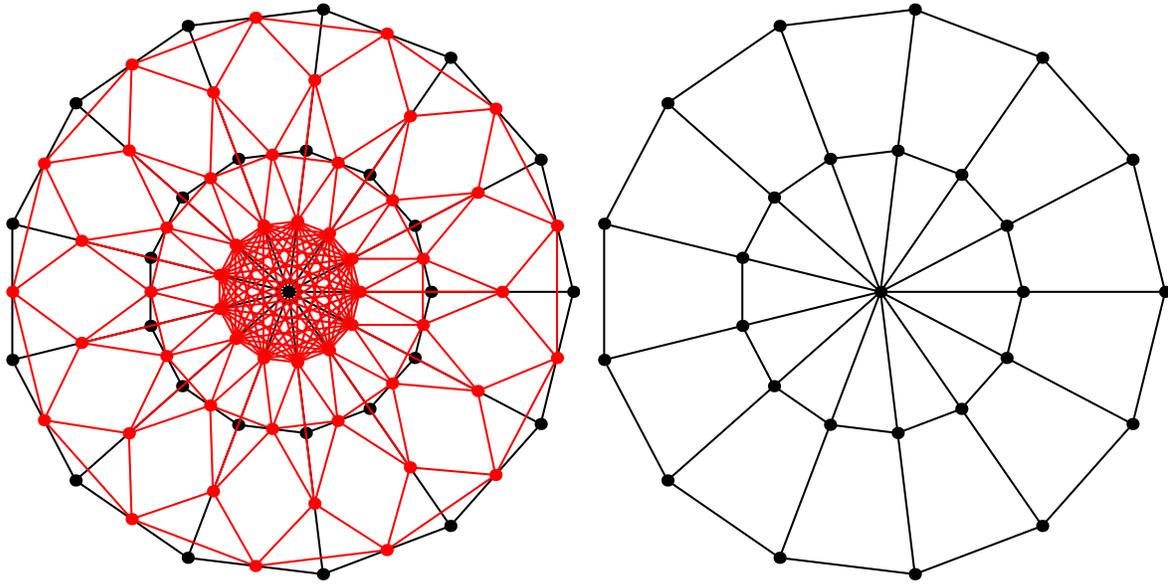# Network Inverse Problems

Description: Networks can be used to model many physical phenomena such as electricity conduction and vibrations of an elastic body. We focus on the inverse problem, i.e. the question: Can one recover properties of the network from measurements made at a few nodes? A classic example is to recover the position and weight of beads in a vibrating string from measuring how the string responds to being plucked at one end. This class explores connections between physics, graph theory, partial differential equations, linear algebra and stochastic processes. Applications include medical imaging and geophysical prospecting.

Stipend: $500.

Prerequisites: Permission of the instructor. Linear Algebra is a must. Programming, PDEs and/or Foundations of Analysis I are highly desirable.

When & Where: Tue and Thu, 9:10-10:30am, JTB 110 (3 credits).

Instructor: Fernando Guevara Vasquez (`fguevara@math.utah.edu`)

For more info: `http://www.math.utah.edu/~fguevara/math4800_s16`

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