

Marie Cosgrove-Davies

Arlington, VA
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WORK EXPERIENCE

United States Peace Corps Makete, Tanzania
Peace Corps Science Education Volunteer September 2008 - October 2010

- Held the position of head of computer department while managing and maintaining a lab of twenty Windows XP computers
- Created and delivered computer training curriculum encompassing basic skills and MS Office
- Trained fellow teachers, improving efficiency and teaching methodology
- Taught 600 students, improving analytical and learning capacity through educational programs
- Provided technical support both remotely and in person for local community members and labs in other regions of Tanzania

Swarthmore College - Engineering Department Swarthmore, PA
Teaching Assistant January 2006 - May 2008

- Evaluated coursework for introductory and advanced classes in circuit design and analysis

Orbital Sciences Corporation Dulles, VA
Intern/On-Site Engineer Summer 2004, 2005, 2007; Winter 2006

- Acquired and analyzed telemetry and test data using Excel and proprietary programs
- Created and improved software for testing of satellite components
- Ran satellite tests in a cleanroom environment
- Served as on-site engineer with Honeywell Corporation in Phoenix, AZ

Penn State Electrical Engineering REU State College, PA
NSF REU Researcher Summer 2007

- Conducted materials research into the pyroelectric properties of barium titanate compounds
- Prepared and tested samples in a cryogenic chamber

Drexel Sensors REU Philadelphia, PA
NSF REU Researcher Summer 2006

- Conducted optics research on properties of holographic polymer-dispersed liquid crystals
- Prepared polymer/liquid crystal gel and created samples using a high-powered solid-state laser
- Analyzed sample properties using a monochrometer
- Instructed and supervised another researcher beginning in the same field

PROGRAMMING MatLab, Python, LaTeX, LabView, HTML, XML, CSS.

LANGUAGES Fluent in English (native speaker) and Swahili. Conversational German.

PAPERS AND POSTERS M. Cosgrove-Davies, T. Maiti, A. Bhalla, "Low Temperature Pyroelectric Characteristics of Barium Titanate", NSF EE REU PENN STATE Annual Research Journal Vol. V (2007).

A.E. Fox, M. Cosgrove-Davies, and A.K. Fontecchio, "Gap Material Study for Holographically Formed Polymer Dispersed Liquid Crystal Composite Film Stacks", *Molecular Crystals and Liquid Crystals* (January 2007).

M. Cosgrove-Davies, A.E. Fox, A.K. Fontecchio, "Wavefront Transmission in Stacked Holographic Polymer-Dispersed Liquid Crystal Gratings (H-PDLCs)", SENSORS REU Poster Presentation Session (August 2006).

EDUCATION

Swarthmore College Swarthmore, PA
Bachelor of Sciences in Engineering; Computer Science minor June 2008.
Relevant Coursework: Digital Signal Processing, VLSI Design, Solar Energy Systems, Adaptive Robotics, Computer Architecture, Electronic Circuit Application, Physical Electronics