## Computer Science Colloquium

## IBMs Watson: From a Modest DeepQA Machine To a Formidable Jeopardy!

## Dr. Bill Murdock IBM's Watson Research Center

Abstract: Watch IBMs Watson on Jeopardy! compete against two of its most successful and celebrated contestants – Ken Jennings and Brad Rutter on February 14 and 15. Then come hear Dr. Bill Murdock provide an overview of the road to Watson becoming a formidable contestant on Jeopardy! The game of Jeopardy! makes great demands on its players from the range of topical knowledge covered to the nuances in language employed in the clues. Can the analytical power of a computer system normally accustomed to executing precise requests overcome these obstacles? Can the troves of knowledge written in human terms become searchable by a machine in order to deliver a single, precise answer? Can a quiz show help advance science? Well find out! Bill Murdock helps Watson distinguish correct answers from wrong answers by building components that apply logic, learning, and analogy to the results of natural language processing. J. William Murdock is a member of the DeepQA research team in IBM's Watson Research Center. He has been working on the IBM Jeopardy! challenge since the initial feasibility study for the project in 2006. He developed many of the DeepQA components used in the Watson question answering system, particularly in the areas of typing answers and evaluating evidence from passages. In 2001, he received a Ph.D. in Computer Science from Georgia Tech. He worked as a post-doc with David Aha at the United States Naval Research Laboratory. His research interests include natural-language semantics, analogical reasoning, knowledge-based planning, machine learning, and self-aware artificial intelligence.

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## MATHEMATICS AND COMPUTER SCIENCE EMORY UNIVERSITY