

# Department of Industrial Engineering

## Spring 2021 Seminar Series

Friday, February 26<sup>th</sup> 1:25-2:15pm EST via Zoom

Open to the public

Please contact Dr. Emily Tucker (etucke3@clemson.edu) for log-in information

**Speaker:** Dr. Retsef Levi

**Affiliation:** MIT Sloan School of Management

**Title:** Food and Agriculture Supply Chain Analytics & Sensing:  
Managing Risks on Human Health

**Abstract:**

Food and agriculture supply chains are essential to any society and economy, but at the same time pose significant risks to human health. In this talk, we will discuss how supply chain analytics and sensing, machine learning and modeling can inform regulatory policies and resource allocation to address and manage food adulteration and safety risks as well as zoonotic disease risks. Much of the talk will focus on a major multidisciplinary research effort to study risks related to economically motivated adulteration (EMA) of food in China, particularly ones originated from the upstream parts of the corresponding supply chains. The talk is based on work done under a new collaborative project funded by the Walmart Foundation as well as work under a contract with the US FDA. It is joint work with multiple faculty and students at MIT and in Chinese universities.



**Bio:** Retsef Levi is the J. Spencer Standish (1945) Professor of Operations Management at the MIT Sloan School of Management. He is a member of the Operations Management Group at MIT Sloan and affiliated with the MIT Operations Research Center. Levi also serves as the Faculty Co-Director of the MIT Leaders for Global Operations (LGO). Before coming to MIT, he spent a year in the Department of Mathematical Sciences at the IBM T.J. Watson Research Center as the holder of the Goldstone Postdoctoral Fellowship. He received a Bachelor's degree in Mathematics from Tel-Aviv University (Israel) in 2001, and a PhD in Operations Research from Cornell University in 2005. Levi spent almost 12 years in the Israeli Defense Forces as an officer in the Intelligence Wing and was designated as an Extra Merit Officer. After leaving the Military, Levi joined an emerging new Israeli hi-tech company as a Business Development Consultant. Levi's current research is focused on the design of analytical data-driven decision support models and tools addressing complex business and system design decisions under uncertainty in areas such as health and healthcare management, supply chain, procurement and inventory management, revenue management, pricing optimization and logistics. Levi has been leading several industry-based collaborative research efforts with some of the major academic hospitals in the Boston area and across the U.S.. Levi was the PI on an MIT contract with the Federal Drug Administration (FDA) to develop systematic risk management approach to address risk related to economically motivated adulterations of food manufactured in global supply chains. With a multi-million award from the Walmart Foundation, Levi currently leads a multi-year U.S.-China collaborative effort to develop new predictive risk analytics tools and testing technologies and platforms to address core food safety challenges in China. Levi has also been involved in developing operational risk and process safety management methodologies for various organizations in the healthcare, pharmaceutical and oil industries. Levi received the NSF Faculty Early Career Development award, the 2008 INFORMS Optimization Prize for Young Researchers, the 2013 Daniel H. Wagner Prize and the 2016 Harold W. Kuhn Award.