

2020 BOARD NOMINEE

Alex Aiken

Professor, Computer Science
Stanford University



CRA
Computing Research
Association

Awards and Honors and Year Received

- Phi Beta Kappa Award for Teaching Excellence, 2003
- ACM Fellow, 2009
- ACM SIGPLAN Programming Languages Achievement Award, 2019

Involvement in CRA Activities

- No.

Other Relevant Experience

- I have served as the Chair of the Stanford Computer Science Department (2015-2019), as a member (2015-2019) and chair (2019) of the ACM Turing Award committee, and a member DARPA's ISAT committee.

Research Interests

programming languages and compilers, verification, high performance computing

Personal Statement

My research interests include all aspects of software development and tools, but particularly programming languages and compilers. A number of the algorithms I've helped develop have been incorporated in commercial tools, and several systems I've contributed to are widely used. For example, I developed and continue to maintain the MOSS plagiarism detection system, which is used by educators in programming classes worldwide, and I led the development of the Legion parallel and distributed programming system. I'm broadly familiar with the landscape of computing research, having worked in industrial research labs, national labs, universities, and served as a CS department chair.

VITA
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Current Positions

Alcatel/Lucent Professor of Computer Science, Stanford University
CS Division Director, SLAC

Areas of research: Currently I work primarily on the construction of reliable and high performance software, including language design, static analysis and dynamic analysis.

Education

Ph.D. in Computer Science; Cornell University, 1988
M.S. in Computer Science; Cornell University, 1987
B.S. in Music and Computer Science; Bowling Green State University (Ohio), 1983

Previous Positions

[2014-2018] Chair, Computer Science Department, Stanford University
[2001-2003] Professor, University of California at Berkeley
[1996-2001] Associate Professor, University of California at Berkeley
[1993-1996] Assistant Professor, University of California at Berkeley
[1988-1993] Research Staff Member, IBM Almaden Research Center, San Jose, California

Selected Professional Activities

2016- CS Division Director, SLAC National Laboratory
2015-19 ACM Turing Award Committee
2014-19 Department Chair, Stanford CS
2003 General Chair, ACM Symposium on Principles of Programming Languages
2010 Program Chair, ACM Conference on Programming Language Design and Implementation
1999 Program Chair, ACM Symposium on Principles of Programming Languages

Awards

ACM SIGPLAN Programming Languages Achievement Award, 2019

Distinguished Paper Award, 2012 for *Concurrent Data Representation Synthesis* from the Conference on Programming Language Design and Implementation (PLDI)

Alcatel-Lucent Chair (since 2011)

Best Paper Award, 2011 for *Data Representation Synthesis* from the Conference on Programming Language Design and Implementation (PLDI)

ACM Fellow, 2009

Distinguished Paper Award for *Context- and Path-Sensitive Memory Leak Detection* from the 2005 Conference on Foundations of Software Engineering (FSE)

Phi Beta Kappa Award for Teaching Excellence (Northern California Association) 2003

Best Paper Award for *Detecting Races in Relay Ladder Logic Programs* from European Joint Conferences on Theory and Practice of Software (ETAPS), 1998

Publications

See <http://theory.stanford.edu/~aiken/publications/publications.html>