



## Project 2: Hyperbolic Tessellations

Hyperbolic tessellations like the one above appear in Escher's art such as his famous Circle Limit prints. Discuss how this is done using a group of Möbius transformations.

A *Mathematica* notebook on this can be found at

<http://mathworld.wolfram.com/PoincareHyperbolicDisk.html>

while a nice introduction with some pictures can be found in the following paper of Douglas Dunham

<http://www.d.umn.edu/~ddunham/dunisam07.pdf>

See if you can understand Dunham's paper and the *Mathematica* notebook. For bonus points, see if you can improve the *Mathematica* code or use it to make nicer pictures more like those in Dunham's paper.