1003-97-520 **Daina Taimina*** (`dt34@cornell.edu`), Department of Mathematics, Malott Hall, Cornell University, Ithaca, NY 14853. *Experiencing and Learning Hyperbolic Geometry from Crocheted Models.*

First of non-Euclidean geometries - spherical geometry has an advantage that all of us are very familiar with the sphere since very early age. There are natural approximate hyperbolic shapes around us - like some lettuce leaves, wood ear mushrooms, some sea weeds, but we see them not as often as spherical objects. Therefore starting to teach hyperbolic geometry in the classroom we do not have this sense of familiarity with the object as in the case of sphere. How can we help students to feel more familiar with a hyperbolic plane? Using crocheted hyperbolic planes is an effective way to get familiar with properties of a hyperbolic plane and to learn mathematics from it. It has been proved that crocheted hyperbolic plane is an isometric model of a hyperbolic plane. I will discuss ways of using crocheted models in the classroom and will share experience how mathematics of a hyperbolic plane can be discovered while playing with them: what does "straight" on hyperbolic plane means? What is the largest triangle you can construct on the hyperbolic plane? What is an area of this triangle? These questions are also discussed in textbook: Henderson, Taimina, "Experiencing Geometry: Euclidean and Non-Euclidean with History", 3rd ed., Pearson Prentice Hall, 2005. (Received September 19, 2004)