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CURRICULUM VITÆ

Bo Ingvar Sandén

Doctoral Professor of Computer Science

Colorado Technical University

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EDUCATION

Ph. D., 1978 Computer Science, (Teknologie Doktor, Informationsbehandling), Royal Institute of Technology, Stockholm, 1978. Advisor: Professor Lars-Erik Thorelli.

B. A., 1971 Russian and Mathematics, Lund University.

M. S. and B. S., 1970 Engineering Physics, Lund Institute of Technology, Sweden.

ACADEMIC WORK EXPERIENCE

May 2009-Present: Colorado Technical University

Doctoral Professor of Computer Science.

Developed and taught CS803 Current Topics in the Discipline. Served as a mentor and reader and also as “deputy” Dean with various responsibilities including course scheduling.

May 2008-May 2009: Institute for Advanced Studies, Colorado Technical University

Interim Dean of Doctoral Computer Science.

In addition to staffing courses, managing instructors and students on a day-to-day basis and arranging quarterly residencies/symposia, also championed the creation of a new concentration in digital systems security, oversaw the redesign of the DCS-EIS program (enterprise information systems) and served on the program committee creating a concentration in emerging media.

September 1996-May 2008: Colorado Technical University.

Professor of Computer Science.

Courses taught: CS845 Software Architecture; CS715 Real-time Systems, CS720 Distributed Systems Concepts, CS750 Simulation and Modeling, CS775 Advanced Object-Oriented Methods, CS789 Doctoral Candidacy Completion, CS889 Applied Dissertation Proposal; CS630 Operating Systems, CS643 Software Architecture, CS647 Specification of Software Systems, CS648 Elements of Programming Languages, CS649 Software Design, CS670 Real-Time Sys-

tems; CS465 (CS366) Software Engineering Methods, CS376 (CS475) Object-oriented Methods, CS/IT481-482 Software Engineering I-II, MIS 410 Software Engineering I.

Course director: CS715 Real-time Systems, CS720 Distributed Systems Concepts, CS775 Advanced Object-Oriented Methods, CS789 Doctoral Candidacy Completion, CS889 Applied Dissertation Proposal; CS649 Principles and Applications of Software Design, CS675 Software Integration and Testing.

Courses developed or redeveloped: CS715 Real-time Systems, CS720 Distributed Systems Concepts, CS750 Simulation and Modeling, CS775 Advanced Object-Oriented Methods, CS789 Doctoral Candidacy Completion, CS889 Applied Dissertation Proposal; CS630 Operating Systems, CS643 Software Architecture, CS648 Elements of Programming Languages, CS649 Principles and Applications of Software Design, CS670 Real-time Systems, CS675 Software Integration and Testing; CS376 (CS475) Object-Oriented Methods.

DCS dissertation direction

Robert W. Johnson: "Tagged protected types: Inheritance and polymorphism extensions for synchronization and mutual exclusion in Ada" (Degree awarded winter 2000).

Charles A. Suscheck: "EASY: An association oriented simulation package" (Degree awarded spring 2000).

Daniela I. Bright: "A practical worst-case methodology for software testing" (Degree awarded spring 2000).

Mark H. Butler: "Scalability of parallel discrete event simulation using threads" (Degree awarded winter 2001).

Richard D. Riddle: "Reducing the user's cognitive burden using an improved navigational interface" (Degree awarded spring 2002. Co-chair: Cynthia Calongne.)

Richard A. Russel: "Internet protocol traceback utilizing pheromone-based heuristics" (Degree awarded summer 2003).

Thomas W. Ulrich: "Augmenting agent negotiation protocols with a dynamic argumentation mechanism" (Degree awarded summer 2003).

Konrad Schmidt: "Diversity in neural network ensembles" (Degree awarded fall 2003).

Danny Maupin: "Managing network interfaces: Increasing end-point performance in a congested network" (Degree awarded winter 2005).

David Goforth: "A smart heartbeat" (Degree awarded winter 2005)

Steven Gosnell: "Indicative steganalysis of least significant bit injection in 24-bit bitmaps" (Degree awarded summer 2006).

Raymond T. Tillman: "Validating code reviews conducted as part of a multi-level peer review process in a large-scale software development" (Degree awarded fall 2006).

George Kondos: "Analysis of a system to provide practical and robust distributed information hiding" (Degree awarded winter 2007).

Steven Chadwick: "Benchmarking scripting languages, Microsoft .NET and databases with a focus on text mining performance" (Co-chaired with Elaine Waybright. Degree awarded summer 2007).

