

## DAVID A. SMITH

dav@ugcs.caltech.edu

### EDUCATION

- (1) B.S. Mathematics, *California Institute of Technology*, GPA 3.3.
- (2) M.S. Mathematics, *California State University, Long Beach*, graduate dean's list of scholars and artists, GPA 4.0.
- (3) Ph.D. Mathematics, *Arizona State University*. Dissertation: *The First-fit Algorithm Uses Many Colors on Some Interval Graphs*, confirming by a construction of Kierstead and Trotter that 5 is a lower bound for the performance ratio of the first-fit coloring algorithm on interval graphs, December 2010.

### INVITED ADDRESS

- SIAM Conference on Discrete Mathematics, Combinatorics and Partially Ordered Sets, *First-fit coloring of interval graphs* (with H. A. Kierstead and W. T. Trotter), Austin, Texas, June 2010.

### EMPLOYMENT

**Programmer, *Semel Institute for Neuroscience at UCLA*, August 2011 to March 2012.**

- Provided data processing services related to high-throughput genome sequencing.

**Teaching assistant and research assistant, *Arizona State University*, August 2004 to August 2010.**

- Taught mathematics (was responsible for lectures, tests, and grades):
  - MAT 243: Discrete Mathematical Structures
  - MAT 265-267: Calculus for Engineers I-III
  - other lower-division courses.
- Conducted research on algorithms in graph theory.
- Represented the mathematics department to GPSA, the university graduate student association.
- Reviewed research grants for GPSA.
- Served as referee for a graduate student journal.

**Lead software engineer, *Mitretek Systems, Falls Church, Virginia*, February 2003 to December 2003.**

- Wrote public key infrastructure software for federal government agencies.
- Studied single sign-on schemes and digital signatures for the desktop.

**Lecturer and teaching associate, *California State University, Long Beach*, August 2000 to May 2002.**

**Software engineer, *Leverage Information Systems, San Francisco*, January 1999 to March 2000.**

- Wrote server software for high-volume web sites.
- Enhanced the Locomotive application server.

**Software designer, *Tandem Computers, Cupertino, California*, February 1997 to January 1999.**

- Developed an intraweb application for document management.
- Received a quarterly award in 1998 from the software engineering services division for contributions to the document management facility.

**Junior localization engineer, *SimulTrans, L.L.C., Mountain View, California*, November 1996 to January 1997.**

**Summer undergraduate research fellow, *California Institute of Technology, Pasadena, California*, April 1995 to September 1995.**

- Studied manipulation in voting.

**Summer undergraduate research fellow, *Jet Propulsion Laboratory, Pasadena, California*, June 1993 to October 1993.**

- Assisted in developing a novel application of optical fibers.