

Index Coding: Old and New

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Abstract: Originally introduced to minimize the number of transmissions in satellite communication, the index coding problem provides a simple yet rich model for several important engineering problems in network communication, such as content broadcasting, peer-to-peer communication, distributed caching, device-to-device relaying, and interference management. In this talk, I will discuss different coding schemes developed for the problem, including two new coding schemes that achieve the optimal performance when the problem size is small.

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