1100-30-179   **Pritha Chakraborty*** (`pritha.chakraborty@ttu.edu`), Texas Tech University, Department of Mathematics & Statistics, Broadway and Boston, Lubbock, TX 79409. *Growth of hyperbolic cells.* Preliminary report.

A hyperbolic cell is a hyperbolic polygon in the disk model with all its vertices on the unit circle. In 1991, Joseph Hersch considered a growth process of such polygons when each n-gon generates an $n(n-1)$-gon by reflecting itself across all of its sides. J. Hersch conjectured that the minimal growth of the conformal radius under this process occurs when a polygon is regular. This conjecture was confirmed by A. Solynin. In connection with this work, A. Solynin raised a question on the growth/decay of other characteristics of hyperbolic cells under this process. In particular, he conjectured that the growth of the Euclidean area will be minimal for the regular n-gons and also posed a more general Majorization problem for the Hersch process of growth of hyperbolic cells.

In this talk, we will discuss our preliminary results toward solution of these Solynin's conjectures. (Received February 07, 2014)