David Fleck: "Evaluation of continuous controls for radial menus" (Degree awarded summer 2008).

Henry Felch: “An evaluation of a network defense strategy combining traditional methods with anomaly detection” (Degree awarded winter 2009).

Matthew Purkeypille: “Cove: A practical quantum computer programming framework” (Degree awarded summer 2009).

Active reader involvement

Steven C. Chadwick: “Benchmarking scripting languages, .NET, and databases with a focus on text mining performance” (Chair: Elaine Waybright; degree awarded summer 2007).

Nigel Thompson: “Binary alternatives to XML encoding” (Chair: Cynthia Calongne; degree awarded summer 2008).

Brian Pankau: “An analysis of document category prediction responses to classifier model parameter treatment permutations within the software design patterns subject domain” (Chair: Carol Keene; degree awarded winter 2010).

Barcus Jackson: “Use of technology in the household: An exploratory study” (Chair: Carol Howard; degree awarded spring 2010).

Terry L. Rorabaugh: “Data-centric coordination: A scale-out architecture for exploiting dynamic data sources in the multicore era” (Chair: Marwan Sabbouh; degree awarded fall 2010).

September 1987-September 1996: George Mason University (GMU);

Associate Professor, Department of Information and Software Systems Engineering.

Courses taught: Program Design and Data Structures, Introduction to Software Engineering, Software Project Laboratory, Software Construction, Software Design, Software Requirements and Prototyping, Advanced Software Design, Advanced Software Requirements, Software Engineering Seminar, Concurrent Object-oriented Systems.

Research funded by the Virginia Center for Innovative Technology through the Center for Software Systems Engineering at GMU and by the Defense Information Systems Agency (DISA): Development of the entity-life modeling approach to the analysis and design of concurrent software.

Initial curriculum development for the Masters program in Software Systems Engineering; in particular, the development of a 3-course suite (Software Construction, Software Design and Software Project Laboratory) and authoring the text *Software Systems Construction with Examples in Ada*.

Master's thesis direction: "Ada tasking represented in Statecharts" (completed fall 90), "A subject-object technique for requirements analysis and specification" (completed fall 92)

Ph.D. thesis direction: Anhtuan Q. Dinh: "Entity-life modeling for parallel computation" (degree awarded fall 1994), Raymond Schneider: "A generic development tool based on equivalent visual and textual formalisms". Member of 20 additional Ph.D. committees.

August 1986-August 1987: Wang Institute of Graduate Studies

Visiting Associate Professor.

Courses taught: Real-time System Design, Programming Methods (team-taught), Software Engineering (team-taught), Software Project Laboratory (team-taught).

PROFESSIONAL EXPERIENCE

February 1980-August 1987: PHILIPS Elektronikindustrier, Stockholm.

Senior Systems Analyst. Project Manager.

Investigation into future, distributed banking systems in conjunction with a major customer. Development project manager and chief architect: distributed transaction control system for a network of bank office computers based on the above-mentioned study. Project manager, BANPAIS project, Monterrey, Mexico: Development of a banking application based on the above-mentioned distributed transaction control system. Development of a course in systems programming with JSP. Technical sales support, Saudi-Arabia. Introduction of PHILIPS terminal systems to Saudi banks. Development of software and firmware supporting Arabic. Study of Unix-based software-development tools. Critical, technical assessment of a new generation of Unix-based real-time systems for bank teller applications being developed by central PHILIPS Data Systems, Apeldoorn, Holland.

July 1978-February 1980: Statskonsult, Stockholm

Consultant.

Consultant to customers installing a UNIVAC security system. Instructor: JSP and other external courses. Technical revision of a software development project in a client organization.

June 1970-July 1978: SPERRY UNIVAC, Sweden

Senior Analyst/Programmer.

Analyst, designer and technical expert; later technical project manager: TP monitor. Construction of transaction scheduling, recovery and restart mechanisms. Analyst, designer and assembler programming consultant: compiler project. Design of a high-performance output-editing library with JSP. Compiler performance evaluation. Technical project manager: Database security system.

CONSULTING

The Foundation for Strategic Research, Stockholm, Sweden: Evaluation of proposals for the research program "Information Technology 2001", 2002.

MariaData, Stockholm, Sweden: Seminar on the real-time specification for Java™, March 2001.

