

Friday Plenary Session

May 8, 2015, 11:40 AM – 12:30 PM; Venue: Columbia 5-8

Sridhar Tayur, Tepper School of Business, Carnegie Mellon University

Abstract Title: Why I am an Academic Capitalist

Abstract: What is the philosophical basis of your economic beliefs and so your academic research? Following Schumpeter, is it to support “disruptive innovation” in capitalism through startups? If so, how to do it effectively? (Hint: Software entrepreneurship.) Can we additionally satisfy Rawls’ vision of a just society where the economically disadvantaged have fair access? (Yes! Through social entrepreneurship). How can we use our specialized competence and intellectual capacity to write high-quality, mathematically sophisticated papers to create prosperity in society, save lives in an equitable manner while having fun (and making money) doing it? Scientific Entrepreneurship has been an enormously satisfying vocation for over a century in many areas of intellectual pursuit. Why not do it in POM? I want to take the occasion of this plenary lecture to discuss my main preoccupation for the last 25 years: how to choose our research topics, and how best to “bring to market” our academic research to make an impact — leave a lasting imprint if we can — on practice, commercial and social. Using SmartOps (my software company that provides enterprise inventory optimization (EIO) for Fortune 500/Global 2000 companies, acquired by SAP) and OrganJet (my social enterprise that provides fair access to organ transplantation) as primary examples, I will discuss a repeatable four-step process — problem identification, partner choice, selecting the appropriate value creating mechanism, executing “management mechanics” for staged implementation — that can operationalize a philosophy of a scientific life in pursuit of making our society better.



Time permitting, I will also discuss additional examples from the “sharing economy” (private jets via Flight Options, designer clothes through Rent-the-Runway), dynamic ads in multi-player video games (Massive Incorporated, acquired by Microsoft), lean operations and private equity to fend off state-capitalism from China (using a wind energy portfolio firm as an example), use of machine learning (in OmniChannel retailing, through a startup, a co-investment with Bain) and pharmaco-genomics (clinical study on optimized Warfarin dosage) among others. The opportunities are infinite, and Universities— and POM research professors with an eye towards practice— are well positioned to continue to make significant contributions to society.

Sridhar Tayur Biography:

Sridhar Tayur is the Ford Distinguished Research Chair and Professor of Operations Management at Carnegie Mellon University's Tepper School of Business. He has held visiting positions at MIT and Cornell. He received his Ph.D. in Operations Research and Industrial Engineering from Cornell University and his undergraduate degree in Mechanical Engineering from the Indian Institute of Technology at Madras.

He is the founder of the software company Smart Ops Corporation (2000-) [acquired by SAPAG in 2013] and served as its CEO for 12 years, as well as the founder of a hybrid social enterprise, Organ Jet Corporation (2011-) and Guardian Wings (2012-). Smart Ops is the subject of a Darden Case Study (2011), now distributed by Harvard, while the "contract hybrid"- Organ Jet and Guardian Wings –the first of its kind, is a subject of a Harvard Business School Case Study (2013).

He has published many scholarly publications (in *Operations Research, Management Science, Mathematics of Operations Research, Mathematical Programming, Stochastic Models, Queuing Systems, Transportation Science, IIE Transactions, NRLQ, Journal of Algorithms and MSOM Journal*), is Co-editor of the widely referenced book, *Quantitative Models for Supply Chain Management*, and has served on the editorial boards of *Operations Research, Journal of Optimization and Engineering, NRLQ, MSOM Journal* and *Management Science*. Dr.Tayur also served as President of Manufacturing and Services Operations Management (MSOM) Society. He has been a finalist for the Lanchester Prize as well as the Edelman Prize.

His work in health care won the 2012 Best paper Award by POMS. He has won the Undergraduate teaching Award, the George Leland Bach teaching award given by MBA students, the INFORMS Teaching Case award, and has been named as a 'Top Professor' by Business Week. His PhD students have won many awards (including the Nicholson prize, Dantzig Prize and NSF CAREER awards) and are placed at top academic departments as well as on Wall Street. He was named INFORMS Fellow in 2012.

Over the past 25 years, he has also been a sought-after supply chain consultant and has helped implement manufacturing and supply chain optimization systems for Caterpillar, Deere and General Electric, as well as implement solutions in other areas such as Fractional Jet scheduling (for Flight Options) and Advertisements in Internet games (for Microsoft). He has consulted (and done executive education) for McKinsey&Company, Cisco and Schibsted. His industrial work has been reported in business periodicals, including an article in FORTUNE concerning his work at Caterpillar, titled "New Victories in the Supply Chain Revolution".

He has been recognized for his entrepreneurship through an Ernst&Young finalist award as well as by the Carnegie Science Center award for Innovation in Information Technology. He

served on the board of CCG Inc., a private equity group, was on the advisory board for the Polaris Project (combating Human Trafficking) and is the founder of RAGS Charitable Foundation (that supports independent films through Silk Screen Festival and BITAHR, child health and education through Plan International and Children International, and early stage medical/ science research with projects on War far in dosage (Pharmacogenetics) and combating rare neurological diseases using RNAi.

His work on Organ Transplantation has been covered by several media outlets, including The New England Journal of Medicine, The Guardian, CBS News (Boston), CBS News (Denver) as well as in an article profiling him in The Atlantic, and has attracted the attention of several luminaries including Nobel winner Alvin Roth who has highlighted Organ Jet several times on his Market Designer blog.

He has been a key note speaker at INFORMS and MSOM, has been a commencement speaker at South Park High School and CMU-Heinz school, and has given the Marschak Lecture (UCLA) and Bangs Lecture (Cornell).