

Curriculum Vitae

Suk-Chung Yoon

Associate Provost for Research, Sponsored Programs, and Entrepreneurial Initiatives
William R. Bailey Endowed Chair Professor
Dept. of Computer Science
Widener University
One University Place
Chester, PA 19013

Education

Ph.D., Computer Science, Northwestern University, June 1991

M.S., Computer Science, Northwestern University, June 1989

B.S., Computer Science, Yonsei University, February 1987

Post-Education

Case Workshop on Development for Deans and Academic Leaders, November, 2012

Administrative Positions

Special Assistant to the President, Widener University, 2011.8-2016.1

- Provide high-level support and advice to the President.
- Serve as a member of the University Executive Team.
- Conduct special administrative tasks and research for the President.
- Work with other senior administrators to resolve University issues.
- Represent the University at functions across campus and throughout the community.
- Interact with the University's Board on issues, including new buildings, new academic programs, and international engagement.
- Coordinate the scheduling and logistical aspects of meetings for the President.
- Serve as the University's representative to the Clinton Global Initiative.
- Serve as the University's representative to the Horatio Alger Association.
- Involve in developing plans for a new academic building that served students in the Communication Studies, Computer Science, and Informatics Programs.

Associate Provost for Experiential Learning and Global Engagement, 2012.3-2014.8

- Have responsibility for providing University-wide vision and leadership in the development and implementation of academic experiential learning, including undergraduate research, service-learning, study abroad/away, and Co-op/Internship.
- Develop specific institutional strategic initiatives to solidify the University's commitment to global engagement.
- Oversee the budget of the Office of Experiential Learning and Global Engagement.
- Serve as Chair of the Experiential Learning Council.
- Serve as a member of the University's Senior Leadership Team.
- Serve as effective spokesperson for the experiential learning program at Widener.
- Establish and implement procedures and policies related to experiential learning and global engagement.
- Support and assist faculty and academic units in their efforts to internationalize the curriculum and in their research, projects, activities, and services that support globalization.
- Expand global engagement that contributes to a robust and global teaching and learning environment.
- Lead in the development of new MOU agreements with foreign university partners.
- Oversee and promote the Study Abroad program.
- Serve as a member of the Common Student Experience Steering Group.
- Partner with University leadership to improve the experiential learning.
- Support student research activities and work on developing University-wide undergraduate research program with the coordinator of Undergraduate Research.

Associate Provost for Research, Sponsored Programs and Global Engagement, 2014.9-2015.8

- Integrate global perspectives and connections into the institution's teaching and research agendas.

Associate Provost for Research, Sponsored Programs, and Entrepreneurial Initiatives, 2015.9-present

Chair of Computer Science, Widener University, 2003.9-2014.8

- Provide a structure and focus for addressing important issues, pertaining to the curriculum.
- Improve and enrich the Computer Science program by introducing new courses and adding opportunities for hands-on experience.
- Work with the Computer Science faculty to enhance their teaching and professional development.
- Establish strong Computer Science department-industry relationships, including a partnership with IBM, JP Morgan Chase, and Oracle.
- Develop a good working relationship with other units within the University.

- Provide the Computer Science faculty with the resources and opportunities to excel in their respective fields.
- Articulate the needs of the Computer Science faculty to the administration.
- Provide support and programs for students from underrepresented groups.
- Cultivate and maintain a strong relationship between the department and its alumni.
- Lead the faculty in the development of three interdisciplinary programs: Computer Information Systems, Media Informatics, and Business Informatics.
- Collaborate with the faculty, admissions, and senior administration to address enrollment issues and reinvigorate student recruitment efforts to ensure that the department attracts, enrolls, retains, and graduates a highly diverse and successful student body.
- Increase involvement and visibility of the Department within the University.
- Secure financial support and participation of industry in organizing an annual programming contest for high school students.
- Have taught courses at the undergraduate and graduate levels in Computer Science, Business, Engineering, and University College.
- Recruit new faculty and staff.
- Serve as a member of the School of Business Dean's search committee.
- Serve as Co-Chair of Director of Sponsored Research Program search committee.
- Have been an advocate of undergraduate research, service learning, Co-op/ Internship, and other forms of experiential learning opportunities for students.
- Have advised more than 30 students who have gone to graduate school.
- Make students aware of scholarships, fellowships, award, and jobs.
- Communicate the Department's vision to prospective donors and ask them for their support.
- Raise funds for academic programs and student scholarships.
- Have solicited and obtained donations of software from industrial sources for use in senior projects.
- Serve as a search committee member for the coordinator in the Co-op office.
- Serve as the faculty advisor to the Widener Student Chapter of the ACM for seven years.
- Help development of the Math/Computer Science double major and the initial curriculum ladder.
- Have compiled a listing of all graduates, "Computer Science Alumni Network," which is available to our students who seek job opportunities.
- Have aided seniors in securing jobs and juniors in obtaining summer jobs.
- Have served as Freshmen Advisor since 1991.

