

Wonderful **O**utstanding **M**entors, **E**ngineers, and **N**ovel researchers

in

Computer Science

- **Career path**
 - **Education**
 - Learning
 - Teaching
 - **Research**
 - **Professional services**
 - Conferences
 - Meetings

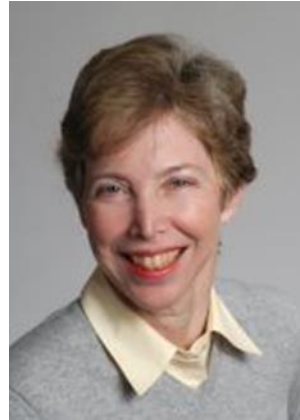
- **I have been impressed by the excellent contribution of several female professors and industry/government researchers in advancing the field of computer science**

- **I will mention some of these professors and researchers other than the ones at UTD**
 - **UTD has an excellent group of female professors**
 - **Several of them have already made good presentations at this series**



- **Pehong Chen Distinguished Professor of Electrical Engineering and Computer Science Emerita at the UC Berkeley**
- **Her research spans many aspects of programming language implementation, software tools, software development, environments, and high-performance computing**
- **She and her students built the Berkeley Pascal system and the widely used program profiling tool gprof. Their paper on that tool was selected for the list of best papers from twenty years of the Conference on Programming Language Design and Implementation (1979-1999)**
- **Member of the National Academy of Engineering, a Fellow of the Association for Computing Machinery, the American Association for the Advancement of Science, the American Academy of Arts and Sciences, and the Institute of Electrical and Electronics Engineers, and an Eminent Member of Eta Kappa Nu**

The Erik Jonsson School of Engineering and Computer Science



- **Founding editor-in-chief of the ACM Transactions on Programming Languages and Systems**
- **Her honors include the ACM SIGPLAN Career Programming Language Achievement Award (2000), the ACM Distinguished Service Award (2006), the Harvard Medal (2008), the IEEE von Neumann Medal (2009), the Berkeley Citation (2009), the ACM/IEEE Ken Kennedy Award (2011), and the Computing Research Association Distinguished Service Award (2012)**
- **She was named a University of California Honored Woman of the CAL Community in 1995 and a Berkeley Fellow in 2011**
- **She has served on numerous advisory committees; among them, the U.S. President's Information Technology Advisory Committee (PITAC) and the Harvard Board of Overseers**

The Erik Jonsson School of Engineering and Computer Science



- Prof. of Aeronautics and Astronautics and Prof. of Eng. Systems at MIT
- She is an elected member of the National Academy of Engineering (NAE)
- Conducts research on the topics of system safety, software safety, software and system engineering, and human-computer interaction
- Member, National Academy of Eng.; ACM 1999 Alan Newell Award; AIAA 1995 Information Systems Award; Hodgins Lecturer, McMaster University; Landsdown Professor, Univ. of Victoria; Conte Lecturer, Purdue University; ACM Fellow; ACM Faculty Awards for Women, 1990
- Editor of the journal IEEE Transactions on Software Engineering
- She has published over 200 research papers and is author of two books, "Safeware: System Safety and Computers" published in 1995 by Addison-Wesley and "Engineering a Safer World" published in 2012 by MIT Press

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- Papers + Book on RTS + Book on signals and systems
- Developed the PERTS system of building blocks and tools and a kernel-level processor-reservation mechanism
- Her recent research focuses on technologies for building personal and home automation and assistive devices and services
- EiC of IEEE Trans. on Computers from 1996-1999
- Serves on numerous international conference Program Committees
- Received the Technical Achievement Award of IEEE Computer Society, Technical Committee on Real-Time Systems in 2005
- Awarded the Information Science Honorary Medal from Taiwan Institute of Information and Computing Machinery in 2008
- She is a member of ACM and a Fellow of IEEE

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- **Dr. Clarke's research is in the area of software engineering, primarily focusing on verification and requirements engineering for human-intensive systems**
- **Fellow of the ACM and IEEE, and a board member of the Computing Research Association's Committee on the Status of Women in Computing Research (CRA-W)**
- **She received the 2012 ACM Special Interest Group on Software Engineering (SIGSOFT) Outstanding Research Award, the 2011 University of Massachusetts Outstanding Accomplishments in Research and Creative Activity Award, the 2009 College of Natural Sciences and Mathematics Outstanding Faculty Service Award, the 2004 University of Colorado, Boulder Distinguished Engineering Alumni Award, the 2002 SIGSOFT Distinguished Service Award**

