Thao Thi Thu Do

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Education

- **Massachusetts Institute of Technology** — Cambridge, MA
  Ph.D. Candidate, Mathematics — 2014-
- **Stony Brook University** — Stony Brook, NY
  B.S., Mathematics — 2010-2014

Research Interests

Combinatorial geometry, additive combinatorics

Honors and Awards

Ida M. Green Fellowship, MIT 2015
Provost award, department awards, Stony Brook University 2013-14
Honorable mention, William L Putnam competitions 2012, 2013
$6^{t}h$ place, ACM-ICPC New York Greater Region 2013
Honorable mention, Alice T. Schafer prize 2013
Silver medal, IMO 2008

Teaching and Mentoring

- **Teaching Assistant** — MIT
  Grade homework, exams and hold office hours — 2015-
- **PRIMES mentor** — MIT
  Co-mentor three high school students in a research project — 2015
- **Teaching Assistant for MAT125** — Stony Brook
  Taught a calculus I recitation for 30 students, graded quizzes and exams. — 2011

Conferences and Summer programs

- **Research Experience for Undergraduate** — Williams College
  Worked on multiple projects in combinatorics and number theory. — 2013
- **IAS Women in Math Program** — Princeton
  Combinatorics and graph theory — May 2013
- **Research Experience for Undergraduate** — U Michigan Ann Arbor
  Solved an important problem in algebra. — 2012

Publications and Preprints

P. Demontingy, T. Do, A. Kulkarni, S. Miller, U. Varma, *A generalization of Fibonacci far-difference representations and Gaussian behavior.* Fibonacci Quarterly. Volume 52 (2014), no. 3, $247 - 273$.

P. Demontingy, T. Do, A. Kulkarni, S. Miller, D. Moon, U. Varma, *Generalizing Zeckendorf's theorem to f-decompositions.* Journal of Number Theory. Volume 141(2014), $136 - 158$.

T. Do, A. Kulkarni, S. Miller, D. Moon and J. Wellens, *Sums and differences of correlated random sets.* Journal of Number Theory. Volume 147(2015), $44 - 68$.

T. Do, A. Kulkarni, S. Miller, D. Moon, J. Wellens and J. Wilcox, *Sets characterized by missing sums and differences in dilating polytopes.* Journal of Number Theory. Volume 157 (2015), $123 - 153$.

T. Do, *Orthocenter of Inscribed Polygons.* Submitted.

A. Carney, T. Do, J. Hallett, X. Huang, Y. Jiang, Q. Sun, B. L. Weiss, E. Wells, Y. Xia and M. Zieve. *Diophantine Equations Involving Dickson Polynomials.* Preprint.

T. Do, J. Hallett, Y. Jiang, B. Weiss, E. Wells, and M. Zieve. *On the Diophantine Equation* $f(x) = g(y)$, *I: The irreducible case.* Preprint.

T. Do, M. Zieve. *On a Question of Lyubich and Minsky on Laminations in Complex Dynamics.* Preprint