

CURRICULUM VITAE

Dr. Chris Stephenson: stephensonc@google.com

Doctorate of Education in Teaching Leadership

Oregon State University, 2008

Masters of Education

Department of Measurement, Evaluation, and Computer Applications
Ontario Institute for Studies in Education, 1996

Bachelor of Arts and Science

University of Toronto, 1979

PROFESSIONAL AFFILIATIONS

- 2017-** Editorial Advisory Board, *Inroads Magazine*
- 2010-2012** Member, College Board AP Computer Science Principle Course Development Commission
- 2009** Computer Science Advisor, *Learning & Leading with Technology*
- 2008-** Founding member, Computing in the Core Coalition
- 2000-2011** Chair, Computer Science and Information Technology Conference
- 2000-2004** Chair, K-12 Education Task Force
- 1998-2007** Computer Science Program Chair, National Educ. Computing Conference
- 1999-2000** President, Association for Computer Studies Educators
- 1997 -** Past President, Educational Computing Organization of Ontario
- 1995-1997** President, Educational Computing Organization of Ontario
- 1995-1996** Past President, Computer Science Special Interest Group, International Society for Technology in Education
- 1994** Chair, Bringing Educators and Industry Together Conference, University of Toronto
- 1993-1995** Vice President, Educational Computing Organization of Ontario
- 1992- 1994** President, Computer Science Special Interest Group, International Society for Technology in Education
- 1991- 1992** Opinions Editor, Journal of Computer Science Education
- 1990 -1993** Post-Secondary Director, Educational Computing Organization of Ontario
- 1990 -** Editorial Board - *Journal of Computer Science Education*

CURRICULUM INITIATIVES:

- 2017** Consultant, *Leaving Certificate for Computer Science, Ireland*
- 2011** Co-author, *CSTA K-12 Computer Science Standards*
- 2003** Co-author, *ACM Model Curriculum for K-12 Computer Science Education*
- 2002-04** Member, ACM K-12 Task Force Curriculum Committee
- 2000** Development Team Leader, High school computer science and computer engineer curriculum for the Ontario Ministry of Education

AWARDS:

- ACM President's Award for Outstanding Contribution to Computer Science Education, San Francisco, 2016
- Outstanding Conference Paper: SIG Education of Deaf Persons, American Educational Research Association, San Diego, 1998.
- Outstanding Conference Paper: Conference on Communication, Technology and Cultural Values, Rochester Institute of Technology, 1997.
- University of Toronto, New College Award for Proficiency in the Arts

PROFESSIONAL PRACTICE

Head of Computer Science Education Strategy Google 2014 -

I serve as the Head of Computer Science Education Strategy for Google. In this role, I work with team across Google and with external computer science organizations globally to improve computer science teaching and learning. Within Google, my focus is on ensuring that all Google computer science education programs are appropriate, effective, scalable, and sustainable. In my work with external organizations, my goal is to ensure that Google continues to be a good partner in the computer science education space. I also manage a number of K-12 and Post-Secondary programs including Google's Computer Science Education Research portfolio through which Goggle supports cutting edge educational and implementation research in the U.S.

Executive Director Computer Science Teachers Association 2004-2014

As the founding Executive Director of this professional association, I built membership to 22,000 educators in 126 countries. I managed all aspects of strategic operations, including: corporate and community partnerships, financial planning and oversight, education policy and advocacy, fundraising, and strategic curriculum and professional development. I also served as the liaison between the organization and the computer science and corporate communities. I served in an advisory capacity on a number of critical projects including Computing in the Core, the CS10K project, Computer Science Education Week, and the College Board Advanced Placement Principles Course development. I also led CSTA's research initiatives. I served as lead author of a number of technical and white papers and scholarly articles and keynoted several international conferences.

