Abstract for an Invited Paper for the APR09 Meeting of The American Physical Society

## Silicon detectors and their impact on hadron collider physics DANIELA BORTOLETTO, Purdue University

Silicon detectors are playing a critical role in extracting physics from the complex collisions at hadron colliders. They have been essential for the discovery of the top quark, searches for the standard model Higgs, and the determination of  $B_s$  mixing. I will present examples of the physics reach provided by the precision tracking and vertexing allowed by silicon detectors. I will also discuss the challenges presented by the construction of large silicon trackers for the Tevatron and LHC and the importance of pixel detectors for the LHC experiments.