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**Ted K Ralphs\*** ([ted@lehigh.edu](mailto:ted@lehigh.edu)). *Duality for Discrete Optimization: Theory and Applications.*

The duality theory for discrete optimization is a well-developed theory with many important applications. The theory generalizes a number of useful concepts from the duality theory of (continuous) linear optimization, which is much better-known within the optimization community. In this talk, we provide an overview of this theory and discuss its connection to the general theory of discrete optimization. We further describe applications in which duality theory provides key insights leading to practical algorithms. (Received September 25, 2018)