President Holt Software Associates 1986-2004

As an original founder of Holt Software Associates, I was involved in every facet of its operations beginning with its inception in 1988. From 2000 to 2004, I served as CEO, with management responsibilities for all aspects of the company's fiscal and research and development operations (software and teaching resources). As an editor and author of numerous textbooks and resource materials, I was actively engaged in the development of curriculum materials to meet the needs of computer educators and their students. I also served as an advisor to both academic and commercial enterprises on numerous curriculum initiatives with special emphasis on addressing the problems of gender equity in technology-related education.

Research Associate Department of Mathematics and Computing University of Waterloo 2001-2004

I provided research support for the departments outreach to high school computer science educators. In this capacity I designed and coordinated broad-based research studies (both quantitative and qualitative) of secondary and post secondary institutions to determine current trends in hardware, software and support material usage, and course design. I also coordinated and facilitate educational outreach and professional development for secondary school educators.

Research Assistant Computer Systems Research Institute University of Toronto 1986 to 2001

I was part of a University of Toronto research team developing computer software, classroom courseware, and teacher materials for use in Ontario high schools. In this capacity I developed broad-based research on secondary and post secondary institutions to determine current trends

in hardware, software and support material usage, and course design. I coordinated and facilitated educational seminars for secondary school educators and acted as liaison with high schools to promote the exchange of new research related to computer education.

Technical Writer

Vericom Systems Ltd. 1984 to 1986

I designed and implemented standards and reviewed system and working templates for user documentation. I determined the user documentation required for all software products and designed and edited all documentation. I also established a tutoring program to train development staff in techniques for more effective technical communication.

Researcher

TVOntario 1983 to 1986

As the research for *Realities*, I provided comprehensive research for 52 half-hour interviews per season for Richard Gwyn and Robert Fulford. I also researched and wrote viewer publications containing broadcast information, guest biographies, and supplementary readings.

Radio News Broadcaster

Radio Station CKNB 1981 to 1983

I worked as a radio news broadcaster with 5 live broadcasts five day per week.

PUBLICATIONS

White Papers and Curriculum Publications

Stephenson, C., and Phillips, P. (2013). *Bugs in the System: Computer Science Teacher Certification in the U.S.* New York: Computer Science Teachers Association.

Wilson, C., Stephenson, C., Stehlik, M., Sudol, L. (2010). *Running on Empty: The Failure to Teach Computer Science in the Digital Age.* Association for Computing Machinery and the Computer Science Teachers Association, New York, NY.

Simard, C., Stephenson, C., Kosaraju, D. (2010). *Addressing Core Equity Issues in K-2 Computer Science Education: Identifying Barrier and Sharing Strategies.* The Anita Borg Institute and the Computer Science Teachers Association. Palo Alto, CA.

Ericson, B, Armoni, M., Gal-Ezer, J., Seehorn, D., Stephenson, C., Trees, F. (2008) *Ensuring Exemplary Teaching in an Essential Discipline: Addressing the Crisis in Computer Science Teacher Certification.* New York: Association for Computing Machinery.

Stephenson, C., Gal-Ezer, J., Habermann, B., and Verno, A. (2005). *The New Educational Imperative: Improving High School Computer Science Education.* New York: Association for Computing Machinery.

Tucker, A., Deek, F., Jones, J., McGowan, D., Stephenson, C., Verno, A. (2004). *A Model Curriculum for K-12 Computer Science.* New York: Association for Computing Machinery.

Periodicals and Papers:

Yadav, A.; Hong, H.; and Stephenson, C. (2016). Computational Thinking for All: Pedagogical Approaches to Embedding 21st Century Problem Solving in K-12 Classrooms. *Tech Trends*, May 30, 2016 Springer

Stephenson, C. (2016) And Now the Hard Part Begins: Achieving the Promise of Computer Science Education, *Journal of Computing Sciences in Colleges*: 31(4), April 2016

Yadav, A., Hong, H., and Stephenson, C. (2016). Computational Thinking for Teacher Education: A Framework for Developing Teacher Knowledge. *Communications of the ACM*, 60(4), 55-62.

