Screening for diseases is an important, and extensively used, public health tool; early detection can improve clinical outcomes and/or reduce the spread of infectious diseases, especially for diseases that have slow to develop and/or initially non-specific symptoms (e.g., AIDS, Zika, hepatitis). A major challenge in public health screening is to design screening policies that are capable of accurately classifying subjects in a large population with limited resources and imperfect tests. In this talk, I will present a brief overview of this fascinating research area, discuss several key models that optimize the resource allocation decision in public health screening, and highlight the challenges and opportunities.

BIO:

Dr. Bish is an Associate Professor in the Grado Department of Industrial and Systems Engineering and is also on the faculty of Health Sciences at Virginia Tech. She received her PhD from Northwestern University, and her MS and BS degrees from Bogazici University in Turkey. Her research interests focus on public health policy and health implementation science. Dr. Bish’s research activities have been recognized by the INFORMS Pierskalla Award for the Best Paper in Healthcare, INFORMS JFIG Best Paper Award, among others; and two of her PhD students are the most recent recipients of the INFORMS Bonder Scholarship in Applied Operations Research in Health Services, in 2015 and 2016.