Caleb Stanford

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Research Interests

▶ Programming systems for data processing

▶ Formal verification

▶ Logical foundations of computing

Education

▶ **University of Pennsylvania**
PhD student, computer science. Fall 2016 – present. Advisor: Rajeev Alur.

▶ **Brown University**
ScB, mathematics and computer science. Fall 2013 – Spring 2016.

▶ **Brigham Young University**
Fall 2012 – Spring 2013.

Papers and Publications

▶ **Data transducers for streamable regular functions,** R. Alur, K. Mamouras, and C. Stanford. Draft, January 2018.

▶ **Data-trace types for distributed stream processing systems,** K. Mamouras, C. Stanford, R. Alur, Z. Ives, and V. Tannen. Draft, November 2017.

▶ **Interfaces for stream processing systems,** R. Alur, K. Mamouras, C. Stanford, and V. Tannen. *Principles of Modeling*: Festschrift Symposium in honor of Edward A. Lee, Robert S. Pepper Distinguished Professor. Berkeley, California, October 2017. Proceedings forthcoming.

▶ **Automata-based stream processing,** R. Alur, K. Mamouras, and C. Stanford. 44th International Colloquium on Automata, Languages, and Programming (ICALP), July 2017.

▶ Outstanding presentation award for "Context-directed reversals of signed permutations," H. Li, J. Ramsey, M. Scheepers, H. Schilling, and C. Stanford. Joint Math Meetings (JMM), January 2016. Travel grant from JMM awarded.

Educational Experience

▶ **Marktoberdorf Summer School** — logical methods for safety and security of software systems. August 2–11, 2017. Accepted with travel grant awarded.

▶ **Lipa Summer School** — topics connected to logic in computer science. July 3–6, 2017, University of Warsaw.

▶ **NASSLLI** — North American Summer School on Logic, Language, and Information. July 9–16, 2016, Rutgers University. Scholarship awarded.

Programming Languages

▶ Python (fluent), C++ (fluent), Coq (fluent), OCaml, Java

▶ Specialized tools: Alloy (a constraint solver for system design), LaTeX

Achievements

▶ Co-founder of the **Utah Math Olympiad**. The fifth annual contest was held in March 2017.

▶ **Putnam math exam:**

Year	Score	National Rank
2012	30	319
2013	40	136
2014	40	150
2015	30	163.5

▶ **Math GRE:** Score 900; 97th percentile.

▶ **ACM ICPC:** International Collegiate Programming Contest. Qualified for the Northeast North America regional round, fall 2014 and fall 2015. 3rd place at qualifier round and 5th place at regionals in 2015, as a team of 3.

Teaching

▶ **Graduate TA** for CIS 511, Theory of Computation (Spring 2018)

▶ **Graduate TA** for CIS 500, Software Foundations (Fall 2017)

▶ **LaTeX workshop teacher** for the Brown Science Center (Spring 2014 – Spring 2016)

▶ **Undergraduate TA** for CS 51 Models of Computation (Fall 2015)

▶ **Undergraduate TA** for CS 22 Discrete Structures and Probability (Spring 2016)

▶ **Math Resource Center Tutor** at Brown (Fall 2014 – Fall 2015)

▶ **Student Teacher** for the BYU Math Circle (Fall 2012 – Spring 2013)

External Links

▶ My website: `http://cis.upenn.edu/~castan`

▶ Utah Math Olympiad: `http://utahmath.org`