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Dimensions on Texts

Dr. Hai Zhuge ACM Distinguished Scientist

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Summarization is a key feature of human intelligence. With rapid and continual expansion of texts in cyberspace, automatic text summarization becomes more and more desirable. Traditional automatic summarization methods process texts empirically while neglecting fundamental characteristics and principles in language use and understanding. This talk summarizes previous research methods in a multi-dimensional classification space, unveils the limitations of previous methods, introduces fundamental characteristics and principles, and proposes a summarization methodology including principles, strategies, rules, research methods, system framework, principles of evaluation, and necessity of summarization. The basic viewpoints include: (1) text is understood from outside of the text, (2) summarization is an open social process of building citations from one text to another text or a set of texts, (3) automatic summarization has a limitation, and (4) research should link text to cyberspace, physical space and social space to approach the limitation. By studying the summarization of pictures, videos and graphs, studies converge to a general summarization method. This talk will further discuss some fundamental issues and methods for processing texts considering human cognition, knowledge and semantics.

Dr. Hai Zhuge is the pioneer of Cyber-Physical Society research and Knowledge Grid research. He invented the Multi-Dimensional Classification Space and the Semantic Link Network Model as the fundamental models to manage various resources in Cyber-Physical Society. He is the author of The Knowledge Grid: Toward Cyber-Physical Society. He is an ACM Distinguished Scientist, ACM Distinguished Speaker, and a Fellow of British Computer Society. He is a joint professor of Nanjing University of Posts and Telecommunications and The Key Laboratory of Intelligent Information Processing in Chinese Academy of Sciences. He presented 15 keynotes at international conferences. He received Wang Xuan Award of China Computer Federation. He was awarded a Distinguished Visiting Fellow of Royal Academy of Engineering in 2013. He is serving as an associate editor of IEEE Intelligent Systems and steering the International Conference on Semantics, Knowledge and Grids.

Wednesday, April 23 @ 2:30pm Information Technology Centre, ITC317