- Ravitz, J., Stephenson, C., Parker, K., and Blaszevski, J. (2016). Early Lessons from Evaluation of Computer Science Teacher Professional Development in Google's CS4HS Program. *Transactions on Computing Education* 17 (4), September 2017
- Stephenson, C. and Gal-Ezer, J. (2014). A Tale of Two Countries: Successes and Challenges in K-12 Computer Science Education in Israel and the United States. *Transactions on Computing Education*, 14(2), 8:1-8:7.
- Barr, V. & Stephenson, C. (2011). Bridging Computation Thinking to K-12: What is the Role of the Computer Science Education Community? *ACM Inroads*, 1(1), 2011, 48-54.
- Seehorn, D.; Carey, S.; Gal-Ezer, J. & Stephenson, C. (2010). Computer Science Teacher Preparation is Critical. *ACM Inroads*, 2(1), 2010, 61-66.
- Stephenson, C. & Dovi, R. (2013). More than Gender: Taking a Systemic Approach to Improving K-12 Computer Science Education. *Computer*, March 2013, 42-46.
- Stephenson, C. (2005). *Theoretical Promiscuity as a Response to Identity Crisis: Or How Can I Know How When I Don't Know Who I Am Any More?* Paper presented at the Congress on Qualitative Research, Champaign-Urbana, May 5-7.
- Stephenson, C. (2004) Finding and Growing Leaders: An Interview With ISTE Deputy CEO Leslie Conery. *Learning and Leading with Technology*, 31(7). 26-29.
- Stephenson, C. (2004). Leading Through Advocacy: An interview with ISTE CEO Don Knezek. *Learning and Leading with Technology*, 31(8), 6-9.
- Stephenson, C. (2004). Leadership as Service: An Interview with ISTE President Jan Van Dam. *Learning and Leading with Technology*, 32(1), 12-15.
- Stephenson, C. (2002). Computer Science Education: Looking Back and Looking Ahead. *Learning and Leading with Technology*, 30(2), pp. 6-9, 44-45.
- Stephenson, C. (2001-2002). Helping students prepare for careers in computing. *Learning and Leading with Technology*, 29(4), 32-35, 56.
- Stephenson, C. (2002). Computer Science Education: Looking Back and Looking Ahead. *Learning and Leading with Technology*, 30(2), 6-9, 44-45.
- Stephenson, C. (1998). Inching toward understanding: Deaf Issues in E-Space. *American Educational Research Association*, San Diego.
- Stephenson, C. (1998). Revitalizing high school computer science: Finding common ground. *Journal of Computer Science Education*, 12(1&2).
- Stephenson, C. (1998). Language choice and key concepts in CS1. *Journal of Research on Computing Education*, 31(1), Fall 1998.
- Stephenson, C. (1997). Building community in cyberspace. *American Educational Research Association Annual Conference*, Chicago, March.
- Stephenson, C. (1997). Computer Science in Ontario high schools: A ten-year overview. *Educational Computer Organization of Ontario (ECOO) Output*, December, 1997.
- Stephenson, C. (1997). Expanding our view of the computer science curriculum. *Journal of Computer Science Education*, 11(4), August.
- Stephenson, C. (1997). The text of new relationships: Building community in E-Space. *Conference on Communications, Technology and Cultural Values Conference on Communication, Technology and Cultural Values*. Rochester Institute of Technology.
- Stephenson, C. (1997). To OO or not to OO and other issues: Programming paradigms in high school computer science. *Educational Computer Organization of Ontario (ECOO) Output*, September, 1997.
- Stephenson, C. (1996). *A renewed and revitalized computer studies/computer science curriculum: A report of the Computer Systems Research Institute Committee on High School Computer Curriculum Reform*. Toronto: University of Toronto Department of Computer Science.
- Stephenson, C. (1996). Addressing gender equity in computer science: Special SIGCS panel at the National Educational Computing Conference. *Journal of Computer Science Education*, 10(2), Winter, 1996.

