

Curriculum Vitae Stuart Hansen

- Personal:** Department of Computer Science 1106 Emerald Dr.
University of Wisconsin - Parkside Racine, WI 53406
900 Wood Road (262) 884 - 2750
Kenosha, WI 53144
(262) 595 - 3395
hansen@uwp.edu
- Education:** Ph.D. Computer Science, May 1993
University of Iowa, Iowa City, IA
Thesis: Conceptual Control Programming for Physical System Simulations
Advisor: Dr. Joseph K. Kearney
- M.S. Computer Science, 1988
University of Iowa, Iowa City, IA
- B.S. Mathematics and General Science, Magna cum Laude, 1977
Dana College, Blair, NE
- Research:** Event Driven Programming, Object-oriented programming, Computer Science Education, Physical System Simulations, Distributed Systems.
- Employment:**
- Since 8/99 **Associate Professor and Department Chair - UW Parkside, Kenosha, WI (Dept. Chair since 7/04)**
Taught a variety of graduate and undergraduate computer science courses including: CS1, CS2, Discrete Mathematics, Java Programming Topics, Data Structures and Algorithms, Files and Databases, Assembly Language and Computer Architecture, Computer Graphics, Software Engineering I and II, Modern Software Architectures, Event Drive Programming, Computability and Automata, Computer Science Seminar and AP Java for High School Teachers. Coached ACM programming teams.
- 8/94 - 5/99 **Associate Professor - UW Stout, Menomonie, WI**
Taught a wide variety of undergraduate courses, including: CS1, CS2, Computer Organization and Architecture, Operating Systems, Computer Graphics, Survey of Programming Languages, Software Engineering, Visual Basic, Intermediate Algebra, College Math I, and Elementary Statistics. Administered approximately 90 Windows and UNIX machines.
- 8/93 - 5/94 **Assistant Professor - Teikyo/Marycrest University, Davenport, IA**
Taught a variety of graduate and undergraduate computer science courses. Served as advisor to the student chapter of the ACM.
- 9/86 - 5/93 **Fellowships, Teaching/Research Assistantships - University of Iowa**
Received a Presidential Fellowship, the highest level of academic support offered by the University of Iowa. Taught Survey of Computing. Teaching assistant for Computer Graphics, Computer Architecture and Artificial Intelligence. Research assistant for many projects involving the simulation of physical systems.
- 9/81 - 5/86 **Academic Staff - University of Wisconsin - Stevens Point**
Taught a variety of math and computer science courses. Organized and taught a summer school course for gifted junior high school students. Taught math courses for the Native American Center.
- 7/77 - 2/81 **US Peace Corps Staff Contract Peace Corps/Benin - West Africa (10/80 - 2/81)**
Arranged infrastructure of a training center for 65 people.
Teacher Peace Corps/Cameroon - West Africa (7/77 - 9/80) Taught math, chemistry and biology to West African students in grades 7 to 13. Led training programs for new volunteers.

Book: S. Hansen and T. V. Fossum, Event Based Programming, 2011, published online at:
<http://www.lulu.com>, ID 10996459

Refereed Journal Publications:

S. Hansen and T.V. Fossum, Refactoring Model-View-Controller, *The Journal of Computing Sciences in Colleges*, Volume 21, Number 1, October 2005, pages 120-129, also presented at CCSC:MW conference, September 2005.

S. Hansen, K. Tuinstra, J. Pisani and L.I. McCann, GraphMagic: A Visual Graph Package for Students, *Computer Science Education*, Volume 13, Number 1, March 2003, pages 53-66.

S. Hansen and L.I. McCann, Object-Oriented Programming Meets Optimal Binary Search Trees, *The Journal of Computing Sciences in Colleges*, Volume 18, Number 1, October 2002, also presented at CCSC:MW conference, September 2002.

J.K. Kearney, S.A. Hansen and J.F. Cremer, Programming Mechanical Simulations, *The Journal of Visualization and Computer Animation*, Volume 4, Number 2, April-June 1993, pages 113-129.

