Department of Mathematics, University of San Francisco
415-422-4693 jennifer.chubb@gmail.com http://cs.usfca.edu/~jcchubb/

Jennifer Chubb

Assistant Professor of Mathematics

Research interests

Logic and foundations of mathematics, computability, computable structure theory, ordered structures. Also, quantum computing & logic, algorithmic learning theory, and computable mathematics.

Education

Ph.D. in Mathematics, George Washington University, Washington D.C.	August, 2009
M.S. in Applied Mathematics, George Mason University, Fairfax, VA	January, 2003
B.S. in Physics & Mathematics, George Mason University, Fairfax, VA	May, 1999

Professional Experience (academic)

Assistant Professor of Mathematics (tenure-track), University of San Francisco	2009–present
Graduate Teaching Assistant in Mathematics, George Washington University	2003–2009
Adjunct Professor of Mathematics and Philosophy, George Washington University	2004–2007
Adjunct Professor of Mathematics and Physics & Astronomy, George Mason University	2001–2006
Graduate Research Assistant in Physics and Mathematics, George Mason University	1999–2002

Professional Experience (other)

The New Teacher Project, Philadelpha, Pennsylvania, *Consultant*	2008–present
DC Teaching Fellows, Washington, D.C., *Trained aspiring secondary math teachers*	2008–2009
Fairfax County Public Schools, Fairfax, Virginia, *Teacher*	2001
Tillinghast–Towers Perrin, Arlington, Virgina, *Research assistant at actuarial firm*	1996–1999

Publications

Volume: Logic and Algebraic Structures in Quantum Computing, co-edited with A. Eskandarian and V.S. Harizanov. Cambridge University Press, series Lecture Notes in Logic. *(In preparation.)*

Groups with orderings of arbitrary algorithmic complexity, co-authored with M. Dabkowski and V. Harizanov. *(In preparation.)*

Degree spectra of the successor relation of computable linear orderings, co-authored with A. Frolov and V. Harizanov. *Archive for Mathematical Logic* 48 (2009) 7–13.

Reverse mathematics, computability, and partitions of trees, co-authored with J. Hirst and T. McNicholl. *Journal of Symbolic Logic* 74 (2009) 201–215.

Ordered Structures and Computability, Ph.D. Thesis, George Washington University (2009).

Partial automorphism semigroups, co-authored with V. Harizanov, A. Morozov, S. Pingrey, and E. Ufferman. *Annals of Pure and Applied Logic* 156 (2008) 245–258.

Strong degree spectra and Π^0_1 classes, co-authored with J. Chisholm, V. Harizanov, D. Hirschfeldt, C. Jockusch, T. McNicholl, and S. Pingrey. *Journal of Symbolic Logic* 72 (2007) 1003–1018.

The breakdown of synchronization in systems of non-identical chaotic oscillators: theory and experiment, co-authored with E. Barretto, P. So, and B. Gluckman. *International Journal of Bifurcation and Chaos* 10 (2001) 2705–2713.

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Professional Activities

Workshop in Computability Theory at the University of San Francisco, Chair of the Organizing Committee, Spring 2011

University of San Francisco Learning Technologies Committee, member, Fall 2010

Association for Symbolic Logic 2010 North American Annual Meeting, Organizing Committee Member, Spring 2010

DC Math Graduate Student Meeting at George Washington University, Washington, D.C., Organizing Chair, Spring 2009

George Washington University Mathematics Graduate Student Seminar, Founder and organizer, Fall 2006–Spring 2008

NSA funded *Summer Program for Women in Mathematics* at George Washington University, Assistant to Organizers, Summer 2008

Grants & Awards

Association for Women in Mathematics/National Science Foundation Travel Grant, Summer 2010.

University of San Francisco Faculty Development Fund, 2009–2010, competetive awards for support of faculty scholarship.

George Washington University's Philip Amsterdam Graduate Teaching Assistant Award, Spring 2007, University-wide recognition for outstanding teaching.

Sigma Xi Grant in Aid of Research, 2007 & 2008, research support from the scientific research society, *Sigma Xi*.

James H. Taylor Graduate Mathematics Prize, Fall 2007, recognition from George Washington University's Department of Mathematics for outstanding research by a graduate student.

