controlled retinal display systems. Development of augmented reality utilizing laser projection of images onto the retina with a deformable membrane MEMS mirror. Contact: Dr. Eric Seibel, Mechanical Engineering (206) 616-1486

9/00-3/01 Microsensor and Actuator Technology Institute, Technical University of Berlin, Germany. Research assistant. Microfabrication, optical MEMS devices and actuated MEMS. Contact: Dr. Ernst Obermeier, Electrical Engineering (+49)-30-314-72769

1/99-3/99 Lockheed Martin Co. Technical design project for deployable rocket flare in conjunction with Cal Poly mechanical engineering department. Contact: Tory Bruno (618) 756-1845

6/96-9/96,6/97-9/97 Perkin-Elmer Applied Biosystems, engineering intern. Flow rate testing of gel temperature control systems, and flow switch testing for DNA sequencing and protein analysis equipment. Contact: Bob Grossman (800) 874-9868

Additional Experience:

9/97-9/98 Exchange student at the University of Bradford, Yorkshire, England. Studied mechanical and biomedical engineering; completed senior project on the wear rates of CoCr hip replacement joints.

Publications:

D. Barrettino, B. Lutz, M. Martin, S. McQuaide, and D. Meldrum, "CMOS Readout and Control Architecture for Single-Cell Real-Time Microsystems", Proc. IEEE International Symposium on Circuits and Systems (ISCAS), Kobe, Japan, pp. 4795-4798, May 23-26, 2005.

Andrew K. Miller, Matthew L. Stanton, Carissa A. Sanchez, Sarah C. McQuaide, Brian J. Reid, Deirdre R. Meldrum, Thomas J. Paulson, and Mark R. Holl (2005). Biopsy Preparation for Flow Analysis using Microfabricated Disaggregation Blades. IEEE Conference on Automation Science and Engineering.

Tracy H. Fung, Gregory I. Ball, Sarah C. McQuaide, Shih-hui Chao, Alejandro Colman-Lerner, Mark R. Holl, Deirdre R. Meldrum, (2004). Microprinting of on-chip cultures: patterning of yeast cell microarrays using concanavalin-A adhesion. ASME International Mechanical Engineering Congress, IMECE2004-60866.

McQuaide, S.C., Seibel, E.J., Kelly, J.P., Schowengerdt, B.T., Furness, T.A. III (2003). A retinal scanning display system that produces multiple focal planes with a deformable membrane mirror. Displays, Vol.24 (2), p. 65-72.

McQuaide, S.C., Seibel, E.J., Burstein, R., Furness, T.A. III (2002) Three-dimensional virtual retinal display using a deformable membrane mirror. Society for Information Display Digest of Technical Papers, Vol. XXXIII.

Seibel E., Gau V., McQuaide S., Weghorst, S., Kelly, J., Furness, T. (2001) Augmented retinal light scanning display for low vision: Effect of text color and background on reading performance. OSA Topical Meeting on Vision Science and Its Applications, Monterey, CA, Feb. 9-12, 2001, p.51-54.

Berry G, Bolton JD, Brown JB, McQuaide SC. (1999) The production and properties of wrought high-carbon CoCrMo alloys. Cobalt-Based Alloys for Biomedical Applications, ASTM STP 1365. American Society for the Testing of Metals.

Awards:

Lufthansa Berlin Foundation grant recipient for research at the Technical University of Berlin, 2000-01
Cal Poly 1999 Woman Engineer of the Year.

Passions:

Competitive running, photography, clockmaking, glasswork.