962-00-624   **Craig J Calcaterra*** (`craig.calcaterra@metrostate.edu`), 700 East Seventh Street, Mathematics Department, Saint Paul, MN 55106. *Acceleration on a Metric Space.* Preliminary report.

Second order arc fields describing acceleration on a metric space are introduced as generalizations of second order vector fields on a manifold. This work extends the theories of arc fields, mutational analysis, and quasi-differential equations. (Received September 17, 2000)