Växjö University, Sweden: Course in real-time systems, March 2000

Swedish Defence Matériel Administration, Stockholm, Sweden: Board member, project to investigate the use of design patterns in military software systems (FOTA), 1999 - 2001

The Foundation for Strategic Research, Stockholm, Sweden: Evaluation of proposals for the research programs ARTES and STRICT, 1996.

Dept. of Automatic Control, Lund Institute of Technology, Lund, Sweden: Course in the design of concurrent software, June 1996.

Ericsson Microwave, Mölndal, Sweden: Course in the design of concurrent software, May 1996.

MariaData, Stockholm, Sweden: Course in the design of concurrent software, March 1996.

SoHaR, Inc.: Review of chapter on Ada from "Assessment of software languages for use in nuclear power plant safety systems", 1996.

GRC, Vienna, VA: Courses in object-oriented analysis and design according to Booch, January and November 1995.

Software Productivity Consortium, Herndon, VA: Review of chapter on "Information Systems Development" from "Applying Consortium Technology to Information Systems", 1993.

GRC, Vienna, VA: Course in object-oriented analysis according to OMT, May - June 1993.

Atlantic Research Corporation: Examination of a C-to-Ada translator approach, 1992.

PUBLICATIONS AND PRESENTATIONS

Refereed journal papers. Books.

Sandén, B. I. Verification of a program complex, *BIT* 19 (1979), 244-255.

Sandén, B. I. Systems Programming with JSP, Studentlitteratur, Lund, Sweden, and Chartwell-Bratt, Brookfield, VT, 1985 (First published in Swedish by Studentlitteratur, Lund, Sweden, 1983 as Systemprogrammering med JSP.)

Sandén, B. I. Systems programming with JSP. Example: A VDU controller, *CACM* 28,10 October 1985), 1059-1067. (Also discussed in ACM Forum, *CACM* 29, 2 (February 1986), 89-90.)

Sandén, B. I. The case for eclectic design of real-time software, *IEEE TSE* 15 (March 1989), 360-362.

Sandén, B. I. An entity-life modeling approach to the design of concurrent software, *CACM* 32, 3 (March 1989), 330-43.

Sandén, B. I. Entity-life modeling and structured analysis in real-time software design - A comparison, *CACM* 32, 12 (Dec. 1989) 1458-1466.

Sandén, B. I. Software Systems Construction with Examples in Ada, Prentice-Hall 1994.

Sandén, B. I. Designing control systems with entity-life modeling, *Journal of Systems and Software*, 28:225-237 (April 1995)

Sandén, B. I. Using tasks to capture problem concurrency. *Ada User Journal* 17, 1 (March 1996), 25-36.

Sandén, B. I. Modeling concurrent software. *IEEE Software* September 1997, 93-100.

Carter, J. R., Sandén, B. I. Practical uses of Ada-95 concurrency features. *IEEE Concurrency* 6:4, (October/December 1998), 47-56.

Sandén, B. I. Implementation of state machines with tasks and protected objects. *Ada User Journal* 20:4 (Jan 2000), 273-288. [Reprinted: *Ada Letters* XX:2 (June 2000) 38-56.]

Wellings, A. J., Johnson, R. W., Sandén, B. I., Kienzle, J., Wolf, T., Michell, S. Integrating object-oriented programming and protected objects in Ada 95. ACM TOPLAS 22:3 (May 2000) 506-539. [Reprinted: Ada Letters XXII:2 (June 2002) 11-44.]

Butler, M. H., Sandén, B. I., Replacing processes with threads in parallel discrete event simulation. TRW Technology Review Journal, Fall/Winter 2001, 19-27.

Sandén, B. I. Real-time programming safety in Java and Ada. Ada User Journal 23:2 (June 2002) 105-113. [Reprinted: Ada Letters XXIII:2 (June 2003) 32-46 and Rendezvous (Newsletter; Swedish Defence User Group for Software Engineering) 1:2004, 6-19.]

Sandén, B. I. Entity-life Modeling: Modeling a thread architecture on the problem environment. IEEE Software, July 2003, 70-78.

Suscheck, Ch. A., Sandén, B. I. A Construct for Effectively Implementing Semantic Associations, Journal of Object Technology, vol. 2, no. 3, May-June 2003, pp. 101-111.
http://www.jot.fm/issues/issue_2003_05/article1

Petersson, K., Persson, T., Sandén, B. I. A software architecture as a combination of patterns. CrossTalk, 16:10 (October 2003), 25-28. [Reprinted: Rendezvous 2004:2 6-11.]

Sandén, B. I. Coping with Java threads, IEEE Computer, 37:4, (April 2004), 20-27.