ACE (American Council on Education) Fellow, 2010.8-2011.8

ACE Fellows Program is a premier fellowship that prepares tomorrow's leaders of American Colleges and Universities.

- Villanova University with President Peter Donahue
- Stockton College with President Herman Saatkamp

Academic Positions

William R. Bailey Endowed Chair Professor, Computer Science, Widener University, 2014.9 – Present

Chair and William R. Bailey Endowed Chair Professor, Computer Science, Widener University, 2005.9 – 2014.8

Chair and Professor, Computer Science, Widener University, 2003.9 – 2005.8

Associate Professor, Computer Science, Widener University, 1997.9 - 2003.8

Assistant Professor, Computer Science, Widener University, 1991.9 - 1997.8

Teaching Assistant, Computer Science, Northwestern University, 1990 – 1991

Research Assistant, Computer Science, Northwestern University, 1989 - 1990

Research Areas

Database: Data/Web mining, Bioinformatics

Artificial Intelligence: Knowledge base systems, Expert systems,
Logic programming, Automated reasoning

Large Scale Computing and Enterprise Computing

Research Grant

- NSF Grant(Co-PI, Award# 0829558, \$416,000): Introducing enterprise computing technologies into undergraduate computing education, 2008

This project develops a computing education community focused on introducing enterprise computing technology into undergraduate computing education. This project brings together representatives from academia, industry, and non-profit sectors to develop and implement new curricula focused on skills needed to develop and maintain enterprise system.

- NSF Grant(Co-PI, Award# 1626124, \$91,500): MRI: Acquisition of an EEG-NIRs Bimodel Neural Signal Recording System, 2016

Selected Journal Publications

- X. Song and S.C. Yoon, "Improving Brain-Computer Interface Classification Using Adaptive Common Spatial Patterns," Vol. 61, pp.150-160, Journal of Computers in Biology and Medicine, 2015
- Y. Qi, M. Song, S.C. Yoon, and L. Versterre, "Combining supervised learning techniques to key-phrase extraction for biomedical full-text," Vol. 7, No 4, pp.33-44, Journal of Intelligent Information Technologies, 2011
- Y. Kortsarts, A. Fischbach, J. Ruffinus, J. Utell, and S.C. Yoon, "Developing oral and written communication skills in undergraduate computer science and information systems curriculum," Vol. 8, No 30, pp.1-13, Journal of Information Systems Education, 2010
- S.C. Yoon and J. Saltz, "The role of large scale computing in computer science education, " Vol. 22, No 6, pp.136-138, Journal of Computing Sciences in Colleges, 2007
- S. Sheikh, S.C. Yoon, A. Saeed, and E.K. Park, "Multicast routing infrastructure in ATM Networks," Vol. 23, No.10, pp. 922-927, Journal of Computer Communications, 2000
- S.C. Yoon and C. Ku, "Towards a deductive and object-oriented database system," Vol. 20, No 2, pp. 68-73, Journal of Computers and Applications, 1998
- S.C. Yoon and L.J. Henschen, "Mining knowledge in object-oriented frameworks," Vol. 16, No 2, pp. 57-63, Journal of Microcomputer Applications, 1997

- S.C. Yoon and L.J. Henschen, "Intelligent query processing in object-oriented frameworks using a deductive approach," Vol. 3, No 1, pp. 40-46, Journal of Computers and Their Applications, 1996
- S.C. Yoon, C. Ku., and L.J. Henschen "Semantic query processing in deductive object-oriented databases," Vol. 15, No 3, pp. 106-112, Journal of Microcomputer Applications, 1996

