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THE CHINESE UNIVERSITY OF HONG KONG

Department of Information Engineering

Seminar

Second-Order Analysis for Multi-terminal Networks

by

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Date : 11 October, 2016 (Tuesday)
Time : 10:00am – 11:30am
Venue : Room 833, Ho Sin Hang Engineering Building
The Chinese University of Hong Kong

Abstract

The study of the second-order analysis has attracted significant interest in recent years since it gives a good approximation for the finite blocklength performance of coding systems. In this talk, we first review solved/unsolved problems on the second-order analysis for multi-terminal networks. Then, we show the second-order coding rate region of the Gray-Wyner network, which is the only problem such that the second-order rate region has been characterized for a problem where the characterization of the first-order region involves an auxiliary random variable. We close the talk by pointing out difficulties to extend the second-order analysis to other multi-terminal networks.

Biography

Shun Watanabe received B.E., M.E., and Ph.D. degree from Tokyo Institute of Technology in 2005, 2007, and 2009, respectively. During April 2009 to February 2015, he was an assistant professor of the Department of Information Science and Intelligence Systems at the University of Tokushima. During April 2013 to March 2015, he was a visiting assistant professor of the Institute for Systems Research at the University of Maryland, College Park. During March to April 2016, he was a visiting fellow at the Institute of Henri Poincare. Since February 2015, he has been a tenure track associate professor of the Department of Computer and Information Sciences at Tokyo University of Agriculture and Technology.

He is a member of IEEE and IEICE. He currently serves as an Associate Editor for the IEEE Transactions on Information Theory.

**** ALL ARE WELCOME ****

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