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Title: Advanced Rule-Based Systems for Sensing Decision Support

Abstract: The key motivation of the research introduced in this talk is “making sense” in supporting human decision making, hence the advanced rule-base is centralized in this research now that advancement and application of rule-based systems have always been a key research area in computer-aided support for human decision making due to the fact that rule-base is one of the most common frameworks for expressing various types of human knowledge in an intelligent system. The talk will be focused on how to integrate qualitative and quantitative information simultaneously in the proposed advanced rule base system for making sense to decision support. The talk will introduce the generic framework, methodologies, tools and applications of this new advanced rule-base system including some key issues related to data and knowledge representation to compromise each other, process transparency and interpretability, representation scheme and processing capabilities to handle simultaneously vagueness, incompleteness and uncertainty in conjunction with different types of input data formats, performance, flexibility and applicability as well as effectiveness and efficiency, followed with some challenges and open issues.