- Stephenson, C. (1996). Just when we thought it was safe. *Journal of Computer Science Education*, 10(4), August 1996.
- Stephenson, C. (1996). Some things teachers need to know about research on reading, writing and technology. *Educational Computer Organization of Ontario (ECOO) Output*, December, 1996.
- Stephenson, C. (1996). Technology in the new OISE/UT. *Educational Computer Organization of Ontario (ECOO) Output*, September.
- Stephenson, C. (1995). Real learning for the real world. *International Society for Technology in Education (ISTE) Journal of Computer Science Education*, Summer 1995.
- Stephenson, C. (1995). The role of the AP in the high school computer science curriculum. *International Society for Technology in Education (ISTE) Journal of Computer Science Education*, Winter 1995.
- Stephenson, C. (1995). The rush to C++. *International Society for Technology in Education (ISTE) Journal of Computer Science Education*, Winter 1995.
- Stephenson, C. (1994). An interview with Sharon McCoy Bell. *The Computing Teacher*, February.
- Stephenson, C. (1992). Student-created tools for teaching complex concepts. *Journal of Computer Science Education*, Spring 1992.
- Stephenson, C. (1992). Why are we doing this: What high school teachers think about teaching programming. *Educational Computer Organization of Ontario (ECOO) OUTPUT*, September 1992.
- Stephenson, C. (1991). Turning the trend around: Bringing computer science back to computer conferences. *International Society for Technology in Education (ISTE) Journal of Computer Science Education*, Summer 1991.
- Stephenson, C. (1991). Why is anyone still teaching BASIC? *Journal of Computer Science Education*, Winter, 1991.
- Stephenson, C. (1990). Changing trends in high school programming. *Journal of Computer Science Education*, Winter 1990.
- Stephenson, C. (1990). Changing trends in high school programming. *Educational Computer Organization of Ontario (ECOO) OUTPUT*, July, 1990.
- Stephenson, C. (1990). Computing Insights '90. *Educational Computer Organization of Ontario (ECOO) OUTPUT*, July, 1990.
- Stephenson, C. (1990). Hardware and software used for teaching programming in high schools. *Educational Computer Organization of Ontario (ECOO) OUTPUT*, April, 1990.
- Stephenson, C. (1990). Turing takes aim at Basic and Pascal: A programming language on the rise. *SIGCS Newsletter*, Summer 1990.
- Stephenson, C. (1990). Licensing Turing: What you get and what it costs. *Educational Computer Organization of Ontario (ECOO) OUTPUT*, December 1990.
- Stephenson, C. (1990). Why computer teachers quit teaching. *Journal of Computer Science Education*, Winter 1990.
- Stephenson, C. (1990). Winning with Turing: One School's Modern Miracle. *SIGCS Newsletter*, Spring 1990.

Conference Proceedings

- Stephenson, C. (2013). *Computer Science Education: What You Should Know About This National Imperative*. Presented at the UMBC K-12 Computer Science Education Summit: May 17, 2013, Baltimore, MD.
- Stephenson, C. (2012). *Computational Thinking: What is IT and Why Should We Care*. Keynote presented at the Australian Computing Education Conference: October 4, 2012, Perth, Australia.
- Stephenson, C. (2012). *Looking at the Big Issues*. Presented at the UMass Lowell CS4HS Workshop: August 2, 2012, Washington, DC.
- Stephenson, C. (2012). *Taking IT to the Next Level*. Presented at the National Girls

