[https://www.rotman.utoronto.ca/FacultyAndResearch/AcademicAreas/Seminars#opr](https://www.rotman.utoronto.ca/FacultyAndResearch/AcademicAreas/Seminars%22%20%5Cl%20%22opr)

|  |
| --- |
| Operations Management and Statistics**In-person** **Seminar LL 1025**& Hybrid online via MS Teams\*Fri., Apr. 12**,** 2024 @ **2:00 pm** EST |
| Public Health Screening, with Focus on Newborn ScreeningDr. Ebru Bish, Professor of Operations Management, Department of Information Systems, Statistics, and Management Science, Culverhouse College of Business*All students and faculty welcome.* ***\*Held in LL 1025 -*** *Hybrid portion hosted in* ***MS Teams*** *–* [*Click here to join the meeting*](https://teams.microsoft.com/l/meetup-join/19%3A9e1bc373e7134fd38f6c04608201b7de%40thread.tacv2/1699300803819?context=%7b%22Tid%22%3a%2278aac226-2f03-4b4d-9037-b46d56c55210%22%2c%22Oid%22%3a%227a3454cf-31a5-4115-a675-2a342cd1bcd8%22%7d)***.*** |

**Abstract |** Screening for genetic disorders and infectious diseases is an important, and extensively used, public health tool. Early detection can improve clinical outcomes, and is especially beneficial for diseases that have slow to develop and/or initially non-specific symptoms. A major challenge is to design public health screening policies that can classify large populations of subjects, potentially with different risk factors, in an accurate and equitable manner with limited resources and imperfect tests. While my talk will draw upon the body of research that my collaborators and I have conducted over the years in a variety of screening contexts, I will specifically focus on newborn screening for genetic disorders. I will present an overview of this research area, discuss open research questions, provide several key models to optimize resource allocation in newborn screening, and highlight the challenges and opportunities.

Related papers: [Main paper](http://www-2.rotman.utoronto.ca/userfiles/brownbags/operations/files/Bish%2C%20MS%2C%20genetic%20testing%20with%20Appendix.pdf). [Paper2](http://www-2.rotman.utoronto.ca/userfiles/brownbags/operations/files/Bish%2C%20MSOM2023-disease-bundling-or-specimen-bundling-cost-and-capacity-efficient-strategies-for-multidisease-testing.pdf).

**Bio |** I am a professor of operations management at the University of Alabama’s Culverhouse College of Business; previously I was a faculty member at Virginia Tech’s Department of Industrial and Systems Engineering. My research interests fall in the areas of data science and optimization, with focus on public health policy and healthcare systems management and optimization. My research has been published in leading operations research, biostatistics, and medical journals; recognized by various best paper awards from INFORMS and IISE; and supported by multiple grants from the National Science Foundation and the Agency for Healthcare Research and Quality. I have extensively collaborated with industry partners, with recent partners including the New York State Laboratory of Public Health, North Carolina State. Laboratory of Public Health, the American Red Cross, and the Carilion Clinic. I have graduated fourteen PhD students, many of whom hold academic positions; and I have served as the 2019 President of the INFORMS Health Applications Society.

**Note:***OM&S PhD students are reminded to stay in attendance for the full duration of the seminar.*

|  |
| --- |
|  |

Katherine Hardie | Area Administrator, Operations Management and Statistics| Rotman School of Management | University of Toronto
Tel: 416-978-4228 | Email: katherine.hardie@rotman.utoronto.ca [**SEMINARS** list for OM&S @ Rotman](http://www.rotman.utoronto.ca/FacultyAndResearch/AcademicAreas/OperationsManagement/Seminars1)