Selected Book Chapters

- S.C. Yoon, "Towards a framework for advanced query processing," In Shirley Becker(Ed.), Developing Quality Complex Database Systems: Practices, Techniques and Technologies, pp. 317-330, 2001
- S.C. Yoon, "Towards conceptual query answering," In Z. Ras and A. Skowron (Eds.) Foundations of Intelligent Systems, pp. 187-196, Springer Verlag, 1997
- S.C. Yoon and I.Y. Song, "Implicit representation for extensional answers in object-oriented databases," In E.A. Yfantis(Ed.), Intelligent Systems(Series D: Systems Theory, Knowledge Engineering and Problem Solving), Vol. II, pp. 775-788, Kluwer Academic Publishers, 1995

Selected Conference Proceedings/Presentations

- X. Song and S.C. Yoon, "Incremental Versus Non-incremental Learning in Adaptive Common Spatial Patterns," Proceedings of The Fifth IEEE Signal Processing in Medicine and Biology Symposium, 2015

- X. Song, V. Perera, and S.C. Yoon, "A study of EEG features for multisubject brain-computer interface classification," Proceedings of The Fourth IEEE Signal Processing in Medicine and Biology Symposium, 2014
- X. Song, S.C. Yoon, and V. Perera, "Adaptive common spatial pattern for single-trial EEG classification in multisubject brain computer interface," Proceedings of The Sixth International IEEE Conference on Neural Engineering, 2013
- J. Saltz, J. Oh, and S.C. Yoon, "Reviewing global enterprise technology immersion experience: an open co-op program," Proceedings of 2012 American Society of Engineering Education (ASEE) North East Section Conference, 2012
- S.C. Yoon and N. Pascarell, "Widener University and JP Morgan Chase experience developing large systems computing program," Proceedings of The Enterprise Computing Community National Conference, 2009
- M. Barnett, S. Kauffman, and S.C. Yoon, "Developing a community based organization technology plan: University-Community collaborations," Proceedings of The Third International Conference on Technology, Knowledge and Society, 2007
- S.C. Yoon, "Web usage mining for personalization," Proceedings of The Sixth International Conference on Internet and E-Commerce, 2005
- S.C. Yoon, B. Cary, and B. Coleman, "Service Learning Projects in Computer Science," Proceedings of The National Conference on Service Learning in Engineering, 2005

- S.C. Yoon and D. Chopra, "A new approach to find patterns from web log data using OLAP operations," Proceedings of The Fifth International Conference on Internet and E-Commerce, 2004
- S.C. Yoon, "Advanced web mining techniques," Proceedings of The Fourth International Conference on Internet and Multimedia, 2003
- S.C. Yoon, "Applying data mining techniques to web-based medical data," Proceedings of International Symposium on Biotechnology, 2002
- S.C. Yoon, L.J. Henschen, E.K. Park, and S. Makki, "Using domain knowledge in knowledge discovery," Proceedings of The Eighth International Conference on Information and Knowledge Management, 1999
- S.C. Yoon and E.K. Park, "An approach to intensional query answering at multiple abstraction levels," Proceedings of The Thirty-Second Hawaii International Conference on System Science, 1999
- J. Stach, E.K. Park, I.Y. Song, and S.C. Yoon, "Specification of MLS transaction processing by strongly compatible I/O automata," Proceedings of The Fourth International Conference on Computer Science and Informatics, 1998
- S. Sheikh, S.C. Yoon, A. Saeed, and E.K. Park, "Multicast Routing Infrastructure in ATM Networks," Proceedings of The Seventh International Conference on Computer Communications and Networks, 1998
- R. Pimplaskar, S.C. Yoon, E.K. Park, "Protocol filtering: a microscopic approach to Windows NT & Novell NetWare network modeling," Proceedings of The Sixth IEEE International Conference on Computer Communications and Networks, 1997

- S.C. Yoon, I.Y. Song, and E.K. Park, ``Intensional query answering using data mining approaches, " Proceedings of The Sixth ACM Conference on Information and Knowledge Management, 1997
- S.C. Yoon and L.J. Henschen, ``Finding interesting knowledge in object-oriented frameworks for semantic query optimization, " Proceedings of The Eighth International Conference on Software Engineering and Knowledge Engineering, 1996
- S.C. Yoon, I.Y. Song, and E.K. Park, ``Semantic query reformulation in object-oriented databases using a deductive approach," Proceedings of The Fourth ACM Conference on Information and Knowledge Management Systems, 1995
- S.C. Yoon, ``Implementation of a deductive object-oriented database system," Proceedings of The Fourth International Conference on Intelligent Systems, 1995
- S.C. Yoon, I.Y. Song, and E.K. Park, ``Intensional query answering in object-oriented databases, " Proceedings of The Third ACM Conference on Information and Knowledge Management, 1994
- S.C. Yoon and I. Y. Song, ``Strategies for controlling and optimizing a query in logic based systems, " Proceedings of International Conference on Computer Applications in Design, Simulation, and Analysis, 1993
- S. C. Yoon and L. J. Henschen, ``Intelligent query answering in expert database systems," Proceedings of ACM-SIGMOD Workshop on Query Optimization, 1989

