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Michael Burr and **Christian Wolf*** (cwolf@ccny.cuny.edu), 160 Convent Ave, New York, NY 10031. *Computability at temperature zero.*

In this talk we discuss the computability of certain thermodynamic invariants at zero temperature for one-dimensional subshifts of finite type. In particular, we show that the residual entropy (i.e., the joint ground state entropy) is an upper semi-computable function on the space of continuous potentials, but it is not computable. Next, we consider locally constant potentials for which the zero-temperature measure is known to exist. We characterize the computability of the zero-temperature measure and its entropy for potentials that are constant on cylinders of a given length k . In particular, we show the existence of an open and dense set of locally constant potentials for which the zero-temperature measure can be computationally identified as an elementary periodic point measure. Finally, we show that our methods do not generalize to treat the case when k is not given. (Received August 24, 2018)