







Special Issue Reprint

Information Theory and Language

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"Information Theory and Language" is a collection of 12 articles that appeared recently in Entropy as part of a Special Issue of the same title. These contributions represent state-ofthe-art interdisciplinary research at the interface of information theory and language studies. They concern in particular: • Applications of information theoretic concepts such as Shannon and Rényi entropies, mutual information, and rate-distortion curves to the research of natural languages: • Mathematical work in information theory inspired by natural language phenomena, such as deriving moments of subword complexity or proving continuity of mutual information; • Empirical and theoretical investigation of quantitative laws of natural language such as Zipf's law, Herdan's law, and Menzerath-Altmann's law; • Empirical and theoretical investigations of statistical language models, including recently developed neural language models, their entropies, and other parameters; • Standardizing language resources for statistical investigation of natural language; • Other topics concerning semantics, syntax, and critical phenomena. Whereas the traditional divide between probabilistic and formal approaches to human language, cultivated in the disjoint scholarships of natural sciences and humanities, has been blurred in recent years, this book can contribute to pointing out potential areas of future research cross-fertilization.





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