- Collaborative Project Conference on Collaboration. April 26, 2012, Washington, DC.
- Stephenson, C. (2012). *The National Imperative for K-12 Computer Science Education*. Presented at the Microsoft Conversations on Education: STEM and the Race to the Future, November 15, 2012, Washington, DC.
- Stephenson, C. (2012). *The Critical Connection: K-12 Computer Science and Jobs*. Presented at the Change the Equation STEM Salon on STEM: Sourcing the C in STEM: December 12, 2012, Washington, DC.
- Cooper, S. *CSTA K-12 (Primary and Secondary School) Computer Science Standards*. Presented at the ACM ITiCSE Conference, July 2, 2012, Haifa, Israel.
- Stephenson, C. (2012). *The State of Secondary Level Computer Science Education in the United States*. Presented at the Computing in Schools Group Annual Spring Meeting, April 18, 2012, Cambridge, UK.
- Stephenson, C. (2011). *The New CSTA K-12 Standards*. Presented at the Grace Hopper Celebration of Women in Computing, November 12, 2011, Portland, OR.
- Stephenson, C. (2011). *Transforming our Discipline and Ourselves*. Presented at the University of Delaware Tapestry Workshop, July 27, 2011, Newark, DE.
- Wilson, C., Stehlik, M. and Stephenson, C. (2011). *Running on Empty: The failure to Teach Computer Science in the Digital Age*. Presented at the ACM SIGCSE Technical Symposium, March 12, 2011, Dallas, TX.
- Stephenson, C., Gal-Ezer, J., Phillipps, M., Varenhold. (2011). *Professional Associations in K-12 Computer Science*. Presented at the ACM ITiCSE Conference, June 30 10, 2011, Ankara, Turkey.
- Astracan, O., Briggs, A., Diaz, L., Haynie, K., & Stephenson, C. (2010). *The CS10K Project: Mobilizing the Community to Transform High School Computing*. Presented at the ACM SIGCSE Technical Symposium, March 10, 2011, Dallas, TX.
- Gal-Ezer, J., Phillipps, M., Stephenson, C. (2011). *Outreach and Reaching Out in K-2: An International Perspective*. Presented at the ACM SIGCSE Technical Symposium, March 10, 2011, Dallas, TX.
- Guzdial, M., Roger, S., Owens, B., Stephenson, C. (2011). *Teaming Up to Change K-12 CS Education, One State at a Time*. Presented at the ACM SIGCSE Technical Symposium, March 10, 2011, Dallas, TX.
- East, P., Bentley, C., Knoch, J. Rainwater, S., Stephenson, C. (2011). *NCATE Standards for Preparation of Secondary Computer Science Teachers*. Presented at the ACM SIGCSE Technical Symposium, March 10, 2011, Dallas, TX.
- Schnabel, R., Rogers, S., Stehlik, M., Stephenson, C., & White, J. (2011). *Progress in Surfacing Computer Science in STEM*. Presented at the ACM SIGCSE Technical Symposium, March 12, 2011, Dallas, TX.
- Bell, T., Pasternak, A., Stephenson, C., Tucker, A., and Varenhold, J. (2010). *Implementing CS Curricula in Secondary Education: An International Perspective*. Presented at the Frontier in Education Conference, October 28, 2010, Washington, DC.
- Gal-Ezer, J., Phillipps, M., Stephenson, C., and Varenhold, J. (2010). *Professional Associations in K-12 Computer Science*. Presented at the ITiCSE Conference, June 29, 2010, Ankara, Turkey.

Textbooks and University Technical Reports:

- Hume, J. & Stephenson C. (1987). *Guide to the PC Turing interpreter*. Toronto, ON: Holt Software Associates.
- Hume, J. & Stephenson C. (2000). *Introduction to Programming in Java*. Toronto, ON: Holt Software Associates.
- Hume, J. & Stephenson C. (1998). *Programming Concepts in Java*. Toronto, ON: Holt Software Associates.

- Milbrandt, G. & Stephenson, C. (2000). *Careers in Computing*. Toronto, ON: Holt Software Associates.
- Smyth, G., & Stephenson, C. (2001). *Computer Engineering: An activities-based approach*. Toronto, ON: Holt Software Associates.
- Smyth, G. & Stephenson C. (2002). *Networks Interfaces and Integrated Circuits*. Toronto, ON: Holt Software Associates.
- Borg Institute and the Computer Science Teachers Association. Palo Alto, CA.
- Stephenson, C. & West T. (2003). *Java for AP Computer Science*. (2003). Toronto, ON: Holt Software Associates.
- Stephenson, C. (1992). *Why Are We Doing This: What High School Teachers Think About Programming*. Technical Report CSRI-261. Computer Systems Research Institute, University of Toronto. February 1992.