

## Donald M. Stull

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CONTACT INFORMATION	Postdoctoral Researcher INRIA, Nancy	<code>donald.stull@inria.fr</code> <code>www.dmstull.com</code>
RESEARCH INTERESTS	Algorithmic information and randomness, computable analysis, molecular programming and chemical reaction networks.	
EDUCATION	<b>Iowa State University</b> Ph.D. in Computer Science, 2017 <ul style="list-style-type: none"><li>• Advisor: Jack H. Lutz</li></ul> <b>University of Texas at Austin</b> B.S. in Computer Science, May 2011	
CONFERENCE PUBLICATIONS	<p>Donald M. Stull, Results on the dimension spectra of planar lines, <i>Proceedings of the 43rd International Symposium on Mathematical Foundations of Computer Science (MFCS 2018)</i>.</p> <p>Neil Lutz, D. M. Stull, Projection theorems using effective dimension, <i>Proceedings of the 43rd International Symposium on Mathematical Foundations of Computer Science (MFCS 2018)</i>.</p> <p>Timothy H. McNicholl and D. M. Stull, The isometry degree of a computable copy of <math>\ell^p</math>, <i>Proceedings of the 14th Annual Conference on Computability in Europe (CiE 2018)</i>.</p> <p>Mathieu Hoyrup, Diego Nava Saucedo and Don M. Stull, Semicomputable geometry, <i>Proceedings of the 45th International Colloquium on Automata, Languages, and Programming (ICALP 2018)</i>.</p> <p>Neil Lutz and D. M. Stull, Dimension spectra of lines, <i>Proceedings of the 13th Annual Conference on Computability in Europe (CiE 2017)</i>.</p> <p>Neil Lutz and D. M. Stull, Bounding the dimension of points on a line, <i>Proceedings of the 14th Annual Conference on Theory and Applications of Models of Computation (TAMC 2017)</i>.</p> <p>Xiang Huang, D. M. Stull, Polynomial space randomness in analysis, <i>Proceedings of the 41st International Symposium on Mathematical Foundations of Computer Science (MFCS 2016)</i>.</p> <p>Adam Case, Jack H. Lutz, and D. M. Stull, Reachability problems for continuous chemical reaction networks, <i>Proceedings of the Fifteenth International Conference on Unconventional Computation and Natural Computation (UCNC 2016)</i>.</p> <p>Robyn R. Lutz, Jack H. Lutz, James I. Lathrop, Titus H. Klinge, Divita Mathur, D. M. Stull, Taylor G. Bergquist, and Eric R. Henderson, Requirements analysis for a product family of DNA nanodevices, <i>Proceedings of the Twentieth IEEE International Requirements Engineering Conference (RE 2012)</i>.</p>	

- JOURNAL PUBLICATIONS
- Neil Lutz and D. M. Stull, Bounding the dimension of points on a line, To appear in *Information & Computation*.
- Joe Clanin, Timothy H. McNicholl and D. M. Stull, Analytic computable structure theory and  $L^p$  spaces, To appear in *Fundamenta Mathematicae*.
- Adam Case, Jack H. Lutz, and D. M. Stull, Reachability problems for continuous chemical reaction networks, *Natural Computing* **17** (2018), pp. 223-230.
- AWARDS AND HONORS
- Research Excellence Award from the ISU Graduate College, Fall 2016
- CONFERENCE AND SEMINAR TALKS
- The effective dimensions of points on lines*, Thirteenth International Conference on Computability, Complexity and Randomness (CCR 2018), December 17-21, 2018.
- Results on the dimension spectra of planar lines*, 43rd International Symposium on Mathematical Foundations of Computer Science (MFCS 2018), August 27-31, 2018.
- Projection theorems using effective dimension*, 43rd International Symposium on Mathematical Foundations of Computer Science (MFCS 2018), August 27-31, 2018.
- The isometry degree of a computable copy of  $\ell^p$* , 14th Annual Conference on Computability in Europe (CiE 2018), July 30-August 3, 2018.
- Semicomputable geometry*, 45th International Colloquium on Automata, Languages, and Programming (ICALP 2018), July 10-13, 2018.
- Semicomputable geometry*, Journées du GT Calculabilités du GDR IM, LIX, July 2-3, 2018.
- Dimension spectra of lines*, 13th Annual Computability in Europe (CiE 2017), June 12-16, 2017.
- Polynomial space randomness and analysis*, 41st International Symposium on Mathematical Foundations of Computer Science (MFCS 2016), August 22-26, 2016.
- Reachability problems for continuous chemical reaction networks*, Fifteenth International Conference on Unconventional Computation and Natural Computation (UCNC 2016), July 11-15, 2016.
- INVITED TALKS
- The effective dimension of points on lines*, AMS-MMA Joint Mathematics Meeting 2019, AMS Special Session on Algorithmic Dimensions and Fractal Geometry, January 16-19, 2019.
- Hausdorff dimension and Kolmogorov complexity*, Computability and Category Theoretic Perspectives on Descriptive Set Theory, Swansea University, July 16-18, 2018.
- Projection theorems using effective dimension*, Workshop on Algorithmic Questions in Dynamical Systems, Institut de Mathématiques de Toulouse, March 26-29, 2018.
- Effective dimension of planar lines*, Midwest Computability Seminar, University of Chicago, October 24, 2017.

*Effective dimension of points on lines*, Iowa Colloquium on Information, Complexity and Logic (ICICL), Grinnell College, September 14th, 2017.

*Polynomial space randomness and analysis*, AMS Fall Central Sectional Meeting, Special Section on Effective Mathematics in Discrete and Continuous Worlds, University of St. Thomas, October 28-30, 2016.

PROFESSIONAL  
EXPERIENCE

**Postdoctoral Researcher**, INRIA, Nancy

Supervised by Mathieu Hoyrup  
*January 2018 - Present*

**Graduate Research Assistant**, Iowa State University

Supervised by Jack Lutz  
*August 2011 - November 2017*

TEACHING  
EXPERIENCE

**Graduate Teaching Assistant**, Iowa State University

Design and Analysis of Algorithms (Graduate) *Fall 2015*

Theory of Computation (Graduate) *Spring 2016*

Design and Analysis of Algorithms *Summer 2016*

Finite-State Information and Randomness *Fall 2017*