

## **IEEE ComSoc DLT Trip Report**

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Under the approval of the Asia Pacific Board, I took a Distinguished Lecturer Tour (DLT) to the Beijing and Nanjing Chapters from March 29 to April 5, 2018.

During the DLT, I gave three talks as follows.

- Tsinghua University, Beijing, China
- Beijing University of Post and Telecommunications, Beijing, China
- Southeast University, Nanjing, China

The title of the talk is “Message Passing in Wireless Heterogeneous Networks: Sustainability and Optimality”. The talk mainly discusses the scalability in terms of algorithm complexity and system capacity in the PHY layer of large scale wireless networks. A novel Randomized Gaussian Message Passing algorithm is introduced for joint signal detection in dense wireless networks. In particular, the novel “randomization” technique greatly enhances convergence of message passing in geometric graphs with short loops.

The talk was well attended in all three universities. It led to fruitful discussions both between the audience and me, and among the audience. I find the DLT quite rewarding.

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