

Information Polarization

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Biography:

Professor Erdal Arıkan received his PhD in Electrical Engineering and Computer Science from Massachusetts Institute of Technology in 1985. Before joining Bilkent University, he was a faculty member at University of Illinois Urbana-Champaign. His research interests are information theory, communications, data communication networks, and cryptography. He served as an Associate Editor for IEEE Transactions on Information Theory. He is the recipient of the 2010 IEEE Information Theory Paper award for his paper “Channel Polarization: A Method for Constructing Capacity-Achieving Codes for Symmetric Binary-Input Memoryless Channels” published in IEEE Trans. Information Theory, July 2009.

Abstract:

Polarization of information is a recently discovered method for constructing capacity-achieving source and channel codes. This talk reviews basic notions of polarization and surveys some of its applications in communications.