1145-03-484 **Douglas Cenzer*** (cenzer@ufl.edu), Department of Mathematics, University of Florida, Gainesville, FL 32611-8105. *Computability and complexity in structure theory: the work of Jeffrey B. Remmel.*

Jeff Remmel played a leading role in the application of computability and complexity to structure theory as well as other areas such as algebra and combinatorics. Here one major theme is to compare and contrast computable structures with structures which are computable at some subrecursive complexity, often polynomial time. The existence question is to classify the computable structures which are isomorphic to polynomial time structures. The uniqueness question is to determine the complexity-theoretic categoricity of a structure, that is, to see whether two isomorphic polynomial time structures of a certain type have, say, an exponential time isomorphism. Another theme is to explore the properties of polynomial time structures, for example, to look at the complexity of a vector space versus the complexity of a basis for the space. This talk will review some of the highlights of Remmel's work, including some recent work on automatic structures. (Received September 07, 2018)