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Introduction
J.J. Laukaitis
Program Director, MIT Corporate Relations

J.J. Laukaitis joined the Industrial Liaison Program in 2012 and is a strong believer in the amplifying power that comes from building enduring relationships between industry leaders and MIT researchers and innovators.

J.J. has over 25 years of experience in engineering, product management and commercial sales management across multiple industries including mechanical design and manufacturing, electronics, semiconductor equipment, health care IT and renewable energy.

In his work for PTC, Continuum, Teradyne, DFT Microsystems and GE, J.J. has managed programs to conceive, design and launch new products and services and has led major initiatives to transform customer information into insight for revenue growth.

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Biomaterials-based Innovation and Drought-resistant Seed Coatings  
Benedetto Marelli

Paul M. Cook Career Development Assistant Professor of Civil and Environmental Engineering  
MIT Department of Civil and Environmental Engineering

Benedetto Marelli

Benedetto Marelli joined the faculty as an assistant professor in Civil and Environmental Engineering in November 2015. He received a B.Eng. and an M.Sc. in biomedical engineering from Politecnico di Milano and pursued his doctoral studies in materials science and engineering at McGill University. His dissertation focused on the biomineralization of tissue-equivalent collagenous constructs and their use as rapidly-implantable osteogenic materials. As a postdoctoral scholar at Tufts University, Marelli worked on the self-assembly and polymorphism of structural proteins, particularly silk fibroin. Marelli’s research at MIT will be in the area of structural biopolymers, biomineralization and self-assembly, mechanical and optoelectronic properties of natural polymers, biocomposites, additive manufacturing, and emerging technologies. By combining basic material principles with advanced fabrication techniques and additive manufacturing, he has developed new strategies to drive the self-assembly of structural biopolymers in advanced materials with unconventional forms and functions such as inkjet prints of silk fibroin that change in color in the presence of bacteria or flexible keratin-made photonic crystals. Using biofabrication strategies, his group will design bio-inspired materials that act at the biotic/abiotic interface to reduce or mitigate environmental impact.

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Rapid Detection of Plant Stress  
Rajeev Ram  
Associate Director, Research Laboratory of Electronics (RLE)

Rajeev J. Ram has worked in the areas of physical optics and electronics for much of his career. In the early 1990’s, he developed the III-V wafer bonding technology that led to record brightness light emitting devices at Hewlett-Packard Laboratory (Lumileds) in Palo Alto. While at HP Labs, he worked on the first commercial deployment of vertical cavity surface emitting lasers. He developed semiconductor lasers without population inversion, semiconductor lasers that employ condensation of massive particles (polariton lasers), and threshold-less lasers. Since 1997, Ram has been on the Electrical Engineering and Computer Science faculty at the Massachusetts Institute of Technology (MIT) and a member of the Research Laboratory of Electronics and the Microsystems Technology Laboratory. He has served on the Defense Sciences Research Council advising DARPA on new areas for investment and served as a Program Director at the newly founded Advanced Research Project Agency-Energy. His group at MIT has developed energy-efficient photonics for microprocessor systems, microfluidic systems for the control of cellular metabolism, and record-efficiency light sources. He co-founded AyarLabs which provides optical I/O for integrated electronics and erbi Biosystems which develops microbioreactors for automated cell culture. He is a MacVicar Faculty Fellow, a Bose Research Fellow at MIT, and a Fellow of the Optical Society of America and IEEE Fellow.

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