

Information complexity and applications*

Takagi Lectures Notes

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Abstract. This paper is a lecture note accompanying the 19th Takagi Lectures lectures in July 2017 at Kyoto University.

We give a high-level overview of information complexity theory and its connections to communication complexity. We then discuss some fundamental properties of information complexity, and applications to direct sum theorems and to exact communication bounds. We conclude with some open questions and directions.

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