- S. C. Yoon and L. J. Henschen, "Intelligent control in expert database systems," Proceedings of The Fourth IEEE International Symposium on Intelligent Controls, 1989

Selected Research with Undergraduate Students

- J. Gordon and T. Romasco, "A low-cost, portable, computer-based solution to the instruction of children with Autism," Proceedings of National Conference on Undergraduate Research, 2013
- S. Venkateswaran, "Simple Web-based interactive voice response manager," Proceedings of National Conference on Undergraduate Research, 2009
- N. Pascarell, "Implementing Web-based point-of sale system," Proceedings of National Conference on Undergraduate Research, 2008
- C. Bissonnette, "Online Portfolio Management using Asynchronous Java and XML," Proceedings of National Conference on Undergraduate Research, 2008
- M. Campbell, "Designing a Real-time Data Warehouse," Proceedings of National Conference on Undergraduate Research, 2006
- T. Burke, "Designing a System for Handling XML information on the Web," Proceedings of National Conference on Undergraduate Research, 2006

Panelist

- Enterprise Computing Community National Conference, 2013
- Greater Philadelphia Chamber of Commerce on Information Technology Developments, 2012

- Enterprise Computing Community National Conference, 2012
- Future Issues of Higher Education by ACE (American Council on Education), 2011
- Enterprise Computing Community National Conference, 2011
- Enterprise Computing Community National Conference, 2010
- Enterprise Computing Community National Conference, 2009
- Technical Symposium on Computer Science Education, 2007
- SHARE Conference on Enterprise Technology, 2007
- Annual Consortium for Computing Sciences in Colleges Northeastern Conference, 2007
- SHARE Conference on Enterprise Technology, 2006

Invited Program Committees

- 1st International Workshop on Mining Spatial and Temporal Data (Program Co-Chair)
- 8th International Conference on Information and Knowledge Management
- 1st ACM International Workshop on Data Warehousing and OLAP
- 1997 IEEE Knowledge and Data Engineering Exchange Workshop
- 4th IEEE International Conference on Computer Communications and Networks
- 1st Pacific-Asia Conference on Knowledge Discovery and Data Mining
- 9th International Conference on Software and Knowledge Engineering
- 8th International Conference on Software and Knowledge Engineering
- 4th ACM International Conference on Information and Knowledge Management
- 11th International Conference on Computers and Their Applications

- 12th International Conference on Computers and Their Applications
- 5th International Conference on Intelligent Systems
- 6th International Conference on Intelligent Systems
- 21st International Computer Software Applications Conference
- 9th International Conference on Computer Applications in Industry and Engineering
- 13th International Conference on Computers and Their Applications
- 2nd International Conference on Systems Integration
- 1st International Conference on Digital Information Management
- 24th Annual ACM Symposium on Applied Computing(The Semantic Web and Applications Track)
- 2007 IRMA International Conference

Refereeing Journals

- IEEE Transactions on Knowledge and Data Engineering
- Journal of Computer and Software Engineering
- Journal of Software and Knowledge Engineering
- Journal of Intelligent Systems
- Journal of Database Management
- IEEE Transactions on Systems, Man & Cybernetics
- Journal of Microcomputer Applications
- Journal of Computers and Their Applications
- Journal of Information Processing Management

- Electronics and Telecommunications Research Journals

Invited Session Chairs

- 8th International Conference on Information and Knowledge Management
- 5th International Conference on Intelligent Systems
- 5th ACM International Conference on Information and Knowledge Management
- 7th International Conference on Software and Knowledge Engineering
- 8th International Conference on Software and Knowledge Engineering
- 11th International Conference on Computers and Their Applications
- 4th IEEE International Conference on Computer Communications and Networks
- 4th Golden West International Conference on Intelligent Systems
- Enterprise Computing Community National Conference, 2009, 2010, 2011, 2012, 2013 (Program Co-Chairs)
- 11th European Conference on Innovation and Entrepreneurship

Refereeing (Institutions and Companies)

- National Science Foundation (Proposal Reviewer)
- Addison-Wesley Publishing Company
- Oxford University Publishing Company
- Idea Group Publishing
- Prentice Hall Publishing Company

