

# Curriculum Vitae

## Johanna N.Y. Franklin

Department of Mathematics  
National University of Singapore  
2, Science Drive 2  
Singapore 117543  
SINGAPORE

E-mail: franklin@math.nus.edu.sg  
Office phone: (+65) 6516 4942  
<http://www.math.nus.edu.sg/~franklin>

### Research Interests

Mathematical logic, particularly recursion theory and algorithmic randomness.

### Education

**University of California, Berkeley.** Berkeley, CA

Ph.D. in Logic and the Methodology of Science, 2007

Advisor: Theodore A. Slaman.

Thesis title: Aspects of Schnorr randomness.

**Carnegie Mellon University.** Pittsburgh, PA

M.S. in Mathematical Sciences, 2001

Advisor: James Cummings.

Thesis title: Algebras of elementary embeddings.

B.S. in Mathematical Sciences with minors in Physics and Linguistics, 2001

Received University Honors and College Honors.

### Employment

Visiting Fellow, National University of Singapore: 2007–present

### Honors and Fellowships

NSF Graduate Research Fellowship (2001–2003, 2005–2006)

Berkeley Fellowship (2003–2005) (awarded to less than 1% of Berkeley graduate students)

Phi Beta Kappa

Phi Kappa Phi

Pi Mu Epsilon

### Publications

#### Published/Accepted

*Hyperimmune-free degrees and Schnorr triviality.* **Journal of Symbolic Logic**, vol. 73(3), 2008, pp. 999–1008.

*Schnorr trivial reals: A construction.* **Archive for Mathematical Logic**, vol. 46(7-8), 2008, pp. 665-678. Previously published in **Electronic Notes in Theoretical Computer Science**, vol. 167, 2007, pp. 79-93.

#### Submitted

*Schnorr trivial sets and truth-table reducibility* (with Frank Stephan). Currently published as Technical Report TRA3/08, School of Computing, National University of Singapore, 2008.

*Schnorr triviality and genericity.*

*Relativizations of randomness and genericity notions* (with Frank Stephan and Liang Yu).

*van Lambalgen's Theorem and high degrees* (with Frank Stephan).

## Talks

### Conference talks

- 10th Asian Logic Conference, September 2008 (invited)
- CCR 2008: Computability, Complexity, and Randomness, May 2008
- 2007–08 ASL Winter Meeting, January 2008
- Joint Meeting of the AMS–NZMS 2007, December 2007 (invited)
- CCA 2006: Third International Conference on Computability and Complexity in Analysis, November 2006
- 2006 Fall Eastern Sectional Meeting (AMS), October 2006 (invited)
- Effective Randomness workshop (AIM), August 2006
- Southeastern Logic Symposium (SEALS) 2006, March 2006 (invited)

### Seminar talks

- National University of Singapore logic seminar, September 2007, November 2008
- UC, Berkeley recursion theory seminar, frequent speaker, 2003–2007
- Summer School in Logic, National University of Singapore logic seminar, July 2006
- George Washington University logic seminar, March 2006

### Other talks

- Nanyang Technological University
  - Definability from parameters*, April 2008
- Undergraduate seminar, UC, Berkeley
  - Cryptology and randomness*, April 2007
- Many Cheerful Facts (graduate student mathematics seminar), UC, Berkeley
  - Scitamehtam*, March 2006
  - A riddle wrapped in a mystery*, February 2005
- Student logic colloquium, UC, Berkeley
  - Random musings*, January 2006
- Noetherian Ring, UC, Berkeley
  - Wanted: Undefinable elements*, October 2002
  - Large cardinals and small algebras*, November 2001

## Teaching Experience

- National University of Singapore, Visiting Fellow
  - Set Theory (2 semesters)
    - Supervised associated Independent Study Module (1 semester).
  - Discrete Structures (School of Computing) (1 semester, tutorial responsibilities)
  - Reverse Mathematics (short course for graduate students)
- UC, Berkeley, Graduate Student Instructor
  - Analytic Geometry and Calculus (1 semester)
  - Introduction to Logic (Department of Philosophy) (2 semesters)
- UC, Berkeley, Reader
  - Mathematical Logic (2 semesters)

## Teaching Experience (Continued)

Carnegie Mellon University, Teaching Assistant

Calculus for Humanities Students I (1 semester)

Differential Calculus and Integral Calculus (2 semesters)

Concepts of Mathematics (3 semesters)

Johns Hopkins University Center for Talented Youth, Instructor

Full responsibility for intensive summer courses for advanced middle-school students.

Mathematical Reasoning (2 sessions)

Cryptology (4 sessions)

## University and Professional Service

Reviewer for the *Journal of Symbolic Logic* and various conference proceedings.

Expanding Your Horizons Singapore, 2008

Conference for high school women interested in mathematics and science. Conducted a workshop for the participants and delivered the closing speech.

Student Logic Colloquium, UC, Berkeley, 2004–2007

Organizer of biweekly student logic colloquium.

Graduate Assembly, UC, Berkeley, 2002–2007

Departmental delegate and member of the Funding Committee (2002–2007) and Faculty Mentors Award Subcommittee (2006).

Noetherian Ring, UC, Berkeley, 2001–2007

Group for women in mathematics at Berkeley. As an officer, responsible for inviting speakers to meetings and organizing outreach efforts and professional development workshops.

ASUC Undergraduate/Graduate Mentoring Program, 2006

## Professional Memberships

American Mathematical Society, 2001–present

Association for Symbolic Logic, 2001–present

Association for Women in Mathematics, 2001–present