The Power of Revolutionary Thinking

September 28, 2005
Radisson Hotel Phoenix Airport North
427 North 44th Street
5:45– 8:30 p.m.

Map to
Radisson Hotel Phoenix Airport North
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MIT Enterprise Forum Presents
“The Power of Revolutionary Thinking”

Wednesday, September 28, 2005
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Networking Session with hors d’oeuvres – 5:45 to 6:45 p.m.
Telecast Program – 6:45 to 7:45 p.m.
Live, Local Q&A Program – 7:45 p.m. to 8:30 p.m.

The MIT Enterprise Forum, Inc. presents a unique program that looks at how cutting-edge technologies are invented and how these technologies move from laboratory curiosity to real commercial adoption. Special attention will be given to the space elevator project. No longer science fiction, the space elevator, a tether-like transportation system between earth and space, could become reality within the next decade if one of several challenges, the development of a cable capable of withstanding tremendous stress, is resolved. That challenge spells business opportunity. Attendees will also learn:

- How ultra-light golf clubs, advanced prosthetics and new wonder drugs were actually inspired by exotic technologies such as ultra-strong carbon nanotubes, electroactive polymers, and so-called ‘extreme environment’ microorganisms;
- How cutting-edge laboratory technology gets commercialized and what they can learn about developing innovations that drive revenue in their company; and
- How revolutionary thinking is fostered and can be driven in their organizations.

Featured telecast panelists: Dr. Robert Cassanova, Director, NASA Institute for Advanced Concepts; Dr. Bradley Carl Edwards, President and Founder of Carbon Designs; Dr. Dava Newman AA ‘89, Professor of Aeronautics and Astronautics at MIT and MacVicar Fellow; Dr. Penelope J. Boston, Director and Professor, New Mexico Institute of Mining and Technology, and Director of Research for Complex Systems Research, Inc.

Featured local Q&A panelists: Dr. Evan C. Unger, Founder, President & CEO, ImaRx Therapeutics, Inc.; Dr. Colleen M. Brophy, Founder and President of AzERx (Arizona Engineered Therapeutics); Jonathan Ariano, Osborn Maledon, P.A.

Cost and Registration Information

$20  Members of the MIT Club of Phoenix, Harvard Business School or Law School Club of Arizona, University of Chicago School of Business Club of Phoenix, and Osborn Maledon Clients

$30  all others

Free  current MIT students and their parents

Please register by Friday, September 23, 2005. You may register and pay either: (1) online at http://alumweb.mit.edu/clubs/phoenix/ or (2) calling (602) 640-9005 and sending a check to the “MIT Club of Phoenix” c/o Michelle Harrington, Osborn Maledon, P.A., P.O. Box 36379, Phoenix, AZ 85067.

Sponsored in part by Osborn Maledon, P.A.
**Speaker Biographies**

**Dr. Robert A. Cassanova** is the Director of the NASA Institute for Advanced Concepts (NIAC) in Atlanta, Georgia. The NIAC is focused on the development of revolutionary, advanced systems and architectures in the fields of aeronautics and space. He is the recipient of the NASA Public Service Medal for exceptional contributions to the Mission of NASA. NIAC and NIAC sponsored advanced concepts have received numerous accolades in the technical and popular press. The NIAC team, including members from USRA, ANSER Corporation and NASA has received the NASA Group Achievement Award. Prior to becoming the Director of NIAC, Dr. Cassanova was Director of the Aerospace and Transportation Laboratory in the Georgia Tech Research Institute (GTRI). While in GTRI and in the School of Aerospace Engineering at Georgia Tech, he performed research in biofluid mechanics, solar thermal energy, acoustics, combustion and rarefied gas dynamics.

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**Dr. Bradley Carl Edwards** is President and Founder of Carbon Designs, developer of high strength materials. He has led development of the space elevator, organized three conferences, has been on organizing committees for five others, led a research staff of 70 people at the Institute for Scientific Research, and written the definitive book on the space elevator. Previously, Dr. Edwards spent 11 years as a staff member at Los Alamos National laboratory (LANL). He has over 50 publications with three books and 8 papers in the works, has delivered over 30 invited talks, received a letter of commendation from the DoE, and his work has appeared on the cover of Discover, Science News, Ad Astral, He has also been featured in the New York Times and Wall Street Journal, and multiple times on CNN and BBC.

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**Dr. Penelope J. Boston** is Director of Cave and Karst Studies and Professor of Earth and Environmental Sciences at the New Mexico Institute of Mining and Technology and Director of Research for Complex Systems Research, Inc., Boulder, Colorado. Dr. Boston specializes in cave microbiology, microbial life in extreme environments, astrobiology and the search for life beyond Earth, human life support in space and other planetary surfaces, Mars research and human exploration of the solar system, global biogeochemical cycling and planetary homeostatic mechanisms. She is the author of more than 70 papers in journals, reports, and articles. She is the recipient of numerous awards, including The NASA Institute for Advanced Concepts Phase II Fellowship.