Refereed Conference Publications:

S. Hansen, Analyzing programming projects. In Proceedings of the 40th ACM Technical Symposium on Computer Science Education (Chattanooga, TN, USA, March 04 - 07, 2009). SIGCSE '09. ACM, New York, NY, 377-381. DOI= <http://doi.acm.org/10.1145/1508865.1508999>

S. Hansen, Academic Bug Patterns. Proceedings of the Midwest Instruction and Computing Symposium, April 2007, Grand Forks, ND.

S. Hansen and E. Eddy, Engagement and Frustration in Programming Projects. Proceeding of The Thirty-eighth Technical Symposium on Computer Science Education, March 7-10, 2007, Covington, KY.

S. Hansen, Interpreting Java Program Runtimes, Proceedings of The Thirty-sixth SIGCSE Technical Symposium on Computer Science Education, February 23-27, 2005, St. Louis, MO.

S. Hansen and T.V. Fossum, CORBA in the Undergraduate Computer Science Curriculum, Proceedings of the Midwest Instruction and Computing Symposium, April 2004, Morris, MN.

S. Hansen and T.V. Fossum, Events Not Equal to GUIs, Proceedings of The Thirty-fifth SIGCSE Technical Symposium on Computer Science Education, March 1-3, 2004, Norfolk, VA.

S. Hansen, The Game of Set: An Ideal Example for Introducing Polymorphism and Design Patterns, Proceedings of The Thirty-fifth SIGCSE Technical Symposium on Computer Science Education, March 1-3, 2004, Norfolk, VA.

S. Hansen and E. Eddy, Introducing Bioinformatics Concepts in CS1, Proceedings of the Midwest Instruction and Computing Symposium, April 2003, Duluth MN.

J. Kearney, O. Ahmad, J. Cremer, S. Hansen and P. Willemsen, Hierarchical, Concurrent State Machines for Behavior Modeling and Scenario Control, Proceedings of the 1994 Conference on AI, Planning, and Simulation in High Autonomy Systems, December, 1994, Gainesville, FL.

S. Hansen, J. Kearney and J. Cremer, Motion Control through Communicating, Hierarchical State Machines, Proceedings of the 4th Eurographics Workshop on Animation and Simulation, September, 1994, Oslo, Norway.

J. Kearney and S. Hansen, Generalizing the Hop: Object-level Programming for Legged Motion, The IEEE International Conference on Robotics and Automation, May 1992, Nice, France.

J. Kearney and S. Hansen, The Composition of Motion Sequences for Animation, Compugraphics 91: The First International Conference on Computational Graphics and Visualization Techniques, September 16-20, 1991, Sesimbra, Portugal, pp. 152-162.

J. Kearney, S. Hansen and J. Cremer, Programming Mechanical Simulations, The Second EuroGraphics Workshop on Animation and Simulation, September 1-2, 1991, Vienna, Austria, pp. 223-224.

Refereed Workshops:

T. Knautz and S. Hansen, Aspect Oriented Programming, Thirty-fifth SIGCSE Technical Symposium on Computer Science Education, March 1-3, 2004, Norfolk, VA.

S. Hansen and T. Fossum, Testing and Debugging Event Driven Systems, Thirty-third SIGCSE Technical Symposium on Computer Science Education, March 2002, Covington, KY.

S. Hansen and T. Fossum, The Life and Times of a Mouse Click, Thirty-second SIGCSE Technical Symposium on Computer Science Education, March 2001, Charlotte, NC. Repeated at ITiCSE 2001, Canterbury, England.

S. Hansen, P. Wagner and D. Christie, The Design and Implementation of CS1/CS2 Closed Laboratory Exercises, Midwest Computing Conference, March 2000, Whitewater, WI.

Panels:

S. Hansen (moderator), P. Wagner, K. Lee and T. Mason, Trends in Computer Science Laboratories, Midwest Instruction and Computing Symposium, April 2011, Duluth, MN, Available online at: <http://www2.css.edu/mics/proceedings.html>

N. Parlante, J. Zelenski, K. Schwarz, D. Feinberg, M. Craig, S. Hansen, M. Scott, D. Malan, Nifty Assignments, In Proceedings of the 42nd ACM Technical Symposium on Computer Science Education, (Dallas, TX, USA, March 9-11, 2011), SIGCSE '11, ACM, New York, NY, 491-492.

