COMPUTER SCIENCE COLLOQUIUM

Research Topics in Information Theory for 6G

SPEAKER **Dr. Bo Bai**

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Huawei, Hong Kong

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ZOOM https://www.cs.cityu.edu.hk/~ccha23/ITalk

ABSTRACT

With the rapid development of 5G all over the world, the industry and academia now start to consider the vision and potential new technologies for 6G. In this talk, we will introduce some interesting information theory problems, which include: 6G Network Architecture, Coding Problems for 6G, AI based Source and Channel Coding, and Coding Problems for Machine Learning. By digging these interesting topics, we hope we can develop new promising technologies for 6G. We also hope we can setup closely cooperation with professors and recruit intelligent PhD students as our researchers to work on these challenging yet exiting problems.

BIOGRAPHY

Dr. Bo Bai received the B.S. degree with the highest honor in School of Communication Engineering from Xidian University, Xi'an China, 2004, and the Ph.D. degree in Department of Electronic Engineering from Tsinghua University, Beijing China, 2010. He received the Honor of Outstanding Graduates of Shaanxi Province and the Honor of Young Academic Talent of Electronic Engineering in Tsinghua University. He was a Research Assistant from April 2009 to September 2010 and a Research Associate from October 2010 to April 2012 with the Department of Electronic and Computer Engineering, Hong Kong University of Science and Technology. From July 2012 to January 2017, he was an Assistant Professor with the Department of Electronic Engineering, Tsinghua University. He has obtained the support from Backbone Talents Supporting Project of Tsinghua University. Currently, he is a Principal Researcher at Theory Lab, 2012 Labs, Huawei, Hong Kong. He is leading a team to develop fundamental principles, algorithms, and systems for graph informatics, non-linear information theory, and B5G/6G cell-free networking.

He is an IEEE Senior Member, USENIX Member, and has authored more than 120 papers in major IEEE and ACM journals and conferences, 2 book chapters, and 1 textbook. He is one of the founded vice chairs of IEEE TCCN SIG on Social Behavior Driven Cognitive Radio Networks. He served as a committee member in IEEE ComSoc WTC and IEEE ComSoc SPCE. He served as a TPC co-chair of IEEE Infocom 2018 - 1st AoI Workshop and IEEE Infocom 2019 - 2nd AoI Workshop, a TPC co-chair of IEEE ICCC 2018, and an Industrial Forum & Exhibition co-chair of IEEE HotICN 2018. He also served as a TPC member for several IEEE conferences such as ICC, Globecom, WCNC, VTC, and ICCC. He served as a reviewer for several major IEEE and ACM journals and conferences. He was the recipient of the Student Travel Grant at IEEE Globecom 2009. He was invited as a Young Scientist Speaker at IEEE TTM 2011. He was a recipient of the Best Paper Award in IEEE ICC 2016.

All are welcome!

In case of questions, please contact Dr CHAN Chung <chung.chan@cityu.edu.hk> or Dr SONG Linqi <linqi.song@cityu.edu.hk> or visit the CS Departmental Seminar Web at http://www.cs.cityu.edu.hk/.