

**Meeting:** 1001, Evanston, Illinois, SS 8A, Special Session on Computability Theory and Applications

1001-03-185      **Anil Nerode\*** ([anerode1@twcny.rr.com](mailto:anerode1@twcny.rr.com)), 545 Malott Hall, Cornell University, Ithaca, NY  
14850. *What is computability for physical systems?* Preliminary report.

We discuss some of the issues in formalizing computability in models of physical systems, considering that there are always unmodelled dynamics and inexact representations of initial and boundary conditions and coefficients for the differential equations describing such systems. We are motivated by our work in hybrid systems and near optimal control. (Received August 24, 2004)