Conference Talks (international)

Algorithmic properties of orderings on groups, *Workshop on Computability Theory,* Ponta Delgada, Portugal, July 2010. *(Invited.)*

Computable partitions of trees, *Association for Symbolic Logic European Summer Meeting (2009 Logic Colloquium)*, Sofia, Bulgaria, August, 2009.

Strong degree spectra of initial segments of scattered linear orders, *Computability in Europe 2007,* Siena, Italy, June 2007.

Conference Talks (domestic)

Computability and ordered groups, *SouthEastern Atlantic Logic Symposium*, University of Florida, Gainesville, March 2010. *(Invited.)*

Effective properties of ordered groups, Special session on *Orderings in Logic and Topology* at the *AMS National Meeting*, Washington, D.C., January 2009. *(Invited.)*

Computable partitions of trees, Special session on *Computability Theory and Effective Algebra* at the *AMS Fall Eastern Section Meeting*, Middletown, CT, October 2008. *(Invited.)*

Degree spectra of successor in linear orderings, *Conference for Women in Mathematics* at the City University of New York, New York, May 2008. *(Invited.)*

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Conference Talks (domestic)

Effectively closed sets in Cantor space, NSF-funded *Workshop on Knots and Quantum Computing* at the University of Texas, Dallas, December 2007. *(Invited.)*

Effectively closed sets and orderings of groups, *Knots in Washington XXV* at George Washington University, Washington, D.C., December 2007. *(Invited.)*

Degree spectra of successor in linear orderings, Special Session on *Advances in Algorithmic Methods for Algebraic Structures* at the 2007 *Fall Southeastern AMS Sectional Meeting*, Middle Tennessee State University, November 2007. *(Invited.)*

Strong reducibilities, scattered linear orders, ranked sets, and Kolmogorov complexity, *Second New York Graduate Student Logic Conference*, St. John's University, March 2007. *(Invited.)*

Recovering structures from their semigroups of partial automorphisms, *SouthEastern Logic Symposium (SEALS)*, University of Florida, Gainesville, March 2006. *(Invited.)*

Invited Seminar & Colloquia

The what and why of quantum computing, *Quantum Computing Seminar*, September 2010, George Washington University, Washington, D.C.

Degree spectra of relations, *Logic Colloquium*, February 2010, University of California, Berkeley.

Unsolvability in mathematics, *Math Colloquium*, November 2009, Sonoma State University, Rohnert Park, CA.

Computability, topology, and ordered groups, *Mathematics Colloquium*, October 2009, University of Texas, Dallas.

Recursive model theory and degree spectra of relations, *Recursion Theory Seminar*, September 28 and October 2009, University of California, Berkeley.

Algorithmic properties of structures, *Mathematics Colloquium*, February 2009, University of San Francisco, San Francisco.

Computability theoretic properties of relations on structures, *Logic Seminar*, October 2008, University of Maryland, College Park.

Algorithmic properties of relations on structures, *Model Theory Seminar*, October 2008, CUNY Graduate Center, New York, NY.

Turing and strong degree spectra of relations, *Southern Wisconsin Logic Colloquium*, September 2008, University of Wisconsin, Madison.

Computability and spaces of orderings of groups, *Graduate Student Seminar*, November 2007, Howard University, Washington, D.C.

Expository Talks for Young People

Quantum computing today, *Special Lecture Series in Computer Science*, April 2010, University of San Francisco, San Francisco.

Unsolvability in Mathematics, *Mathematics Colloquium*, March 2010, University of San Francisco.

Basic notions in quantum computing, *Logic Seminar*/guest lecture in *Computational Complexity*, March 2010, George Washington University, Washington, D.C.

Fractals and recursive processes, February 2009, *Mathematics Colloquium* at University of San Francisco.

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Expository Talks for Young People

Computing fractals, Guest lecture at *School Without Walls High School*, November 2008, Washington, D.C. Public Schools.

Solvability and tractability, Guest lecture at *Dean's Seminar for Freshmen,* April 2007, George Washington University, Washington, D.C.

The infinitely complex, Guest lectures at *Dean's Seminar for Freshmen,* November 14 and 29, 2006, George Washington University, Washington, D.C.

Computational complexity, Guest lecture at *Dean's Seminar for Freshmen,* February 2006, at George Washington University, Washington, D.C.

Professional Affiliations

American Mathematical Society

Association for Symbolic Logic

Mathematical Association of America

Association for Women in Mathematics

Sigma Xi, The Scientific Research Society

Association for Computability in Europe