Retailing is a big industry. In the U.S., retail business represents forty percent of the economy and is the largest employer. Retail supply chain management is still more art than science, but this is changing rapidly as retailers begin to apply analytic models to the huge volume of data they are collecting on consumer purchases and preferences. This industry-wide movement resembles the transformation of Wall Street that occurred in the 1970’s when physicists and other ‘rocket scientists’ applied their analysis skills to investment decisions. The rocket science retailing movement will create enormous opportunities for management scientists. To better understand these opportunities, Ananth Raman and I have been working with 32 leading retailers to assess their progress towards rocket science retailing and to accelerate that progress through selected research projects with the retailers. In this talk, I will describe findings from this work including discussion of how retail supply chains function, what decisions arise in retail supply chain management that lend themselves to analysis, a synopsis of prior research on selected topics including managing short life cycle products to manage life cycle profits, merchandise testing and store level assortment planning, as well as other exciting future research frontiers.

Marshall L. Fisher is the UPS Professor of Operations and Information Management at the Wharton School of the University of Pennsylvania and co-director of the Fishman-Davidson Center for Service and Operations Management. He earned an SB in electrical engineering and an MBA and PhD in operations research from MIT. After teaching assignments at the University of Chicago and Cornell University, Dr. Fisher joined the faculty of the Wharton School in 1975. His pioneering research in logistics and supply chain coordination has been implemented by many companies and recognized by numerous awards including the Lanchester Prize and the Edelman Prize. Dr. Fisher is a member of the National Academy of Engineering and an INFORMS Fellow. He has been a consultant to many Fortune 500 companies, including Ahold, Air Products and Chemicals, BMG, Campbell Soup, Dupont, Exxon, Frito Lay, General Motors, IBM, Matel, Nokia, Scott Paper and Spiegel, Inc. Dr. Fisher is a founder and Chairman of 4R Systems, Inc., a company that provides supply chain planning software to retailers of short lifecycle products.