Title: **Cooperative Jamming in Wireless Networks with Eavesdroppers at Arbitrary Locations**

Speaker: Prof. Jiajia Liu
Xidian University, China

URL: http://web.xidian.edu.cn/jjliu/en/index.html

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Location: E417 Seminar room, B4 Building
1-1 Gakuen-cho, Nakaku, Sakai, Osaka 599-8531, Japan
http://www.osakafu-u.ac.jp/osakafu-content/uploads/sites/344/nakamozu_map3d_20150701.pdf

Abstract: In this talk, we investigate divide-and-conquer based cooperative jamming for physical-layer security enhancement in the presence of multiple eavesdroppers. Different from previous works, we consider a scenario where the eavesdroppers can be located anywhere inside the communication region of the source, no location information of the eavesdroppers is available and no constraint on the number of eavesdroppers is presupposed. The basic idea is to transmit the message in multiple rounds such that each eavesdropper can only obtain partial information about the message. Stochastic geometry based analytic results as well as Monte Carlo simulations are presented to illustrate the achievable secrecy performances.

Speaker Biography: Jiajia Liu (S'11-M'12-SM'15) received his B.S. and M.S. degrees both in computer science from Harbin Institute of Technology in 2004 and from Xidian University in 2009, respectively, and received his Ph.D. degree in information sciences from Tohoku University in 2012. He was a JSPS special research fellow in Tohoku University from Apr. 2012 to Oct. 2013, and a data analytics engineer in Aviation Industry Corporation of China from Jul. 2004 to Aug. 2006. He has been a Full Professor at the School of Cyber Engineering, Xidian University, since 2013, and has been the director of the Institute of Network Science and Technology at Xidian University since 2015. He was selected into the prestigious "Huashan Scholars" program by Xidian University in 2015. He has published more than 70 peer-reviewed papers in many high quality publications, including prestigious IEEE journals and conferences. He received the Best Paper Awards from many international conferences including IEEE flagship events, such as IEEE GLOBECOM in 2016, IEEE WCNC in 2012 and 2014. He was the recipient of the prestigious 2012 Niwa Yasujiro Outstanding Paper Award due to his exceptional contribution to the analytics modeling of two-hop ad hoc mobile networks, which has been regarded by the award committees as the theoretical foundation for analytical evaluation techniques of future ad hoc mobile networks. He was also a recipient of the Tohoku University President Award 2013, Graduate School of Information Sciences Dean Award 2013, Professor Genkuro Fujino Award 2012, Chinese Government Award for Outstanding Ph.D. Students Abroad 2011 and the RIEC Student Award 2012. His research interests cover a wide range of areas including load balancing, wireless and mobile ad hoc networks, Fiber-Wireless networks, Internet of things, cloud computing and storage, network security, LTE-A and 5G, SDN and NFV. He has been actively joining the society activities, like serving as associate editors for IEEE Transactions

on Computers (Oct. 2015-present) and IEEE Transactions on Vehicular Technology (Jan. 2016 - present), editor for IEEE Network (July 2015-present), guest editors of top ranking international journals like IEEE Transactions on Emerging Topics in Computing (TETC), IEEE Network Magazine, IEEE Internet of Things (IoT) Journal, etc., and serving as technical program committees of numerous international conferences like the leading symposium co-chair of AHSN symposium for GLOBECOM 2017, CRN symposium for ICC 2018. He is a Distinguished Lecturer of the IEEE Communications Society.