DEMING FORUM

DISRUPTIVE INNOVATION: CHALLENGES AND OPPORTUNITIES

TUESDAY, MAY 2, 2017

SCHEDULE

Deming Forum May 2, 2017 *Columbia Business School* *Uris Hall, Room 142*				
8:30-8:50	*Breakfast*			
8:50-9:00	Nelson Fraiman David Niles	Columbia Business School G100 Companies	Welcome Remarks	
9:00-10:00	Hod Lipson	Columbia Engineering	*The Six Waves of Artificial Intelligence*	
10:00-11:00	Mohammad Ehteshami	GE	*Accelerating the Additive Revolution*	
11:00-11:15	*Break*			
11:15-12:15	Brent James Ellen Kullman	Intermountain Healthcare Formerly of DuPont	*Disruption in the Healthcare and Chemical Industries* Deming Cup Winners Panel	Moderator: Paul Glasserman
12:15-1:30	*Lunch: Bernheim & Schwartz, 2911 Broadway between 113th and 114th Streets*			
1:45-2:45	Mauro Fenzi	Comau	*How Robotics Can Make Personalized Production Easier*	
2:45-3:00	*Break*			
3:00-4:15	Shahram Ebadollahi Sam Sia Nina Tandon	IBM Watson Columbia Engineering EpiBone	*Disruption in Healthcare* Panel Discussion	Moderator: Carri Chan
4:15-5:15	Nelson Fraiman Medini Singh	Columbia Business School	*Lessons Learned: Applications and Ramifications*	

SPEAKERS

Carri Chan

Sidney Taurel Associate Professor of Business in the Decision, Risk and Operations Division at Columbia Business School. Her research interests are in data-driven modeling and analysis of service systems with an emphasis on healthcare operations management. Her current focus is on combining empirical and stochastic modeling approaches to develop evidence-based approaches to improving patient flow through hospitals. She is the recipient of a 2014 NSF CAREER award, an NSF/AHRQ grant and the 2016 POMS Wickham Skinner Early-Career award. She received her BS from MIT in 2004 and MS and PhD from Stanford University in 2006 and 2010.

Shahram Ebadollahi

Vice President of Innovations (R&D) and Chief Science Officer of IBM Watson Health. He is the technical founder of Watson Health, IBM's first vertical industry business unit, building on his previous role as the global head and founder of Health Informatics Research for IBM. He oversees all product engineering, innovation incubation, and intellectual property for Watson Health. In his capacity as the Chief Science and Technology Officer, he determines the overall technical and scientific strategy for Watson Health and IBM as a whole in the area of healthcare and life sciences.

Prior to his current role, Dr. Ebadollahi was the global head and founder of Health Informatics Research for IBM, which spanned IBM's global research labs in Asia, Europe, Africa and the US. He has pioneered novel technologies in the area of health analytics and computational health, has published many scientific publications, and has led scientific projects funded by national agencies.

Mohammad Ehteshami

Vice President and General Manager, GE Additive (a startup), a division of GE Aviation. Most recently, he served as Vice President & General Manager of Engineering for GE Aviation, where he led a team of more than 8,000 engineers to design, procure, test and certify commercial and military aircraft engines.

Ehteshami has more than 33 years of experience in Engineering, Manufacturing and program/product management with GE. His career spans across GE Aviation, GE Oil and Gas and now GE Additive. He began his career with GE Aviation as a design engineer in military engines, in particular the engines that power F16 and B1 bomber planes. Then, he moved to commercial engines, where he designed and managed the CFM56 and GE90.

Ehteshami is an avid supporter of advancing the transition from STEM (Science, Technology, Engineering and Math) to STEAM (Science, Technology, Engineering, Additive and Math). Under his leadership, GE will invest $10 million over the next five years in educational programs to develop pipelines of future talent in additive manufacturing.

Mauro Fenzi

Chief Executive Officer of Comau S.p.A. In addition to having global profit and loss responsibility for an annual turnover of €1.8 B generated by 4 primary divisions in 20 different locations, he is part of the FCA Global Product Committee. He joined Comau – FCA Group – in 2001 and held multiple executive management positions before accepting the role of CEO in 2014.

From 2001 to 2007, he was responsible for Project Management at global level, first with the Painting Systems division followed by Powertrain Systems. He then became the Vice President of Corporate Project Management, spearheading the creation and launch of Comau's Project Management Office. He also launched the Aerospace Business Unit, where he held the role of COO until becoming the General Director and Head of the Body Welding Systems Division in 2010.

Fenzi has also authored multiple books, including *Project and People Management – an Operational Guide: Comau's Experience in the World*.

Nelson Fraiman

Professor of Professional Practice at Columbia Business School; Faculty Director of the W. Edwards Deming Center. Following a 17-year career at International Paper Company, Fraiman joined Columbia Business School in 1995 as a professor in the Decision, Risk, and Operations division. As the director of the Deming Center, he has steered the center's programs to connect theory with practice in the area of operations. His research explores institutionalizing quality improvement, specializing in the retailing, consulting, and process industries.

Fraiman is the faculty director of Entrepreneurship and Competitiveness in Latin America (ECLA), a program designed for Latin American entrepreneurs who aim to be successful across borders. In addition, he has conducted executive education programs in Asia, Europe, Latin America, the Middle East, and the US. He received all his degrees—BS in industrial engineering, MS, MBA, and PhD—from Columbia University.