Tom Gendreau (moderator), Mike Morrison, Stuart Hansen, Introducing web concepts and programming within the CS curriculum, Midwest Instruction and Computing Symposium, April 2008, LaCrosse, WI.

David Reed (moderator), Doug Baldwin, Michael Clancy, Stuart Hansen, and Allen Downey, Integrating Empirical Methods into Computer Science, Thirty-third SIGCSE Technical Symposium on Computer Science Education, March 2002, Covington, KY.

Grants:

NSF – Scholarships in Science, Technology, Engineering and Math – principal investigator

Period: September 2007 – August 2012

Value: \$515, 888

Description: Provide full scholarships to talented students with financial need. Grant is a collaboration of Computer Science(PI), Chemistry, Geosciences and Biological Sciences departments.

UW-Parkside – Student Success Initiative Grant

Period: August 2006 – May 2007

Value: \$2,000

Description: Award to study Information, Communication and Technology (ICT) skills of UWP students.

NSF - Collaborative Research: Wisconsin Collaborating Campuses on Cyber Security – Award # 0313712 with Tim Fossum (PI), Susan Haller, Karen Larson, Susan Lincke, Lester McCann and Timothy Knautz

Period: July 1, 2003 – December 31, 2005

Value: \$188,000.00

Description: Provide support faculty and staff training in cyber security, to establish a computer security laboratory, and to develop a certificate program in information security

Primary Role: Served as PI for the last 6 months of the grant after original PI retired.

NSF CCLI - Educational Material Development Grant - DUE 0089406 - co-principal investigator with Timothy Fossum (PI)

Period: January 1, 2001 - December 31, 2002

Value: \$74,900.00

Description: Funding to develop a textbook prospectus and other educational materials for a course in event-driven programming.

UW - System Curriculum Reform Grant - principal investigator

with Bruce Johnston and Kenny Hunt

Period: July 1, 2000 - June 30, 2001

Value: \$9,556.00

Description: Funding to organize a workshop for computer science instructors from across the UW-System entitled Design Patterns: Pedagogic Foundations for Object-Orientation. The workshop was lead by Dung Nguyen and Stephen Wong, nationally recognized experts in the field.

Women and Science Curriculum Reform Grant

with Eileen Zito (PI), Diane Christie, and Radi Teleb

Period: Summer 1999

Description: The grant supported the attendance of the investigators at a curriculum reform institute. Their activities focused on the redesign of CS1/CS2 closed lab exercises.

Nakatani Grant: MSCS Department Online Learning Initiative

with Eileen Zito (PI), Diane Christie, Marian Ellison, and Ruth Mikkelson

Period: June 1, 1996 - May 31, 1997

Value: \$8,992.00

Description: This project was designed to help students integrate previously learned knowledge and current subject material. Online exercises and problems were developed for a variety of math and computer science courses.

Microsoft Instructional Lab Grant - principal investigator

with Ruth Mikkelson, Diane Christie and Paul Wagner

Period: July 1995 - June 1996

Value: \$17,010.00

Description: Provided 45 software licenses for Microsoft Visual Basic Professional, Microsoft Office Professional, and Windows 95.

Faculty Research Initiative

Period: June 1995 - May 1996

Value: \$6,877.00

Description: This grant enabled the pursuit of a research project entitled Developing a Symbolic Constraint Based Programming System.

Consulting:

- Summer 2004 **Joe Hummel, Inc./Microsoft**, Lake Forest IL, Developed curricular material for week long workshops for high school teachers on Microsoft's .Net technology.
- Summer 2003 **Joe Hummel, Inc./Microsoft**, various locations
Taught week long workshops to high school computer science teachers on Microsoft's .Net technology.
- Fall 1994 **Gatorade - Quaker Oats Research Center**, Barrington IL
Helped determine patterns of rehydration in competitive athletes by analyzing the concentrations over time of injected inulin in blood samples.
- Summer 1992 **CADSI/Animatronics**, Coralville IA
Developed software to convert the results of a mechanical simulation to a format that allowed high quality graphical presentations. The system was used by Animatronics, a division of Walt Disney Productions.

