Abstract:

In this talk I present an extension of Burgin’s approach that generalizes Kolmogorov Complexity. I prove that only four axioms and some additional properties of the encoding are sufficient to prove most of the results in algorithmic information theory, including universality, randomness, and topological properties. Moreover, we can also include the complexity defined for languages into this theory, thus state complexity for regular languages becomes a particular case of an Encoded Blum Static Complexity (EBSC) space.

Short Bio:

Professor Cezar Campeanu [http://www.csit.upei.ca/~ccampeanu] graduated in 1988, has got a PhD at the University of Bucharest, February, 1995, supervised by Prof. Cristian Calude. He held Postdoc positions at the University of Western Ontario, Canada, 1997-1998, and at Queen’s University, Canada, 2001. Between 1991 and 2001, he taught at the university of Bucharest. Starting with 2001, he is teaching at the University of Prince Edward Island, Prince Edward Island, Canada. His area of research and expertise is theory of computing: Automata and Formal Languages (State complexity; Minimization Algorithms; Cover Automata) and Algorithmic Information Theory (Kolmogorov type Complexity).