

Swarthmore College

# Math/Stat Colloquium



## **Hormuzd Katki**

Biostatistics Branch

National Cancer Institute

The role of statisticians and  
quantitative thinking in cancer  
prevention and screening

Although prevention and screening prevent more cancer deaths than treatments, controversies abound about what screening guidelines ought to be. I present screening as a stochastic process parameterized by latent quantities that are usually difficult to directly observe, which is the source of common misunderstandings about screening by non-quantitative researchers. The future of screening will use statistical and AI prediction models that are integrated into a patient's Electronic Health Record to identify who should be screened, what test they should select, when they should return for the next visit, and when they should exit lifetime screening. I present examples from my career that progress towards this future, and highlight opportunities for further research and clinical implementation.

**Tuesday, March 26**

**4:15pm, Refreshments**

**4:30-5:30pm, Lecture**

**Science Center 199**

**Cunniff Hall**