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Speaker Biographies

Dr. Dava Newman is an Associate Professor in the Department of Aeronautics and Astronautics at MIT and faculty in the Harvard-MIT Health Sciences and Technology Program (an MD and PhD program between Harvard and MIT). Dr. Newman specializes in investigating astronaut performance across the spectrum of gravity. She is currently the Principal Investigator (PI) on the MICR0-G space flight experiment to quantify astronaut intravehicular activity (IVA) onboard the International Space Station. She has been a funded NASA PI throughout the past decade to investigate and establish an EVA database for microgravity and partial gravity environments as well as to utilize technology and robotics for advanced EVA.

Previously Dr. Newman was the PI for the Space Shuttle Dynamic Load Sensors (DLS) experiment that measured astronaut-induced disturbances of the microgravity environment on mission STS-62.

Alf Nucifora is the chairman of Nucifora Consulting Group, specializing in strategic planning and marketing services consultation. He is also a marketing columnist, syndicated in 40+ business publications across the country. A native of Brisbane, Australia, Mr. Nucifora entered the advertising and marketing business on the corporate side working for two Fortune 500 companies, first in Australia and then in the United States. He then made the move to the advertising business and later advanced into agency management. Currently, he serves as principal of a marketing consulting firm, having “retired” from the responsibilities as Chairman of the Southeast office of a $310 million advertising agency in 1990.

Jonathan Ariano is an associate with Osborn Maledon, P.A. and focuses on representing growth-oriented and entrepreneurial clients, often in connection with the firm’s outside general counsel practice. A licensed patent lawyer, he focuses a majority of his practice on intellectual property and technology related matters such as licensing, distribution, procurement and trademark prosecution and protection. Mr. Ariano’s practice also includes representing companies in business transactions and corporate governance matters, including mergers and acquisitions, venture capital, private equity financing and securities offerings. Mr. Ariano received his B.S. in Computer and Electrical Engineering from Cornell University and his J.D. from the evening program at Rutgers School of Law. Prior to joining Osborn Maledon, Mr. Ariano worked for Tosco Corporation (acquired by ConocoPhillips) in both the Information Technology and Legal departments.
Speaker Biographies

Dr. Evan C. Unger is founder, President & Chief Executive Officer of ImaRx Therapeutics, Inc., he led scientists developing three FDA approved drugs and is a world-renowned expert on diagnostic imaging, contrast media development and drug delivery. He has over 100 publications in peer-reviewed journals and more than 160 abstracts presented at major scientific meetings; he is the principal inventor on more than 100 of the Company’s U.S. patents. He serves as Associate Editor of Radiology, and as editor of the journals Academic Radiology and Magnetic Resonance Imaging, guest editor of Investigative Radiology and the Journal of Magnetic Resonance Imaging.

Dr. Unger is a board-certified radiologist, Fellow of the American College of Radiology, and Professor of Radiology and Bioengineering at the University of Arizona Health Sciences Center. He also serves on the Executive Committee and the Board of Directors of the Arizona Cancer Center. Dr. Unger has an undergraduate degree in Economics, with Departmental Honors from the University of California at Berkeley. His medical degree is from the University of California, San Francisco, graduating with honors Alpha Omega Alpha.

Dr. Colleen M. Brophy is a founder and President of AzERx (Arizona Engineered Therapeutics). AzERx has raised over 1 million dollars through venture seed funding and technology start up grants from the National Institutes of Health (NIH). AzERx is re-engineering natural biology to bring novel therapeutics to market. Prior to coming to the Ira A Fulton School of Engineering at ASU, Dr. Brophy received both her B.S. and M.D. from the University of Utah, Salt Lake City. She served as a surgical resident and postdoctoral fellow at Yale University and a vascular fellow at Harvard University.

Dr. Brophy has received the National Institutes of Health (NIH) National Research Service Award; the American College of Surgeons Faculty Fellowship Award; the SVS/ISCVS Lifeline Foundation Award; the Clinician Scientist Award from the American Heart Association and the Von Leibig Foundation Award for Early-Career Academic Surgeons, for her investigative research. She has over 70 publications in peer reviewed journals. She is an editor for the Journal of Surgical Research and on the editorial board of Surgery. She is the mother of two daughters, Jessica (8 yrs old) and Kate (6 yrs old) and enjoys climbing walls, skiing, and reading with her daughters.