Sandén, B. I., Zalewski, J. Designing state-based systems with entity-life modeling, Journal of Systems and Software, 79:1 (2006), 69-78.

Sandén, B. I., Intuitive multitasking in Ada 2005, CrossTalk, 19:8 (August 2006), 12-15.

Sandén, B. I. Design of Multithreaded Software: The entity-life modeling approach, IEEE Software Society Press/Wiley. March 2011.

Conference and workshop papers

Sandén, B. I. Computer security, NordDATA, Stockholm 1977.

Sandén, B. I. Systems programming with JSP, NordDATA, Oslo 1983.

Sandén, B. I. Distributed banking system, NordDATA, Copenhagen 1985.

Sandén, B. I. Distributed banking system, Symposium, Monterrey Institute of Technology, Monterrey, Mexico, 1985.

Ammann, P. Davis, A., Fairley, R., Gomaa, H., Sandén, B. I. Graduate Programs in Software Engineering at George Mason University. Proc. Workshop on Software Engineering Education, International Conference on Software Engineering, Austin, TX, May 1991.

Sandén, B. I. An Ada-based software-engineering curriculum at GMU. Proc. 7th Annual ASEET Symposium, Monterey, CA, Jan. 1993.

Amman, P., Gomaa, H., Offutt, J., Rine, D., Sandén, B. I. A five-year perspective on Software Engineering graduate programs at George Mason University. Proc. 7th SEI CSEE Conference, San Antonio, Jan 1994, Springer Verlag, 473-488.

Sandén, B. I. Entity-life modeling of the home-heating problem. Workshop on Design Methods for Real-time Systems, Macquarie University, Sydney, Australia, June 1994.

Sandén, B. I. A restrictive definition of concurrency for discrete-event modeling, Dagstuhl Seminar on Software Architectures, February 1995. [Software Engineering Notes 20:3 (July 1995), 68-69].

Sandén, B. I. Design of concurrent software. Proc. Seventh Annual Software Technology Conference, Salt Lake City, Utah, April 1995.

Sandén, B. I. Design of concurrent software based on problem concurrency. Proc. Ada Europe, Frankfurt/Main, October 1995, M. Toussaint (Ed.), Lecture Notes in Computer Science #1031, Springer Verlag, Berlin, 298-310.

Sandén, B. I. Entity-life modeling in a distributed environment. Proc. 4th International Workshop on Parallel and Distributed Real-time Systems at the 10th Annual IEEE International Parallel Processing Symposium, Honolulu, April 1996, 35-41.

Sandén, B. I. Real-time systems education at George Mason University. Proc. Workshop on Real-Time Systems Education, Embry-Riddle Aeronautical University, Daytona Beach, FL, April 1996, pages 49-53.

Sandén, B. I. A course in real-time software design based on Ada 95. Proc. Tenth Annual ASEET Symposium, June 1996.

Sandén, B. I. The State Machine pattern. Proc. TRI-Ada, Philadelphia, PA, Dec. 1996, pages 135-142.

Sandén, B. I. Concurrent design patterns for resource sharing. Proc. TRI-Ada, St. Louis, MO, Nov. 1997, 173-183.

Johnson, R. W., Sandén, B. I. Reuse through extension of protected types in Ada. Proc. Fifth Joint Conference on Information Sciences (JCIS 2000), Atlantic City, N. J., Feb. - Mar. 2000, vol 1, 695-699.

Wellings, A. J., Johnson, R. W., Sandén, B. I., Kienzle, J., Wolf, T., Michell, S. Object-oriented programming and protected objects in Ada 95. International Conference on Reliable Software Technologies - Ada Europe 2000, Potsdam, Germany, June 26-30, 2000, Hubert B. Keller and Erhard Plödereder (Eds.), Lecture Notes in Computer Science, Volume 1845, 2000, 16-28. (Best paper award.)

Wellings, A. J., Johnson, R. W., Sandén, B. I., Kienzle, J., Wolf, T., Michell, S. Extensible protected types: Proposal status, Proc. 10th International Real-time Ada Workshop (IRTAW), La Navas del Marqués, Spain, Sept. 2000. Ada Letters XXI:1 (March 2001) 105-110.

Sandén, B. I. A design pattern for state machines and concurrent activities. Proc. 6th International Conference on Reliable Software Technologies - Ada-Europe 2001, Leuven, Belgium, May 14-18, 2001, Dirk Craeynest, Alfred Strohmeier (Eds.), Lecture Notes in Computer Science, vol. 2043, Springer-Verlag, 2001, 203-214.

