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**Stephen D Szydlik\*** (szydliks@uwosh.edu), Mathematics Department, University of Wisconsin-Oshkosh, 800 Algoma Blvd., Oshkosh, WI 54901-8631. *Non-Euclidean Constructions using Geometer's Sketchpad.*

Models of hyperbolic geometry such as the Poincaré and Beltrami-Klein models provide us with concrete examples of domains in which Euclid's fifth postulate does not hold, and serve as laboratories for testing theorems and conjectures in hyperbolic geometry. Without these models, it is extremely difficult for students to actually visualize non-Euclidean concepts. Alexander and Finzer have written *Geometer's Sketchpad* scripts that automate typical constructions in the Poincaré disk model while Peil and Bennet have developed some similar scripts for the Poincaré half-plane model. These include constructions which bisect segments and angles, and construct lines, circles and perpendiculars. Recently, I have written corresponding scripts for the Beltrami-Klein model. These scripts afford students the opportunity to experiment in the model, test conjectures about hyperbolic geometry, and develop general arguments in non-Euclidean geometry. In this session, I will demonstrate my scripts and discuss classroom activities for the scripts which promote a deeper understanding of the fundamental concepts of hyperbolic geometry. (Received September 14, 2000)