CURRICULUM VITA

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DR. CARL K. CHANG, PH.D.

PROFESSOR EMERITUS
(Retired on June 30, 2022)
DEPARTMENT OF COMPUTER SCIENCE

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EXECUTIVE SUMMARY

Highlights of Administrative Contributions: Chang served as department chair for eleven years from 2002-2013 in the department of computer science at Iowa State University. During his terms as the chair he promoted two full professors, twelve associate professors, four senior lecturers, and cultivated six NSF CAREER awardees. The department continued to grow in faculty size and strength, and heavily engaged in interdisciplinary research. The joint Software Engineering degree program between Computer Science and Computer Engineering is also completed during his tenure as the chair. Today, Computer Science at ISU has visibly moved up in its national ranking in several areas including software eC and significantly improved its academic reputation with a globally recognized faculty.

Undergraduate Education: Chang spearheaded the joint task force on Computing Curricula 2001 (CC2001) for education renovation in a global setting, an effort of the IEEE Computer Society (IEEE-CS) and the Association for Computing Machinery (ACM). CC2001 has had a major impact on undergraduate computing education worldwide. He is highly experienced with accreditation, articulation, and certification matters in higher education and the computing profession. Since he joined Iowa State, Chang led the Computer Science Department to have developed a joint software engineering undergraduate degree program with computer engineering faculty. He led the department in several rounds to have earned or renewed accreditations of both computer science and software engineering programs by ABET. He also contributed to education renovation through initiating the interdisciplinary Gerontechnology Program at ISU, partially funded by the National Science Foundation, to train technologists in support of the national agenda on successful aging.

Graduate Education: Chang is a popular academic advisor and has attracted many graduate students to work in his research group to study the latest software technologies and engage in hands-on projects. Since he began his academic career at the University of Illinois in 1984, he has produced 40 Ph.D. dissertations, 33 M.S. theses, and 150+ M.S. projects. At ISU, he rejuvenized the department to expand the Ph.D. program from 30 to 100 Ph.D. students at peak during his tenure as the chair.

Research and Grants: His current research interests include software architecture, requirements engineering, services computing and successful aging. He has published extensively in these areas in journals and refereed conferences, and various column articles and editor's messages. In the past 30 years, he has attracted numerous external grants from federal funding agencies and industry sources to support his research. To date, 23 visiting scholars from foreign countries have been hosted for joint research in Chang's labs.

Professional Services: Chang has been an active volunteer leader in the IEEE Computer Society for almost three decades, the largest and oldest computer association in the world. He was elected 2004 President of the society. Before that, he served as the First Vice President (2001) to lead the Educational Activities Board. He served as Editor-in-Chief (EIC) of *IEEE Software* from 1991-94, and in that capacity established a legendary Industrial Advisory Board. He organized the 1997 President's Roundtable to develop a technology roadmap for IEEE-CS. As a recognized scholar in software engineering, he is among the initial team that developed the Software Engineering Body of Knowledge (SWEBOK). He co-founded the IEEE International Conference on Requirements Engineering (ICRE), and the Symposium on Applications and the Internet (SAINT) co-sponsored by the IEEE-CS

and Information Processing Society of Japan (IPSJ). He served from 2006-2015 as the chair of the standing committee of the IEEE International Computer Software and Applications Conference (COMPSAC), the IEEE signature conference on computer software technology for computer and software professionals. From 2007-2010, he served as the Editor-in-Chief of *IEEE Computer*, the flagship publication for the IEEE Computer Society. In that capacity, he spearheaded a Society-wide initiative and established another Industrial Advisory Board for the entire Society, which is a premier industrial forum with global expertise and networks. He was recently elected an Officer of the Computational and Information Sciences Division, Scientific Committee, European Academy of Sciences, for a 3-year term (2017-2019. From June 2017 through July 2022, he served as the Chair of the Steering Committee for IEEE World Congress on Services (a.k.a. IEEE SERVICES) which is an umbrella of several top-tier co-located IEEE conferences including IEEE Web Services and IEEE CLOUD.

Awards, Medals, and Honors: As an IEEE Fellow, he received the Computer Society's Outstanding Contribution Award, Meritorious Service Award, and the Golden Core Award, in addition to the IEEE Third Millennium Medal. He finished a 3-year term (2000-02) as a Distinguished Visitor for IEEE-CS. In 2004 he was elected Fellow of the American Association for the Advancement of Science (AAAS). In 2006, he received the prestigious Marin Drinov Medal from the Bulgarian Academy of Sciences. Through a globally competitive selection program, he received prestigious IBM Faculty Awards in 2006, 2007, and 2009. He is the recipient of the 2012 IEEE Richard E. Merwin Medal for his contributions and leadership in the computing profession. In 2014, he was selected as the 2014 Distinguished Alumnus for his alma mater, National Central University in Taiwan, and as recipient of the 2014 Overseas Outstanding Contributions Award by the China Computer Federation (CCF), the largest professional association in China, selected from the pool of internationally recognized computer scientists of Chinese origin outside China. He received the Honorary Member Award from the Information Processing Society of Japan (IPSJ) on June 5, 2019 in Tokyo, becoming the 8th foreign awardee in IPSJ's long history since 1960. Most recently, the Steering Committee of IEEE SERVICES presented a special award in recognition of his Research Excellence and Leadership (the REAL Award) in the opening plenary session at the 2023 IEEE SERVICES, Chicago, on July 3.