(303) 818-0461
khellman@mines.edu

Keith Hellman — Curriculum Vitae

40 Everett Street
Lakewood, CO 80226-1260
USA

Publications and Presentations

Simulation

Jason Liu, Nathanael Van Vorst, Scott Mann, and Keith Hellman. A real-time network simulation infrastructure based on openvpn. *Journal of Systems and Software*, 82(3):473–485, 2009

Jason Liu, Scott Mann, Nathanael Van Vorst, and Keith Hellman. An open and scalable emulation infrastructure for large-scale real-time network simulations. In *INFOCOM*, pages 2476–2480. IEEE, 2007

Parallel Computing

Keith Hellman, David Bloomquist, and Roman Tankelevich. Parallel find for distributed and network filesystems, April 2008. Poster presentation at Colorado Celebration of Women in Computing Conference

Wireless Sensor Networks

Keith Hellman. Learning to live — a wireless sensor network protocol using reinforcement learning. Master's thesis, Colorado School of Mines, Golden, CO, 2006

Keith Hellman and Michael Colagrosso. Investigating a wireless sensor network optimal lifetime solution for linear topologies. *Journal of Interconnection Networks*, 7(1):91–99, March 2006

Keith Hellman and Michael Colagrosso. Increasing sensor network lifetime by identifying and leveraging nodes with excess energy in heterogeneous networks. In *Proceedings of the 8th International Symposium on Parallel Architectures, Algorithms and Networks (ISPAN 05)*, pages 542–546, Las Vegas, Nevada, 2005

Education

Julie Krause, Irene Polycarpou, and Keith Hellman. Exploring formal learning groups and their impact on recruitment of women in undergraduate cs. In *Proceedings of the 43rd ACM technical symposium on Computer Science Education*, SIGCSE '12, pages 179–184, New York, NY, USA, 2012. ACM

Cyndi Rader, Doug Hakkarinen, Barbara M. Moskal, and Keith Hellman. Exploring the appeal of socially relevant computing: are students interested in socially relevant problems? In *Proceedings of the 42nd ACM technical symposium on Computer science education*, SIGCSE '11, pages 423–428, New York, NY, USA, 2011. ACM

Keith Hellman. Wireless sensor networks and computer protocols, August 2008. Presentation for GK-12 Learning Partnerships and Bechtel K-5 Excellence Initiative

Keith Hellman. "Do you like brussel sprouts?" How to implement population surveys with embarrassing questions, September 2006. Presentation at Colorado Council of Teachers of Mathematics Convention

Keith Hellman. The craftman's questionable son, November 2005. Presentation at Colorado Science Convention

Catherine Skokan and Keith Hellman. Integrating engineering into mathematics and science classrooms, October 2005. Presentation at Next Steps Institute

Teaching Experience

Teaching Associate Professor *August 2021 – Ongoing*

Colorado School of Mines (Golden, Colorado)

- "Visiting instructor" 2021–2023 academic years
- CSCI423 *Computer Simulation* Fall 2016 — Ongoing
- CSCI499, CSCI425, CSCI598 *Compiler Design* Spring 2020 — Ongoing
- CSCI220 *Data Structures and Algorithms* Spring 2023 — Ongoing

Adjunct Instructor *August 2016 – May 2021*

Colorado School of Mines (Golden, Colorado)

(303) 818-0461
khellman@mines.edu

Keith Hellman — Curriculum Vitae

40 Everett Street
Lakewood, CO 80226-1260
USA

Teaching Experience continued

Associate Teaching Professor (Lecturer) *August 2009 – May 2016*
Colorado School of Mines (Golden, Colorado)
· CSCI Special Topics *Compiler Design* Spring 2014, 2016.
· CSCI423 *Computer Simulation* Fall 2013, 2014, 2015.
· CSCI101 *Introduction to Computer Science* course development and instruction.
· CSCI474 *Introduction to Cryptography* Spring 2015.
· CSCI Special Topics *Linux Programming* Fall 2014.
· CSCI274 *Introduction to Linux*.
· CSCI262 *Data Structures*.
· CSCI261 *Introduction to Programming in C++* course coordinator.
· Department undergraduate outreach committee.
· Academic Readmissions Committee.

Graduate Teaching Fellowship *June 2007 – May 2009*
Colorado School of Mines (Golden, Colorado)
· Two sections of *Introduction to Programming in C++* in the fall and spring, one section in the summer.
· Spring 2009 course coordinator.

Adjunct Instructor *August 2006 – May 2007*
Colorado School of Mines (Golden, Colorado)
· Two sections of *Calculus I* and *II* in the fall and spring, respectively.

Education

Phd Candidate (part-time) Mathematics & Computer Science *August 2009–December 2014*
Colorado School of Mines (Golden, Colorado)

Phd Candidate Mathematics & Computer Science *August 2007–August 2009*
Colorado School of Mines (Golden, Colorado)
· Graduate Teaching Fellowship, CSCI261 (*Introduction to Programming in C++*).
· CSCI261 course coordinator spring 2009.

M.S. Mathematics & Computer Science *August 2004 –May 2006*
Colorado School of Mines (Golden, Colorado)
· Thesis: *Learning to Live — A Wireless Sensor Network Protocol Using Reinforcement Learning*.
· Middle-School Teaching Fellowship (principal investigators Dr. Skokan and Dr. Moskal, CSM).

Graduate Student at Large *1995–1996*
University of Illinois Circle Campus (Chicago, Illinois)
· Medical Imaging, Pattern Recognition

B.S. in Applied Mathematics *1990*
The University of Chicago (Chicago, Illinois)
· Concentration in statistics
· Passed Society of Actuaries Exam 100

Interests

· **Social Dancing**: Many different forms including: swing, Argentine tango, Viennese waltz, and Contra. Taught East Coast Swing for seven years at Denver's *Mercury Cafe*.
· **Cycling**, **Chess**