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- She has also received a 1993 University Faculty Fellowship, and the 1991 Univ. of Massachusetts Distinguished Faculty Chancellor's Medal
- Former vice chair of the Computing Research Association (CRA), co-chair of CRA-W, IEEE Publication Board member, associate editor of ACM Transactions on Programming Languages and Systems (TOPLAS) and IEEE Transactions on Software Engineering (TSE), member of the CCR NSF advisory board, ACM SIGSOFT secretary/treasurer, vice-chair and chair, IEEE Distinguished Visitor, and ACM National Lecturer
- She has written numerous papers, served on many program committees, and was program co-chair of the 14th and general chair of the 25th International Conference on Software Engineering
- She is also involved in several efforts to increase participation of underrepresented groups in computing research

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- Serves or has served on the editorial boards of several journals - many of which are related to security, such as the ACM Transactions on Information and System Security, the IEEE Security & Privacy Magazine, and IEEE Transactions on Dependable and Secure Computing
- Served as program chair of the 36th International Conference on Very Large Data Bases (VLDB 2010)
- Fellow of the IEEE and Fellow of ACM
- Received the IEEE Computer Society Technical Achievement award in 2002 for outstanding contributions to database systems and database security and advanced data management systems and the 2005 Tsutomu Kanai Award by the IEEE Comp. Society for pioneering and innovative research contributions to secure distributed systems
- Served in the IEEE CS Board of Governors and as Chair of ACM SIGSAC

The Erik Jonsson School of Engineering and Computer Science

- Program Director in CISE at the National Science Foundation
- Received the CRA A. Nico Habermann Award in 2003
- CRA presents these awards, usually annually, to individuals for **outstanding service to the computing research community**
- The A. Nico Habermann Award is given to an individual who has played a leadership role in aiding members of underrepresented groups within the computing research community. It recognizes work in areas of government affairs, educational programs, professional societies, and public awareness
- Rita Rodriguez is recognized for her impact on minority students, faculty, and institutions throughout the country by constantly striving to improve the quality of programs at minority institutions
- Her energy and devotion in helping the members of underrepresented groups in the computing science community is well known



- Professor in the College of Computing at Georgia Institute of Technology and an elected IEEE Fellow
- She has published over 300 international journal and conference articles
- Her research group has produced a number of open source software systems, among which the most popular ones include WebCQ, XWRAPelite, PeerCrawl, GTMobSIM, and SHAPE
- Co-recipient of the best paper award from a number of conferences and organizations, including ICDCS 2003, WWW 2004, 2005 Pat Goldberg Memorial Best Paper Award, IEEE Cloud 2012, IEEE ICWS 2013, Mobiquitous 2014, APWeb 2015, IEEE/ACM CCGrid 2015
- Recipient of IEEE Computer Society Technical Achievement Award in 2012 and an Outstanding Doctoral Thesis Advisor award from Georgia Institute of Technology

The Erik Jonsson School of Engineering and Computer Science



- Served as a general chair and a PC chair of numerous IEEE and ACM conferences in data engineering, very large databases and distributed computing fields
- Served as a co-general chair of IEEE Compsac 2016 and a co-PC chair of IEEE 2016 Big Data Conference
- Recently Prof. Liu was the Editor In Chief of IEEE Transactions on Service Computing
- She currently serves on the editorial board of half dozen international journals, including ACM Transactions on Internet Technology (TOIT), ACM Transactions on Web (TWEB), Distributed and Parallel Databases (Springer), Journal of Parallel and Distributed Computing (JPDC)



- **Nine years of architect and technical lead experience in the software industry**
- **Associate Research Professor at Carnegie Mellon University's Silicon Valley campus**
- **Co-authored one textbook titled "Services Computing" and has published over 150 refereed journal papers, book chapters, and conference papers**
- **Associate Editor of IEEE Transactions on Services Computing (TSC) and of International Journal of Web Services Research (JWSR), and Editor-in-Chief of International Journal of Services Computing (IJSC)**



- **Full Professor, The Ohio State University, Columbus, Ohio**
- **Multidisciplinary research interests**
 - Probabilistic risk assessment
 - Dynamic Methodologies
 - Continuous event trees
 - Markov analysis
 - Software reliability modeling
 - Automated software testing
 - Human reliability modeling
 - Digital systems reliability and risk assessment
- **Recently received \$800,000 to develop methods and a prototype tool to determine if abnormal nuclear power plant events are cyber-security or safety incidents**

The Erik Jonsson School of Engineering and Computer Science



- Professor at the Lane Department of Computer Science and Electrical Engineering, West Virginia University
- Internationally recognized for her work in the areas of software reliability engineering, fault tolerant computing and dependable systems
 - Published over 100 journal and conference articles in the area of software engineering, cybersecurity, and data analytics
- Received the NSF CAREER award and served as a Principal Investigator on various NSF, NASA, WVU Research Corporation, NASA West Virginia Space Grant Consortium, CACC, and Motorola funded projects
- Serving as a Faculty Coordinator of the MS SE Program, which in 2017 has been ranked 10th by U.S. News & World Report
- Served as a Program Chair of the ISSRE 2007 and as a Guest Editor of the IEEE Trans. On Software Engineering and IEEE Trans. on Reliability
- Senior Member of IEEE and a member of ACM

