1025-49-85   **Michael McAsey*** (`mcasey@bradley.edu`), Department of Mathematics, Bradley University, Peoria, IL 61625, and **Libin Mou** (`mou@bradley.edu`), Department of Mathematics, Bradley University, Peoria, IL 61625. *Sequential Strict Derivatives on Metric Spaces.* Preliminary report.

Recently we used the notion of a derivative of a function defined on a metric space in a proof of the Maximum Principle for an optimal control problem with general constraints. In this talk we will explore some properties of this "sequential strict derivative." In addition to a few concrete calculations, we indicate a some elementary properties. Finally we outline the calculation needed in the proof of the Maximum Principle. (Received January 16, 2007)