1131-37-59 **Christian Wolf*** (`cwolf@ccny.cuny.edu`), New York, NY 10031. *On the computability of rotation sets and their entropies.*

Given a continuous dynamical system $f : X \to X$ on a compact metric space X and an m-dimensional continuous potential $\Phi : X \to R^m$, the (generalized) rotation set $R(\Phi)$ is defined as the set of all μ-integrals of Φ, where μ runs over all invariant probability measures. Analogous to the classical topological entropy, one can associate the localized entropy $H(w)$ to each $w \in R(\Phi)$. In this talk, we discuss the computability of rotation sets and localized entropy functions by deriving conditions that imply their computability. We then apply our results to study to the case of subshifts of finite type. We prove that $R(\Phi)$ is computable and that $H(w)$ is computable in the interior of the rotation set. Finally, we discuss an explicit example that shows that, in general, H is not continuous on the boundary of the rotation set, when considered as a function of Φ and w. This suggests that, in general, H is not computable at the boundary of rotation sets. This is a joint work with Michael Burr and Martin Schmoll. (Received June 29, 2017)