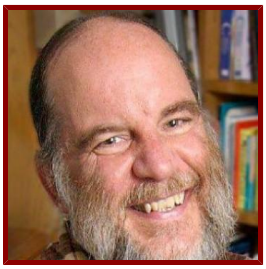
Stanford



Eric Roberts

The Charles Simonyi Professor in the School of Engineering, Emeritus

Computer Science

CONTACT INFORMATION

- **Administrator**

  Steven Magness - Administrative Associate

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Bio

BIO

From 1990-2002, Roberts served as associate chair and director of undergraduate studies for the Computer Science Department before being appointed as Senior Associate Dean in the School of Engineering and later moving on to become Faculty Director for Interdisciplinary Science Education in the office of the VPUE.

ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Computer Science

HONORS AND AWARDS

- Bing Fellowship, Stanford University (1993-95)
- Perin Award for Undergraduate Engineering Education, Stanford University (1995)
- Dinkelspiel Award, Stanford University (1998)
- Outstanding Contributions to Computer Science Education, ACM SIGCSE (2003)
- Hoagland Prize for Excellence in Undergraduate Teaching, Stanford University (2004)
- Fellow, American Association for the Advancement of Science (2005)
- Fellow, ACM (2008)
- Taylor Booth Award, IEEE (2012)
- Karl V. Karlstrom Outstanding Educator Award, ACM (2012)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Past Chair, ACM Education Board (2009 - present)

PROGRAM AFFILIATIONS

- Science, Technology and Society
- Symbolic Systems Program

PROFESSIONAL EDUCATION

- PhD, Harvard , Applied Mathematics (1980)
- BA, Harvard , Applied Mathematics (1973)
- MS, Harvard , Applied Mathematics (1974)

Publications

PUBLICATIONS

- **Programming Abstractions in C++**
  Roberts, E.
  Pearson Prentice Hall.2014
- **A portable graphics library for introductory CS**
  Roberts, E.
  2013
- **Informatics education using nothing but a browser**
  Piech, C., Roberts, E.
  2011
- **Meeting the challenges of rising enrollments** *ACM Inroads*
  Roberts, E.
  2011
- **Counterpoint: Eric Roberts** *COMMUNICATIONS OF THE ACM*
  Roberts, E.
  2008; 51 (7): 30-32
- **The Art and Science of Java**
  Roberts, E.
  Addison-Wesley.2008
- **Point/Counterpoint: Technology education for early 21st century** *Communications of the ACM*
  Roberts, E.
  2008
- **Sparking self-sustained learning: report on a design experiment to build technological fluency and bridge divides** *International Conference on Technology Education in the Asia Pacific Region (ICTE)*
  Barron, B., Martin, C. K., Roberts, E.
  SPRINGER.2007: 75–105
- **Sparking self-sustained learning: Report on a design experiment to build technological fluency and bridge divides** *International Journal of Technology and Design Education*
  Barron, B., Martin, C. K., Roberts, E.
  2007; 1 (17)
- **Resurrecting the applet paradigm**
  Roberts, E.
  2007
- **Resurrecting the Applet Paradigm** *38th SIGCSE Technical Symposium on Computer Science Education*
  Roberts, E.
  ASSOC COMPUTING MACHINERY.2007: 521–525
- **Thinking Recursively with Java**
  Roberts, E.
  John Wiley and Sons.2006

- **An interactive tutorial for Java**
  Roberts, E.
  2006
- **Designing a Computer Science Curriculum for Bermuda's Public Schools**
  Barron, B., Martin, C. K., Roberts, E.
  2005
- **What can computer science learn from a fine-arts approach to teaching?**
  Barker, L., Garvin-Doxas, K., Roberts, E.
  2005
- **The dream of a common language: The search for simplicity and stability in computer science education**
  Roberts, E.
  2004
- **Imagining possible futures: Course taking and knowledge use within trajectories of technological fluency** *American Educational Research Association Annual Meeting*
  Barron, B., Martin, Caitlin, K., Roberts, E., Mercier, Emma, M., McPhee, S.
  2004
- **Encouraging women in computer science** *Inroads*
  Roberts, E., Kassianidou, M., Irani, L.
  2002
- **Strategies for promoting academic integrity in computer science courses**
  Roberts, E.
  2002
- **Design experiments at a distance: Lessons from developing a secondary school curriculum for Bermuda public schools**
  Barron, B., Martin, C., Roberts, E., Osipovich, A., Ross, M.
  2002
- **A design experiment to build technological fluency and bridge divides**
  Martin, C., Barron, B., Roberts, E.
  2002
- **Designing and assessing ongoing professional development: Opportunities for high school computer science teachers**
  Martin, C., Barron, B., Roberts, E.
  2002
- **Computing Curricula 2001**
  edited by Roberts, E., Engel, G.
  IEEE Computer Society Press.2001
- **An overview of MiniJav**
  Roberts, E.
  2001
- **Strategies for encouraging individual achievement in introductory computer science courses**
  Roberts, E.
  2000
- **Computing education and the Information Technology workforce** *paper was prepared for the National Academy Study on Workforce Needs in Information Technology with the endorsement and support of the Education Board of the Association of Computing Machinery.*
  Roberts, E.
  Reprinted in SIGCSE Bulletin.2000: 1
- **Curricula 2001: Bringing the future to the classroom** *IEEE Computer*
  Chang, Carl, K., Engel, G., King, W., Roberts, E., Shackelford, R., Sloan, Robert, H.

