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Media Release

Professor Robert Deng is first SMU faculty to be conferred IEEE Fellowship

Singapore, 19 February 2016 (Friday) – Professor Robert Deng from the School of Information Systems (SIS) at Singapore Management University (SMU) has been elevated to IEEE Fellow with effect from 1 January 2016. He is being recognised for his long history of professional contributions to the field of cybersecurity, and in particular for work on cybersecurity algorithms, protocols and systems.

The IEEE Grade of Fellow is conferred by the IEEE Board of Directors upon a person with an outstanding record of accomplishments in any of the IEEE fields of interest. The total number selected in any one year cannot exceed one-tenth of one-percent of the total voting membership. IEEE Fellow is the highest grade of membership and is recognized by the technical community as a prestigious honor and an important career achievement.

Prof Deng said, “I am greatly humbled and honoured to be elevated to IEEE Fellow. I would like to offer my sincerest gratitude to all my collaborators and students for their valuable support and contributions to my professional career, and to A*STAR and SMU for providing dynamic and supportive research environments that have enabled me, over the past 20 plus years, to undertake cybersecurity research in Singapore.”

Prof Deng has been working at the interface of cryptography and information systems and created a series of breakthrough security protocols and systems that were motivated by real world problems. He and his collaborators designed the first optimal and true fair exchange protocol in 1998 which guarantees that digital values can be exchanged fairly between two distrustful parties over open networks. He also co-developed with colleagues the first suite of techniques for authenticating and encrypting scalable multimedia content which was adopted as international standards in 2007; and in 2010, the first theoretical model which formally establishes relationships among different RFID privacy notions and the minimal condition for achieving RFID privacy.

Prof Deng is also a leading authority in security analysis. In 1996, he and his colleagues were the first to publish fault-based attack against public key cryptosystems and the countermeasures. In 2012, he and colleagues were the first to theoretically prove the infeasibility of designing secure and usable leakage-resilient password systems; and in 2013, he was part of the first team to publish a generic technique that enables third-party applications to launch attacks on iOS devices.

Prof Deng joined SIS in 2004 as the school's very first tenured Full Professor. In addition to carrying out his cybersecurity research work at SMU over the past 11 years, he has also actively contributed to service work by serving as Associate Dean for Research and Faculty (2006- 2012), and Associate Dean for Faculty (2012-2014), in addition to supervising the school's internal research centre.

He is presently Director of the Secure Mobile Centre, which was established in February 2015 and funded by Singapore's National Research Foundation to develop efficient and scalable technologies and solutions that strengthen the security of mobile computing systems, applications and services.

Prior to joining SIS in 2004, Prof Deng spent 14 years with Singapore government ICT research institutes, including the Institute for Infocomm Research (I²R), as well as the organizational pre-cursors of I²R. I²R is an ICT research institute under the Agency for Science, Technology and Research (A*STAR) family and Singapore's largest ICT research institute. In the early 1990s, Professor Deng spent 3 years at the NUS Department of Electrical and Computer Engineering.

Prof Deng obtained his B.Eng from National University of Defense Technology, China, and his MSc and PhD from Illinois Institute of Technology, USA.

Over his 30-year career, Prof Deng obtained 26 patents and published more than 300 papers in refereed conferences and journals.

Among the numerous awards Prof Deng has received were the University Outstanding Researcher Award from National University of Singapore in 1999, Lee Kuan Yew Fellow for Research Excellence from Singapore Management University in 2006, and the Asia-Pacific Information Security Leadership Achievements (ISLA) Community Service Star and Showcased Senior Information Security Professional from the International Information Systems Security Certification Consortium (ISC)² in 2010. He has also been a co-author on several academic publications which have been designated as Best Papers or Distinguished Papers at top tier international academic conferences.

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About Institute of Electrical and Electronics Engineers (IEEE)

The IEEE is the world's leading professional association for advancing technology for humanity. Through its 400,000 members in 160 countries, the IEEE is a leading authority on a wide variety of areas ranging from aerospace systems, computers and telecommunications to biomedical engineering, electric power and consumer electronics.

Dedicated to the advancement of technology, the IEEE publishes 30 percent of the world's literature in the electrical and electronics engineering and computer science fields, and has developed more than 900 active industry standards. The association also sponsors or co-sponsors nearly 400 international technical conferences each year. www.ieee.org.

About the Singapore Management University (SMU)

A premier university in Asia, the Singapore Management University (SMU) is internationally recognized for innovative research and teaching in the areas of Management, Social Sciences, Analytics and Computing, and for interdisciplinary work across these areas. SMU's educational programmes are known for their highly interactive and technologically enabled pedagogy in small class sizes.

Home to over 9,300 undergraduate and postgraduate students, SMU comprises six schools: School of Accountancy, Lee Kong Chian School of Business, School of Economics, School of Information Systems, School of Law and School of Social Sciences, offering a wide range of bachelors', masters' and PhD degree programmes in various disciplines.

With an emphasis on generating rigorous, high-impact, multi-disciplinary research that addresses Asian issues of global relevance, SMU faculty members collaborate with leading international researchers and universities from USA, Europe, China and India as well as with partners in the business community and public sector through its research institutes and centres. SMU's city campus is a state-of-the art facility located in the heart of downtown Singapore, fostering strategic linkages with the business and wider community. For more information, please visit www.smu.edu.sg.