Romanovsky, A., Sandén, B. I. Except for exception handling ..., Workshop on exception handling for a 21st century programming language, Ada Europe 2001, Ada Letters XXI:3 (Sept. 2001), 19-25.

Bail, W., Sandén, B. I. Session summary: Exception propagation. Workshop on exception handling for a 21st century programming language, Ada Europe 2001, Ada Letters XXI:3 (Sept. 2001), 8-10.

van Katwijk, J., Sandén, B., Zalewski, J., An approach to evaluate real-time software architectures for safety-critical systems, Proc. Critical Systems Development with UML (UML'03 workshop San Francisco, October 2003), 121-128.

Tillman, R., Sandén, B. Validating Informal Code Reviews in a Large-scale Software Development, Presented at 18th IEEE International Symposium on Software Reliability Engineering (ISSRE 2007) (Industry Practices track) Trollhättan, Sweden November 2007. See CTU tech. report CTU-CS-2007-002, Department of Computer Science, Colorado Technical University, 2007.

Yang, W., Qu, Y., Sandén, B., Parallel Scheduling of Multiple Tasks on the Enterprise Information System, Proc. 2011 International Journal of Arts and Sciences' Conference, Las Vegas, Nevada, March 7-10, 2011.

Yang, W., Qu, Y., Sandén, B., Improving the Performance of the Enterprise Information System via Optimal Scheduling, Proc. 12th IEEE International Conference on Information Reuse and Integration, Las Vegas, USA, Aug. 3 -5, 2011, 337-341.

Theses. Technical reports. Other publications.

Sandén, B. I. Categorial expression analyzer, Research Group for Quantitative Linguistics, Stockholm, Ref 581, 1970. (Master's thesis.)

Sandén, B. I. Restarting a real-time system: Summary, TRITA-CS-7803 (1978). Ph.D. dissertation, Dept. of Telecommunications and Computer Systems, Royal Institute of Technology, Stockholm. The dissertation includes three other reports:

Restarting a real-time system: A SIMULA model, TRITA-CS-7601 (1976)

Restarting a real-time system: Correctness analysis, TRITA-CS-7704 (1977)

Restarting a real-time system: Correctness of an authentic system, TRITA-CS-7802 (1978)

Sandén, B. I. Programming masters break out of the managerial mold, Computerworld, June 16, 1986, 73-78

Sandén, B. I. Concurrent tasks in real-time software design, CSSE-88-03, Center for Software Systems Engineering, GMU 1988.

Sandén, B. I. Software design of a simple, distributed banking system, CSSE-88-12, Center for Software Systems Engineering, GMU 1988.

Sandén, B. I. An example of concurrent software design in Ada, CSSE-88-13, Center for Software Systems Engineering, GMU 1988.

Sandén, B. I. Subjects and objects: Structuring concepts for reactive systems, ISSE-TR-92-100, Dept. of Information and Software Systems Engineering, 1992.

Carter, J. R., Sandén, B. I. Ada design of a neural network, Ada Letters, 14, 3 (May/June 1994), 61-73

Sandén, B. I. A graduate course in object-oriented analysis based on student-generated projects, ISSE-TR-94-102, Dept. of Information and Software Systems Engineering, 1994

Sandén, B. I. A restrictive definition of concurrency for discrete-event modeling, ISSE-TR-94-114, Dept. of Information and Software Systems Engineering, 1994

Sandén, B. I. Utformning av program med parallella processer baserad på samtidighet i problemet, AiS-brev (Ada i Sverige), 4, 1995, 24-27. (In Swedish.)

Wellings, A. J., Johnson, R. W., Sandén, B. I., Kienzle, J., Wolf, T., Michell, S. Integrating object-oriented programming and protected types in Ada 95. YCS 316, Department of Computer Science, University of York, UK, 1999

Butler, M. H., Sandén, B. I. Replacing processes by threads in parallel discrete event simulation, CTU-CS-2001-01, Department of Computer Science, Colorado Technical University, July 2001.

Suscheck, Ch. A., Sandén, B. I. A simulation framework with direct support for associations, CTU-CS-2001-02, Department of Computer Science, Colorado Technical University, July 2001.

Thor, P. V., Sandén, B. I., Willshire, M. J. Using image color vectors to index and retrieve images from an image database, CTU-CS-2001-03, Department of Computer Science, Colorado Technical University, October 2001.

