

David Doty

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- EDUCATION
- ◇ **Iowa State University**, Ames, IA, USA
current Ph.D. student in Computer Science, GPA: 3.95
 - ◇ **Iowa State University**, Ames, IA, USA
M.S. in Computer Engineering, 2002, GPA: 3.95
Master's Thesis: *Genetic Algorithm-Based Simulation of Electric Power Markets*
 - ◇ **University of Queensland**, Brisbane, Queensland, Australia
Coursework in Computer Science, Physics, and Cognitive Science, Fall 2001. GPA: 4.0 (equivalent)
 - ◇ **Iowa State University**, Ames, IA, USA
B.S. in Computer Engineering, 2001, GPA: 3.89
 - ◇ **Creighton University**, Omaha, NE, USA
Coursework in Chemistry, Physics, Mathematics, and Computer Science, 1995-1997, GPA: 4.00

- AWARDS AND GRANTS
- ◇ **Iowa State University Teaching Excellence Award**, 2007
 - ◇ **National Science Foundation Travel Grant**, 2007, Travel grant to attend the 3rd Computability in Europe conference in Siena, Italy, June 18–23, 2007
 - ◇ **Association for Symbolic Logic Travel Grant**, 2007, Travel grant to attend the 3rd Computability in Europe conference in Siena, Italy, June 18–23, 2007
 - ◇ **American Institute of Mathematics Travel Grant**, 2006, Sponsored travel to invited Workshop on Effective Randomness, Palo Alto, CA, USA, August 7–11, 2006
 - ◇ **Association for Symbolic Logic Travel Grant**, 2006, Travel grant to attend the 2nd Computability in Europe conference in Swansea, Wales, UK, June 30 – July 5, 2006
 - ◇ **Scholarships and Fellowships**
 - Pioneer Hi-Bred/National Science Foundation Graduate Research Fellowship (2005–2006)
 - National Science Foundation Integrative Graduate Education and Research Traineeship (IGERT) Fellowship (2002–2004)
 - Iowa State University Electrical and Computer Engineering Graduate Excellence Fellowship (2002)
 - Iowa State University National Merit Undergraduate Scholarship (1997–2001)
 - Union Pacific Undergraduate Scholarship (1997–2001)

- RESEARCH INTERESTS
- ◇ Algorithmic Information Theory
 - ◇ Computational Complexity
 - ◇ Theoretical Aspects of Computational Biology

- PUBLICATIONS
- ◇ Laurent Bienvenu, David Doty, and Frank Stephan.
Constructive Dimension and Weak Truth-Table Degrees.
Theory of Computing Systems, to appear. Special issue of invited papers from Computability in Europe 2007.

- ◇ David Doty, Jack H. Lutz, and Satyadev Nandakumar.
Finite-State Dimension and Real Arithmetic.
Information and Computation, 205(11):1640–1651, 2007.
- ◇ David Doty and Jared Nichols.
Pushdown Dimension.
Theoretical Computer Science, 381(1–3):105–123, 2007.
- ◇ David Doty.
Dimension Extractors and Optimal Decompression.
Theory of Computing Systems, to appear. Special issue of invited papers from Computability in Europe 2006.
- ◇ David Doty and Philippe Moser.
Feasible Depth.
Proceedings of the 3rd Conference on Computability in Europe, 2007.
- ◇ Laurent Bienvenu, David Doty, and Frank Stephan.
Constructive Dimension and Weak Truth-Table Degrees.
Proceedings of the 3rd Conference on Computability in Europe, 2007.
- ◇ David Doty, Jack H. Lutz, and Satyadev Nandakumar.
Finite-State Dimension and Real Arithmetic.
Proceedings of the 33rd International Colloquium on Automata, Languages and Programming, 2006.
- ◇ David Doty.
Every Sequence is Decompressible from a Random One.
Proceedings of the 2nd Conference on Computability in Europe, 2006.
- ◇ David Doty, Xiaoyang Gu, Jack H. Lutz, Elvira Mayordomo, and Philippe Moser.
Zeta-Dimension.
Proceedings of the 30th Annual Symposium on Mathematical Foundations of Computer Science, 2005.
- ◇ David Doty.
Non-local Evolutionary Adaptation in Gridplants.
Proceedings of the 2004 Congress on Evolutionary Computation, 2004.
- ◇ Dan Ashlock, Dean C. Adams, and David Doty.
Morphometric Grayscale Texture Analysis Using Foot Patterns.
Proceedings of the 2003 Congress on Evolutionary Computation, 2003.
- INVITED TALKS ◇ **Coevolution and Non-local Adaptation in Gridplants.**
Pioneer Hi-Bred Bioinformatics Group, March 2004.
- SERVICE ◇ **Reviewer**
 - 3rd Conference on Computability in Europe, Siena, Italy, June 18–23, 2007.
- TEACHING EXPERIENCE ◇ **Instructor**, June 2006 – present, Iowa State University
 - Computer Science 207: Programming I, Summer 2006, Summer 2007, Spring 2008
 - Computer Science 227: Introduction to Object-Oriented Programming, Fall 2006, Fall 2007
 - Computer Science 228: Data Structures, Spring 2007
- ◇ **Graduate Teaching Assistant**, May 2001 – July 2001, January 2002 – May 2002, Fall 2004 – Spring 2005, Summer 2007, Iowa State University
 - Electrical Engineering 441: Introduction to Circuits
 - Industrial Engineering 567: System Modeling, Simulation, and Optimization

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- Computer Science 207: Programming I
- Computer Science 227: Introduction to Object-oriented Programming
- Computer Science 228: Data Structures
- ◇ **Developed course materials** for Computer Science 227 and 228 on a grant from Caterpillar, Inc. during Summer 2005, Iowa State University
- ◇ **Tutor**, January 1999 – May 1999, January 2000 – May 2000, Iowa State University
 - Physics 222: Classical Physics
 - Computer Engineering 210: Introduction to Digital Design
 - Computer Science 311: Algorithm Design and Analysis