Department Colloquium

Speaker: Professor Shun Watanabe, University of Tokushima and University of Maryland
Date: Friday, November 21
Time: 2:30 p.m.
Place: Jeffery 234
Title: A Converse Bound on Secret Key Agreement and Its Applications

Abstract: We consider secret key agreement by multiple parties observing correlated data and communicating interactively over an insecure communication channel. By relating secret key agreement and binary hypothesis testing, we derive a single-shot converse bound on the length of the secret key. Furthermore, we apply the bound for secure computation problems, and derive a converse bound for those problems. The talk is based on joint work with Himanshu Tyagi (http://arxiv.org/abs/1404.5715).

Biography: Shun Watanabe received B.E., M.E., and Ph.D. degree from the Tokyo Institute of Technology in 2005, 2007, and 2009, respectively. Since April 2009, he has been an assistant professor at the Department of Information Science and Intelligence Systems at the University of Tokushima. Since April 2013, he has also been a visiting assistant professor at the University of Maryland. His research interests include information theoretic security, network information theory, and quantum information theory.