Teaching Awards: Wisconsin Teaching Fellow, 1996-97.

Coaching:

Coached student programming teams every year since 1994, with the following success:

3rd Place in MICS robotics contest, April 2008.

1st and 4th Place CCSC:MW programming contest, September 2006

2nd Place CCSC:MW programming contest, September 2005

1st Place MICS programming contest, April 2005

2nd Place MICS programming contest, April 2003

1st Place CCSC:MW programming contest, September 2002

World Finals of the ACM Inter-Collegiate Programming Contest 2002. The team placed 51st in the world!

Professional Development:

- 2011 Attended Midwest Instruction Computing Symposium in Duluth, MN
Attended SIGCSE 2011
- 2010 Attended Midwest Instruction Computing Symposium in Eau Claire, WI
Attended SIGCSE 2010
- 2009 Attended SIGCSE 2009
- 2008 Attended Midwest Instruction Computing Symposium in LaCrosse, WI
- 2007 Attended Midwest Instruction Computing Symposium in Grand Forks, ND
Attended SIGCSE 2007
- 2006 Attended Consortium for Computing Sciences in Colleges: Midwest Conference
Attended SIGCSE 2006
- 2005 Attended Consortium for Computing Sciences in Colleges: Midwest Conference
Attended UW Colleges Computer Science Faculty meeting at UW-Washington County.
Attended on day workshop on Java 1.5 held at UW-Milwaukee, Milwaukee, WI
Attended Midwest Instruction Computing Symposium in Eau Claire, WI
Attended SIGCSE 2005
- 2004 Attended 2 day workshop on BioInformatics held at UW-Parkside, Kenosha, WI.
Participated in the AP CS Reading held at Clemson University, Clemson SC.
Attended Midwest Instructional Computing Symposium in Morris MN.
Attended SIGCSE 2004
Attended new chairs workshop in Madison, WI
- 2003 Attended 1 week workshop on Cyber Security held at St. Cloud State University, St. Cloud, MN.
Attended Midwest Instructional Computing Symposium in Duluth, MN.
Attended SIGCSE 2003.
- 2002 Attended Consortium for Computing Sciences in Colleges: Midwestern Conference.
Attended 2 day symposium on computer security at UW-Milwaukee.
Attended 2 week Microsoft .NET workshop at Lake Forest College, Lake Forest IL.
Attended SIGCSE 2002.
- 2001 Attended 1 week workshop on Component Based Software Development at the University of Alabama.
Attended ITiCSE 2001.
Attended 2 day workshop on teaching Java in CS1 held at UW-Stout.
Attended SIGCSE 2001.
- 2000 Organized and Attended 1 day UW-System workshop entitled Design Patterns: Pedagogic Foundations for Object-Orientation.
Attended SIGCSE 2000.
Attended Midwest Computing Conference at UW-Whitewater.
- 1999 Attended UW-System Computer Science Faculty meeting at UW-Marathon County.

Supervised Student Projects:

- 2009 Independent study developing an Artificial Intelligence engine to play Sheepshead.
- 2008 Independent study developing a Chess playing program. Resulted in presentation at Midwest Instruction and Computing Symposium 2008. No one at the conference beat the program!
Independent study on using a genetic algorithm to generate well formed postfix expressions. Resulted in presentation at Midwest Instruction and Computing Symposium 2008.
Independent study developing a software product for a local church to help process announcements.
- 2006 Independent study on ASP.Net. Resulted in a software product to prepare and administer on-line exams.
- 2003 Independent study on image compression techniques for web cameras. Resulted in a student paper at the Midwest Instruction and Computing Symposium 2003.
Independent study on recording and replaying Java events.
- 2002 Independent study on Problems in the Software Development Industry in Vietnam.
- 2001 Independent study on Memetic Algorithms to solve the Traveling Salesperson Problem.
- 2000 Independent study on NP-Complete Theory and the Sum of Subsets Problem. Resulted in a poster session at SIGCSE 2001.
Independent study on developing a visual package for graph algorithms. Resulted in a joint publication in *Computer Science Education* (see above).
- 1997 Student team project to develop a software system to display and record responses to a mathematics quiz bowl. The software was used for multiple years for an annual high school contest.