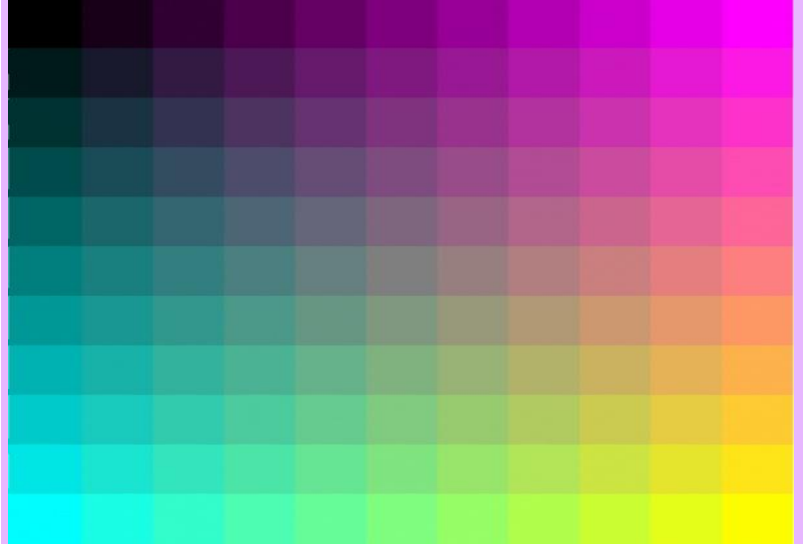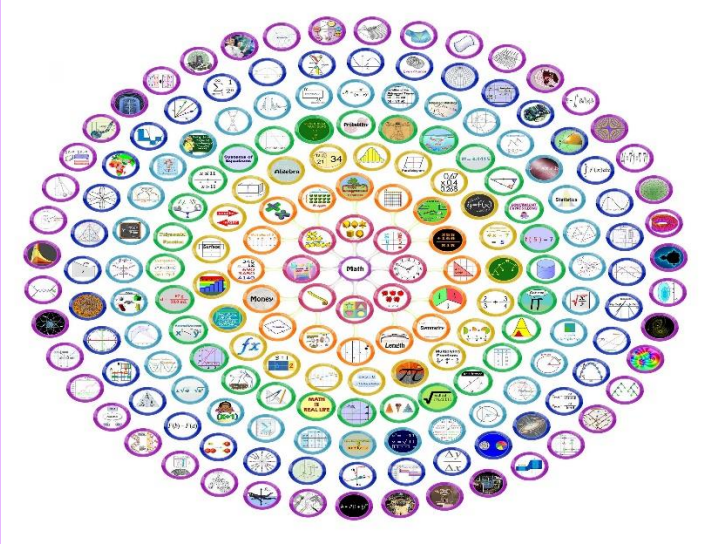# COLLOQUIUM

2-15-24

Jurek Kocik, SIUC

School of Mathematical & Statistical Sciences Southern Illinois University

Place: Neckers 156

Time: 3:00pm

Reception immediately following in the Math Library.

Title: Metamorphic Life of Circles; Unexpected Connections

Abstract: In mathematical physics, spinors bring insight into the inner structure of matter. Quite similarly, the spinors of (2+1)-dimensional Minkowski space provide a fresh look at Apollonian disk packings and provide novel results including a parametrization of the integral packings, a fractal visualization of the Apollonian depth function, an alternative derivation of the Descartes' configuration, and more. On the other hand, Apollonian disk packing may be interpreted as a "space-time crystal". These two seemingly different representations meet strikingly.