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Ning Zhong* (Ning.Zhong@uc.edu), Department of Mathematical Sciences, University of Cincinnati, 816 Old Chemistry Building, Cincinnati, OH 45221-0025. *Computability and Complexity of Computable Cauchy Problems.*

In this talk, we discuss computability, non-computability, and complexity aspects of solutions, life spans, blowup times, and limiting behaviors of computable Cauchy problems for differential equations. We will present a sample of results and give some idea of the motivation and general philosophy underlying these results. (Received September 14, 2010)