The Erik Jonsson School of Engineering and Computer Science



- **Professor, Computer Science & Cyber Systems and Operations Naval Postgraduate School, Monterey, CA**
- **Principal Investigator of hundreds of projects & programs**
- **Developed and led SW program with 50 courses and led 60 PhD seminars since the mid 1990's, in recent years focusing on Cyber, Cyber & Cyber-physical Systems, Complex IT Systems, Distributed Systems Engineering, Weapons Safety, Computer Languages and many Software Engineering topics. The program graduated dozens of PhDs and hundreds of MS students**
- **Co-author of 2 books, 18 book chapters, and many refereed papers. More than 50 articles published in IEEE Trans. on Software Engineering, IEEE Software, IEEE Computer, IEEE Expert, Comm. of the ACM, and a variety of other international journals. Supervised many dissertations and theses, including six that won the Grace Murray Hopper Award**

The Erik Jonsson School of Engineering and Computer Science



- **Professor, Department of Computer Science, University of Denver**
- **Has served as**
 - Associate Dean, for Industry Programs
 - Chair, Department of Computer Science, University of Denver
 - Associate Director, School of Electrical Engineering and Computer Science, Washington State University
 - Associate Director, School of Electrical Engineering and Computer Science, Washington State University
 - Assistant Vice President for Research, Colorado State University, Ft. Collins, Colorado
- **Served on several Editorial Boards:**
 - Editorial Board Journal of Software Maintenance, 1996 -present.
 - Editorial Board Empirical Software Engineering Journal, 1996-2010.
 - Editorial Board Journal of Information and Software Technology, 2001-present.
 - Editorial Board Software Quality Journal, 2002-present



- **Professor and Director, Computer Engineering, University of Virginia**
- **Developed the dynamic fault tree model, which extends the applicability of fault tree analysis to computer systems**
 - Has been used for reliability analysis and probabilistic risk assessment by industry, academic and government researchers and contractors
 - A software tool that embodies this work (called Galileo) was developed by researchers at the University of Virginia and has been used by NASA and its contractors for many years
- **Currently developing a new sequence of interdisciplinary courses in robotics, including autonomous vehicles, humanoids, and small robots for social applications**
- **Fellow of the IEEE, IEEE Reliability Society Award, Harriet B. Rigas Award for outstanding woman engineering educator (IEEE Education and Computer Societies), Hartfield-Jefferson Scholars Teaching Prize, La Salle University Alumna 2016 IT leadership award**

The Erik Jonsson School of Engineering and Computer Science



- **Directeur de Recherche at LAAS-CNRS, heading the Dependable Computing and Fault Tolerance Research Group**
- **Authored or co-authored more than 150 conference and journal papers, 5 books and 10 book chapters**
- **Co-directed the production of a book on Dependability Benchmarking for Computer Systems, published jointly by IEEE Comp. Society & Wiley**
- **Vice-chair of the Intl. Federation for Information Processing (IFIP) working group 10.4 on Dependable Computing and Fault Tolerance**
- **Chairperson of:**
 - **The Special Interest Group on Dependability Benchmarking (SIGDeB) of the IFIP working group 10.4, French SEE (Technical Committee on Trustworthy Computer Systems, and the SEE Working Group "Design and Validation for Dependability**



- **Chairing the Steering Committee of EDCC, The European Dependable Computing Conference**
- **Member of the Steering Committees of:**
 - ISSRE (the IEEE International Symposium on Software Reliability Engineering),
 - DSN (the IEEE/IFIP International Conference on Dependable Systems and Networks)
 - SSIRI (the IEEE International Conference on Secure Software Integration and Reliability improvement)
- **Program Committee Co-Chair of:**
 - 28th Annual International Computer Software and Application Conference, COMPSAC 2004, Hong Kong
 - International Conference on Dependable Systems and Networks, DSN-2000, , New York, NJ, USA
 - 5th IEEE Intern. Symposium on Software Reliability Engineering, ISSRE 1994, Monterey, CA, USA
 - 4th European Workshop on Dependable Computing, EWDC 1992, Prague, Czechslovakia
- **General Chair of:**
 - 18th International Conference on Computer Safety, reliability and Security, Safecomp'99, Toulouse, 1999.
 - 6th IEEE International Symposium on Software Reliability Engineering, Toulouse, 1995.
 - 2nd International Conference on Reliability, Maintainability and Safety, Beijing, China, 1994
- **Editorial Board of:**
 - IEEE Transactions on Dependable and Secure Computing, International Journal of Performability Engineering, Revue de l'électricité et de l'électronique, International Journal of Critical Computer-Based Systems, International Journal of Discrete Event Control Systems