Paul Glasserman

Jack R. Anderson Professor of Business at Columbia Business School. Professor Glasserman's research and teaching address risk management, derivative securities, Monte Carlo simulation, statistics and operations. Prior to joining Columbia, Glasserman was with Bell Laboratories; he has also held visiting positions at Princeton University, NYU, and the Federal Reserve Bank of New York. In 2011-2012, he was on leave from Columbia and working at the Office of Financial Research in the U.S. Treasury Department, where he continues to serve as a part-time consultant.

Glasserman was senior vice dean of Columbia Business School in 2004-2008 and served as interim director of the Sanford C. Bernstein & Co. Center for Leadership and Ethics in 2005-2007. He currently serves as research director of the Program for Financial Studies.

Glasserman serves on the editorial boards of Finance & Stochastics, Mathematical Finance, the Journal of Derivatives, and Stochastic Systems.

Brent James

Chief Quality Officer at Intermountain Healthcare and Executive Director of the Institute for Health Care Delivery Research. Dr. James is internationally known for his work in clinical quality improvement, patient safety, and the infrastructure that underlies successful improvement efforts, such as culture change, data systems, payment methods, and management roles.

Intermountain Healthcare is an integrated system of 23 hospitals, 160 clinics, an 850+ member physician group, and an HMO/PPO insurance plan jointly responsible for more than 500,000 covered lives serving patients in Utah, Idaho and at a tertiary level, seven surrounding states. Through the Advanced Training Program in Clinical Practice Improvement (ATP), he has trained nearly 5000 senior physician, nursing and administrative leaders drawn from around the world, in clinical management methods with proven improvement results.

Ellen Kullman

Retired Chair of the Board and CEO of DuPont. She began her 27-year career at DuPont in 1988. Prior to joining DuPont, she worked for Westinghouse and General Electric. Kullman was named CEO at the beginning of 2009 and board chair late that year. As a business leader, she led double-digit growth of the company's Safety & Protection business portfolio, started-up two successful high-growth businesses known today as DuPont Industrial Biosciences and DuPont Sustainable Solutions. During her seven years as CEO, Kullman led the company's focus on growth in emerging international markets and championed the power of DuPont science and global market knowledge to transform industries. She decisively positioned the company for its next generation of growth, executing a strong plan that is delivering results today while positioning DuPont for future growth.

Hod Lipson

Professor of Mechanical Engineering and Data Science at Columbia University in New York, and a co-author of the award winning book "Fabricated: The New World of 3D Printing", and "Driverless: Intelligent Cars and the Road Ahead." His broad spectrum of research projects focus on the two "grand challenges" of engineering: (a) Can we design machines that can design other machines, and (b) Can we make machines that can make other machines? Both of these questions lie at the crux of understanding the engineering process itself, and progress on these fronts can offer huge leverage in our ability to design, make and maintain increasingly complex systems in the future.

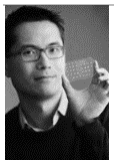
Lipson's work on self-aware and self-replicating robots challenges conventional views of robotics. He has also pioneered many aspects of 3D Printing, including bio-printing, electronics printing, and food printing, as well as launching the first open-source printer in the US, the Fab@Home in 2005.

David Niles

President of SSA & Company and G100 Companies. He currently sits on the board of Leading Edge Aviation, a portfolio company of Vance Street Capital, and is an investor in private companies and venture capital funds. He is also Chairman of the board of the Deming Center at Columbia Business School and is a member of the Gotham Chapter of YPO.

David has extensive experience in building businesses, as a strategic advisor, private equity investor, and operating executive. Previous to SSA, David was a Partner at Castling Group, a management consulting firm and private equity fund with offices in New York, San Francisco and Los Angeles. Prior to Castling, David was a member of Booz, Allen and Hamilton's Media and Entertainment Practice, where he worked on numerous strategic and growth-related initiatives.

David also has extensive experience with corporate operations, having run corporate development efforts for a division of Bertelsmann AG and having served as a Senior Advisor to the CEO of the Signature Group.



Sam Sia

Professor in the Department of Biomedical Engineering at Columbia University. His lab focuses on using microfluidics for global health diagnostics and for 3D tissue biology. His lab's work has been supported by the NIH (NHLBI and NINR), NSF, USAID/Grand Challenges Canada/Gates Foundation, Wallace H. Coulter Foundation, American Heart Association, and World Health Organization.

He was named one of the world's top young innovators by MIT Technology Review (2010), and is an elected fellow of AIMBE (American Institute for Medical and Biological Engineering). His research has been covered by NPR, Washington Post, CBS, NBC, BBC, CBC, Voice of America, and Agence France Presse. He is a founder of Claros Diagnostics, a venture capital-backed company developing diagnostics products which was acquired by Opko Health, and Harlem Biospace, New York City's first life-science incubator.

Medini Singh

Senior Lecturer in Discipline in Business at Columbia Business School. His research focuses on service and supply chain design, at both the tactical and strategic level. He teaches in both the MBA and Executive MBA program, including the core Operations Management class as well as electives in Supply Chain Management, Operations Strategy and Service Operations Management. Professor Singh is a member of the Deming Center Advisory Board.

Nina Tandon

CEO and co-founder of EpiBone, the world's first company growing living human bones for skeletal reconstruction. She is the co-author of *Super Cells: Building with Biology*, a book that explores the new frontier of biotech. She is a TED Senior Fellow, Adjunct Professor of Electrical Engineering at the Cooper Union and a former Staff Associate Postdoctoral Researcher in the Laboratory for Stem Cells and Tissue Engineering, Columbia University.