Sandén, B. I. Choosing a thread architecture, CTU-CS-2001-04, Department of Computer Science, Colorado Technical University, 2001.

Maupin, D. L., Sandén, B. I. Increasing End-Point Performance in a Congested Network, CTU-CS-2005-005, Department of Computer Science, Colorado Technical University, 2005.

Rauf, A., Keene, C., Waybright, E. M., Sandén, B. I. A tradeoff analysis between data accessibility and inference control for row, column, and cell level security in relational databases, CTU-CS-2007-001, Department of Computer Science, Colorado Technical University, 2007.

Tillman, R., Sandén, B. Validating Informal Code Reviews in a Large-scale Software Development, CTU-CS-2007-002, Department of Computer Science, Colorado Technical University, 2007.

Sandén, B. Lärdomar och äventyr i IT-branschen. (In Swedish; 2007.) Contribution to the project IT-historia (IT History) which focuses on computing in Sweden prior to 1980. <http://ithistoria/se>

Sandén, B. I. Inspired software design: Early Jackson methods to thread architectures, ACM Software Engineering Notes July 2009.

Courseware

Sandén, B. I. A course in real-time software design based on Ada 95. Formerly available through the ASSET repository as ASSET_A_825, 1996.

Baum, R., Sandén, B. I. An Ada-based foundation course for a graduate Information Systems program. Available through the ASSET repository. 1997.

Workshops presentations, panels, etc.

OOPSLA Workshop on Object-Oriented Real-Time Systems Analysis and Design Issues 1993: Concurrency in object-oriented analysis and design.

Academic panel, Ada Dual-Use Workshop, February 1995.

Panel member, Alternative real-time design methods, Joint IEEE and ACM Workshop on parallel and distributed real-time systems, Santa Barbara, CA, April 1995.

TRI-Ada Workshop on Ada design and coding guidelines, Anaheim, CA, Nov. 1995.

Ada Europe Workshop on Concurrent Design Patterns, Montreux, June 1996.

TRI-Ada Workshop on Design Patterns, Philadelphia, PA, Dec. 1996.

10th International Real-time Ada Workshop (IRTAW), La Navas del Marqués, Spain, Sept. 2000

Ada Academic Initiative meeting, New York, NY, June 2004, June 2005

Tutorials

ACM Professional Development Seminar 1989: Design of concurrent real-time software in Ada.

ACM Professional Development Seminar 1994: Design of concurrent software.

Washington Ada Symposium 1994: Design of concurrent software with entity-life modeling.

TRI-Ada November 1994, November 1995 and December 1996: Design of concurrent software.

Washington Ada Symposium 1995 and 1996: Design of concurrent software in Ada.

Guest lectures

Monterrey Institute of Technology, Monterrey, NL, Mexico, 1985, 1987: JSP.

Institute for Defense Analysis (IDA) 1988: Concurrent tasks in real-time software design - an object-life modeling approach.

Virginia Polytechnic Institute 1989: An entity-life modeling approach to the analysis and design of real-time software.

MITRE Corp., 1991: Subject-object modeling.

Software Engineering Institute, 1992: Subject-object modeling.

MITRE Corp., 1993: Design of concurrent software with entity-life modeling.

DC SIGAda 1994: Entity-life modeling approach to concurrent software design in Ada.

TRW, Corp., 1994: Entity-life modeling.

Invited guest researcher at Macquarie University, Sydney, Australia, 24 May - 24 June 1994.

Swiss Federal Institute of Technology (EPFL), Lausanne, 1995: Design of concurrent software with entity-life modeling.

DC SIGAda February 1996: Concurrent software design in Ada 95.

Seattle University, March 1996: Entity-life modeling.

Växjö University, March 2000: Entity-life modeling.

HONORS AND AWARDS

Nominated for a University-wide Teaching Excellence award, GMU, 1994.

Research fellowship from Lund University 1970-1971.

Michael Hansen student housing scholarship 1966-1967.

PROFESSIONAL MEMBERSHIPS

Senior member of ACM

IEEE Computer Society.

OTHER

Fluent in Swedish and English. Speak some Spanish, Russian and French. Read French and Russian fluently. Read Spanish and German.

Reviewer for journals such as *IEEE Computer*, *IEEE Software*, *IEEE Concurrency*, *Information and Software Technology*, and the *Journal of Systems and Software* and for conferences such as *TRI-Ada*, *Ada Europe*, *Software Engineering Education and Training* and *Real-time Systems Education*

Reviewer for SWEBOK, Software Engineering Body of Knowledge, 1999-2000