Jack H. Lutz - Short CV

Current position: Professor of Computer Science, Iowa State University
(Assistant Professor 1987-1992; Associate Professor 1992-1996; Professor 1996-present)
Professor of Mathematics
Faculty Member in Bioinformatics and Computational Biology

Visiting positions
Visiting Professor, University of Texas, 2020
Visiting Associate, Caltech, 2020
Visitor, University of Oxford, 2017
Visitor, University of Wisconsin, 2017
Visiting Associate, Caltech, 2017
Visiting Fellow, University of Cambridge, 2012
Visiting Associate, Caltech, 2012
Visiting Professor, University of Wisconsin, 2006
Visiting Scientist, NEC Research Institute, 2001
Visiting Professor, Cornell University, 1997
DIMACS Visiting Fellow, Rutgers University, 1990

Research areas
Molecular Programming and DNA Nanotechnology: universality, robustness, dynamics, specification, and verification of programmable self-assembling nanosystems.
Algorithmic Information and Randomness: algorithmic dimensions, Kolmogorov complexity, randomness, prediction, finite-state dimension, and algorithmic fractal geometry.
Computational Complexity: complexity in analysis, structure of complexity classes, and resource-bounded measure and dimension.

Research funding (Principal Investigator unless noted)

NSF Grant, 2019–2023 (coPI)	NSF Grant, 1997–2000
NSF Grant, 2015–2020 (coPI)	NSF Presidential Young Investigator Award, 1991–1997
NSF Grant, 2012–2017	Rockwell International, 1991–1996
NSF Grant, 2011–2013	Amoco Foundation, 1993–1995
NSF Grant, 2007–2012	Microware Systems Corporation, 1992–1996
NSF Grant, 2007–2010	Hughes Aircraft Company 1990–1991
NSF Grant, 2003–2006	NSF Grant, 1988–1991
NSF Grant, 2000–2004	

Publications (authored and co-authored)
60 journal papers, principally in *SIAM Journal on Computing*, *Information and Computation*, *Theoretical Computer Science*, *Journal of Computer and System Sciences*, and *Theory of Computing Systems*
66 conference papers

Recent and upcoming invited lectures at meetings
Conference on Computability, Complexity, and Randomness, 2020
AMS-ASL Special Session: Logic Facing Outward, Joint Mathematics Meetings, 2020

ASL North American Annual Meeting, New York, 2019 (two-hour tutorial)
Equidistribution: Arithmetic, Computational and Probabilistic Aspects, NUS IMS, 2019
Computability Workshop, Oberwolfach Mathematics Research Institute, 2018
Midwest Computability Seminar, Chicago, 2017
NZMRI Workshop and Summer School, Napier, NZ, 2017 (three lectures)
Workshop on Normal Numbers, Erwin Schrödinger Institute, 2016
AMS Special Session on Effective Mathematics in Discrete and Continuous Worlds, 2016
Conference on Computability, Complexity, and Randomness (CCR), 2015
Computability Special Session, ASL North American Annual Meeting, 2015
Midwest Computability Seminar, Chicago, 2014
AMS-ASL Special Session on Logic and Probability, Joint Math Meetings, 2014
Natural Algorithms and the Sciences Workshop, Princeton, 2013
Intl. Conference on Unconventional Computation and Natural Computing (UCNC), 2012
Conference on Computability, Complexity, and Randomness (CCR), 2012
Logic, Dynamics, and their Interactions (celebrating work of Dan Mauldin), 2012
Intl. Conference on Languages and Automata Theory and Applications (LAA), 2012
Conference on DNA Computing and Molecular Programming (DNA), 2011
Conference on Computability in Europe (CiE), 2011 (three-hour tutorial)
AMS-ASL Special Session on Logic and Analysis, Joint Math Meetings, 2011
Conference on Computability, Complexity, and Randomness (CCR), 2010
CiE Special Session on Algorithmic Randomness, 2009
Workshop on Fractals and Tilings, 2009
Conference on Logic, Computability, and Randomness, 2009

Education

Ph.D., Mathematics, Caltech, 1987 (Adviser: Alexander S. Kechris)
M.S., Computer Science, Univ. Kansas, 1981
M.A., Mathematics, Univ. Kansas, 1979
B.G.S., Mathematics, Univ. Kansas, 1976

Ph.D. Degrees Supervised

Donald M. Stull, 2017, now Postdoctoral Research Fellow, INRIA, Nancy, France
Adam Case, 2016, now Assistant Professor, Drake Univ.
Titus Klinge (two advisers), 2016, now Assistant Professor, Drake Univ.
Divita Mathur (two advisers), 2016, now Postdoctoral Fellow, U.S. Naval Research Lab
Brian Patterson (two advisers), 2011, now Associate Professor, Oglethorpe Univ.
Scott M. Summers, 2010, now Associate Professor, Univ. Wisconsin–Oshkosh
Matthew J. Patitz, 2010, now Associate Professor, Univ. Arkansas
Xiaoyang Gu, 2009, now Head of Data Engineering, BorderX Lab
Satyadev Nandakumar, 2009, now Associate Professor, IIT–Kanpur, India
David S. Doty (two advisers), 2009, now Assistant Professor, Univ. California–Davis
John M. Hitchcock, 2003, now Professor, Univ. Wyoming
Jack J. Dai (two advisers), 2001, now Postdoctoral Fellow, Fudan University, China
James I. Lathrop, 1997, now Assistant Professor, Iowa State Univ.

Josef M. Breutzmann, 1996, now Professor Emeritus, Wartburg College

David W. Juedes, 1994, now Professor and Chair, Ohio Univ.

External committee member for Ph.D. students at U. Zaragoza (2011), U. Illinois (2005), U. Amsterdam (1998), Heidelberg U. (1996), Rutgers U. (1995), and Polytech. U. Catalonia (1994)

Currently supervising five Ph.D. students at Iowa State University

Conference program committee memberships

ACM Intl. Conf. on Nanoscale Computing and Communication (NanoCom) 2016

Intl. Conf. on Computability, Complexity, and Randomness (CCR) 2008, 2010, 2016

Conference on Computability in Europe (CiE) 2015

Intl. Conf. on Languages and Automata Theory and Applications (LATA) 2013, 2014

Intl. Conf. on Computability and Complexity in Analysis (CCA) 2005, 2008, 2012

Intl. Computing and Combinatorics Conf. (COCOON) 2011

IEEE Conference on Computational Complexity (CCC) 1993, 1996, 2007

Symp. on Theoretical Aspects of Computer Science (STACS) 1998