Grants and Awards for Last Ten Years

- NSF Grant(Co-PI, Award# 0829558, \$416,000): Introducing enterprise computing technologies into undergraduate computing education, 2008
- Christian R. and Mary F. Lindback Award for Distinguished Teaching, 2008
- IBM Faculty Award(\$20,000), 2006 and 2010
- JP Morgan Chase Faculty Award(\$15,000), 2006, 2007 and 2008
- College of Arts and Science Teaching Award, 2003

Invited Talks and Colloquiums

- Glaxo SmithKline, "Data mining techniques in biopharmaceutical industries," 2001
- Panasonic, "Using data mining techniques for marketing, sales, and customer support," 2000
- Sanguine Solution, "Introduction to data mining and Data warehousing," 1998
- Lotus, "Recent Trends in data mining and data warehousing," 1997
- Dupont, "Object-oriented database systems," 1995
- Widener University, "Towards an intelligent database," 1995
- Western Illinois University, "Control and optimization strategies in knowledge base systems," 1991
- Bradley University, "Methodology and implementation of compiling recursive rules in logic based programming language," 1991
- Middle Tennessee State University, "Control and optimization strategies in knowledge base systems", 1991
- Bellcore, "Compiling strategies in logic based programming language," 1991
- Winona State University, "On compiling recursive rules," 1991

- University of Wisconsin at Milwaukee, ``Towards an intelligent general-purpose knowledge base management system," 1990
- Northwestern University, ``Search strategies in knowledge base systems," 1989

Selected University Activities

- Executive Team 2011-2016
- Senior Leadership Team 2011-Present
- Strategic Planning Steering Committee, 2013-Present
- Strategic Planning Go Team- Rigorous Academic Experience and High-Impact Learning Practices, 2013
- School of Law Reorganization Committee, 2012
- President for a Day Selection Committee, 2012
- Campaign Client Committee, 2009
- Vision 2015 Phase III Academic Environment Goal Co-Chair, 2008
- Vision 2015 Campaign Task Force, 2008
- Co-op Task Force, 2007
- CAPS/Co-op Employer Advisory Board 2006-2010
- Vision 2015 Task Force on the University Planning, Resource Allocation, and Institutional Renewal, 2005
- Strategic Planning Administrative Programs Task Force, 2003
- Middle States Accreditation Committee on Academic Computing Services, 1994

Ph.D. Dissertation Committee

- Larry Reeve, Ph.D. in Information Systems, Drexel University

Master's Thesis Committees

- Roopa D. Rao, M.S. in Computer, Software, and Telecommunication Engineering
- S. Ganapathy, M.S. in Computer, Software, and Telecommunication Engineering
- P. Bhalerao, M.S. in Computer, Software, and Telecommunication Engineering
- R. Meiyur, M.S. in Computer, Software, and Telecommunication Engineering
- D. Jayanetti, M.S. in Computer, Software, and Telecommunication Engineering
- Robin Halpin, M.S. in Computer, Software, and Telecommunication Engineering
- Ahmed Saeed, M.S. in Computer, Software, and Telecommunication Engineering
- Chen Cheng, M.S. in Computer, Software, and Telecommunication Engineering
- R. Patankar, M.S. in Computer, Software, and Telecommunication Engineering
- Prachi Mehta, M.S. in Computer, Software, and Telecommunication Engineering

Community Activities

- Supervised the Chester Unity Center Project (set up computer labs in local churches and non-profit organizations).
- Supervised the Web site project for Habitat for Humanity, Delaware County Chapter.
- Supervised the YWCA project (set up a computer lab).
- Organize Computer Workshops for high school teachers.
- Organize Computer Programming Contests for high school students.
- Organize Computer Workshops for high school girls.
- Serve as board member for the New Hope Scholarship Foundation.

- Serve as board member for the Yi Jun Peace Museum in The Hague, The Netherlands.
- Served as Sunday school and youth group teacher at the New Covenant United Methodist Church.
- Serve as youth group teacher at the First Korean United Methodist Church of Cherry Hill.
- Serve as the Director of the Summer Enrichment Program at the First Korean United Methodist Church of Cherry Hill.
- Serve as the Education Director at the First Korean United Methodist Church of Cherry Hill
- Serve as the Fundraising Director for the Hurricane Sandy Relief efforts and the Malaria Prevention Program at the First Korean United Methodist Church of Cherry Hill