

Distributed Data Structures: A Survey on Informative Labeling Schemes

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Abstract. In this talk, we will survey the role of data structures for compactly storing and representing various types of information in a localized and distributed fashion. Traditional approaches to data representation are based on global data structures, which require access to the entire structure even if the sought information involves only a small and local set of entities. In contrast, localized data representation schemes are based on breaking the information into small local pieces, or *labels*, selected in a way that allows one to infer information regarding a small set of entities directly from their labels, without using any additional (global) information.

Keywords: data-structures, distributed algorithm, labeling scheme, graphs.

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