1999

- **Conserving the seed corn: Reflections on the academic hiring crisis** *SIGCSE Bulletin*
  Roberts, E.
  1999
- **Programming Abstractions in C**
  Roberts, E.
  Addison-Wesley.1998
- **Strategies for integrating technology into computer ethics courses**
  Roberts, E.
  1998
- **Designing a Java graphics library for CS1**
  Roberts, E., Picard, A., Fredricsson, M.
  1998
- **Directions in computer science education** *published electronically in conjunction with the December 1996 issue of Computing Surveys as part of an invited collection of position papers.*
  Roberts, E.
  1996
- **Tools for creating portable demonstration programs**
  Roberts, E.
  1996
- **Thetis: An ANSI C programming environment designed for introductory use**
  Freund, S., Roberts, E.
  1996
- **The Art and Science of C: A Library-Based Introduction to Computer Science**
  Roberts, E.
  Addison-Wesley.1995
- **Using undergraduates as teaching assistants in introductory programming courses: an update on the Stanford experience**
  Roberts, E., Lilly, J., Rollins, B.
  1995
- **Loop exits and structured programming: Reopening the debate**
  Roberts, E.
  1995
- **A C-based graphics library for CS1**
  Roberts, E.
  1995
- **Using C in CS1: The Stanford experience**
  Roberts, E.
  1993
- **Computers and society** *in Encyclopedia of Computer Science*
  Roberts, E.
  edited by Ralston, A., Reilly, E.
  Van Nostrand Reinhold.1992; third: 1
- **Factors working against women in computer science** *Tough Questions*
  Roberts, E.
  1989

- **Computing implications: Report from DIAC-88** *Computers and Society, ACM SIGCAS*
  Roberts, E., Schuler, D.
  1989; 19 (1)
- **Implementing exceptions in C** *Research Report #40, Digital Equipment Corporation Systems Research Center*
  Roberts, E.
  1989
- **WorkCrews: An abstraction for controlling parallelism** *Research Report #42, Digital Equipment Corporation Systems Research Center*
  Roberts, E., Vandevoorde, M.
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- **Computers and the Strategic Defense Initiative** *included as Chapter 8 of Computers in Battle: Will They Work?*
  Roberts, E., Berlin, S.
  edited by Bellin, D., Chapman, G.
  Harcourt Brace Jovanovich.1987: 1
- **Programming and the Pentagon** *Abacus magazine*
  Roberts, E.
  1987
- **parmake and dp: Experience with a distributed, parallel implementation of make**
  Roberts, E., Ellis, J.
  1987
- **Thinking Recursively**
  Roberts, E.
  John Wiley and Sons.1986
- **The Eastport Report: Unexpected support for SDI critics** *The CPSR Newsletter*
  Roberts, E.
  1986; 4 (3)
- **Task management in Ada: A critical evaluation for real time multiprocessors** *Software—Practice and Experience*
  Roberts, E., Evans Jr., Arthur, Morgan, C., Robert, Clarke, E.
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- **The impact of multiprocessor technology on high-level language design** *Bolt Beranek and Newman Inc.*
  Evans Jr., Arthur, Morgan, C., Robert, Roberts, Eric, S., Clarke, E.
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- **Pluribus: An operational fault-tolerant multiprocessor**
  Katsuki, D., Elsam, E., Mann, W., Roberts, E., Robinson, J., Skowronski, F., Stanley
  edited by Chu, W.
  1978
- **Software fault-tolerance in the Pluribus**
  Robinson, J., Roberts, E.
  1978
- **Elements of Basic Programming: An Introduction to Algorithmic Computation**
  Roberts, E.
  Department of Computer Science, Wellesley College, Wellesley, MA..1981 , 1987
- **The Intellectual Excitement of Computer Science**
  Roberts, E.
  forthcoming..