

1065-70-78

Dmitry V Zenkov* (dvzenkov@ncsu.edu), Department of Mathematics, North Carolina State University, Raleigh, NC 27695-8205, and **Cameron Lynch**. *Structurally Stable Nonholonomic Integrators*.

When simulating mechanical systems numerically, it may be desirable to preserve some of the system's intrinsic structures. For instance, in the absence of velocity constraints, it is desirable to preserve a symplectic form. Integrators that preserve suitable quantities in the presence of velocity constraints will be introduced. (Received August 31, 2010)