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

Research funding (Principal Investigator unless noted)

NSF Grant, 2019–2025 (coPI)	NSF Grant, 1997–2000
NSF Grant, 2015–2021 (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)
  65 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*
  72 conference papers

Recent and upcoming invited lectures at meetings
  Joint Meeting, American, Australian, and New Zealand Mathematical Societies, 2024
  NSF-CBMS Research Conference on Algorithmic Fractal Dimensions, 2024 (ten lectures)
  Conference on Computability, Complexity, and Randomness, 2022

Minisymposium on Applications of Stochastic Reaction Networks, SIAM-DS 2021
Algorithmic Randomness Workshop, American Institute of Mathematics, 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
Hugh D. Potter, 2022
Dawn Nye, 2022, now Visiting Assistant Professor, Grinnell College
Andrei N. Migunov, 2022, now Assistant Professor, Drake Univ.
Xiang Huang, 2020, now Assistant Professor, Univ. Illinois–Springfield
Donald M. Stull, 2017, now L.E. Dickson Instructor, University of Chicago
Adam Case, 2016, now Associate Professor, Drake Univ.
Titus Klinge (two advisers), 2016, now Software Engineer, Third Wave Automation
Divita Mathur (two advisers), 2016, now Assistant Professor, Case Western Reserve Univ.
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 Principal Staff Software Engineer, LinkedIn

Satyadev Nandakumar, 2009, now Associate Professor, IIT–Kanpur, India

David S. Doty (two advisers), 2009, now Associate 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 Associate Dean, 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)

Thirteen Ph.D. "grandchildren"

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

Conference program committee memberships

Iowa Colloquium on Information, Complexity, and Logic (ICICL) Summer Research Conference, 2024, 2023

Intl. Conf. on Computability, Complexity, and Randomness (CCR) 2023, 2016, 2010, 2008

Intl. Conf. on Computability and Complexity in Analysis (CCA) 2021, 2012, 2008, 2005

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

Conference on Computability in Europe (CiE) 2015

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

Intl. Computing and Combinatorics Conf. (COCOON) 2011

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

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