- **Associate Professor in the Department of Computer Science and Engineering at the University of Connecticut**
- **She was a Research Scientist at Telcordia Technologies, Morristown, NJ**
- **Her research interests lie in the areas of software reliability, software performance, quality-of-service assurance of wireless and wireline networks, and application-level intrusion detection.**
- **She is a senior member of the IEEE**



- **Professor of Computer Science and Engineering LSU**
- **She holds a Dow Chemical Distinguished Professorship and is the Associate Vice Chancellor for Research & Graduate Studies**
- **Recently completed a three-year assignment at the NSF**
- **1998 IEEE Computer Society President**
- **Fellow of the IEEE and Fellow of the American Association for the Advance of Science**
- **Member of the Steering Committee of the IEEE Computer Society/ACM Computing Curricula 2001 Committee, the Steering Committee for the IEEE Computer Society/ACM Software Engineering Coordinating Committee, and Co-Chair of the Joint ACM/IEEE Task Force on Software Engineering Education**

The Erik Jonsson School of Engineering and Computer Science



- **Interim Department Head of Computer Science and a Professor in the Computer Science Department of the College of Engineering at North Carolina State University (NCSU)**
- **Co-director of the NCSU Science of Security Lablet**
 - Laurie's research focuses on software security particularly in relation to healthcare IT; agile software development practices and processes, particularly continuous deployment; and software reliability, software testing and analysis
 - Laurie has more than 230 refereed publications
- **Awards: NC State Faculty Scholar - 2013; IBM Faculty Award - 2012; ACM Distinguished Scientist - 2011; IBM Smarter Planet Innovation Faculty Award – 2011; IBM Faculty Award - 2010; ACM SIGSOFT Influential Educator Award - 2009; IEEE Software 25th Anniversary "Top Picks" for full-length, peer-reviewed articles - 2009; and several other awards**

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- Professor in Computer Science and Engineering at Michigan State Univ.
- MSU College of Engineering Withrow Distinguished Scholar Award, 2008
- MSU Distinguished Faculty Award, 2007
- Site Director, NSF Research Center for Ultra-Large Scale Software-Intensive Systems (ULSSIS)
- Editorial Board of IEEE Transactions on Software Engineering, Requirements Engineering Journal, Software and Systems Modeling
- Program Committee Co-Chair, EEE Intl Conf. on Software Eng. (ICSE13)
- Prog. Chair, 6th Intl Symp. on SE for Adaptive & Self-Managing Systems
- Co-founder of the Software Engineering and Network Systems Laboratory that currently supports 5 faculty members and their graduate students



- Served as Provost and Vice President for Academic Affairs at California State University, Chico, and as the Charles W. Davidson College of Engineering's Don Beall Dean of Engineering at San José State University (SJSU) for 10 years
- She is currently SJSU's Carolyn Guidry Chair in Engineering Education and Innovative Learning
- Belle has been a champion for fostering inclusive excellence, bolstering STEM education, and developing sustainability programs
- Founder and President of the Center for Advancing Women in Technology (CAWIT) that creates the Technology Pathways Initiative (TPI)
 - TPI empowers public universities, sponsored by industry partners, to create new interdisciplinary degree programs that integrate computing with other fields of study such as biology, math, and social and behavioral sciences

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- **The aim of these programs is to provide technology pathways, from campus to career, for today's diverse student population, a majority of whom are women**
- **Belle chaired the Engineering Deans Council's Diversity Committee in 2009-2012, and spoke before U.S. Congress in 2006 on innovation, contributing to the 2007 America COMPETES Act**
- **She is a strong advocate and education leader, committed to defining and directing the course of global competitiveness and innovativeness issues and the role of U.S. science and technology education in maintaining and enhancing future U.S. leadership**

- **These are just a few of the women in computer science**
- **Many of the female computer scientists have made truly outstanding contributions to all aspects of the field of computer science**
 - Pioneering research
 - Excellent education and mentoring of students
 - Incredible support for the CS community, including organizing conferences, serving on editorial boards, managing funding agencies, etc.
- **All these contributions have significantly enhanced the field of computer science**
- **Computer science is a major aspects of several interdisciplinary projects that can greatly enhance the quality of humanity**
 - Health care
 - Emergency response
 - High quality and highly secure systems
 - Cyber-physical systems: Smart cities, smart homes, smart transportation, etc.
- **You have all the intelligence needed to fully address all the challenges**
- **THANK YOU!**