How to Work with MIT

October 19, 2020 11:00 am - 12:00 pm
Krystyn J. Van Vliet is currently Professor of Materials Science and Engineering and Biological Engineering at MIT. Van Vliet received her Sc.B. and Ph.D. in Materials Science and Engineering from Brown University and MIT, respectively, focusing on mechanical behavior of metals. Upon receiving her Ph.D., Van Vliet continued postdoctoral studies at Boston Children's Hospital, applying nanomechanical experiments and simulations to problems in vascular and cancer biology, such as measuring how mechanical stress can accelerate the formation of new blood vessels.

Van Vliet joined the MIT faculty in 2004, and her Laboratory for Material Chemomechanics studies how chemical and mechanical states are strongly coupled at complex material interfaces. These material systems range from steel and cement to polymer nanocomposites and biological cells, all sharing this characteristic chemomechanical coupling that governs functional properties, performance, and behavior. As these mechanisms occur at the atomic/molecular level, her group develops new nanoscale experimental approaches and multiscale simulations to enable such studies, and collaborates with a wide range of researchers who synthesize and fabricate such chemomechanically coupled materials. The applications of such materials include sensors, transducers, and actuators, but the understanding obtained from such studies also enables tuning of biological function as is required of cell-based drug screening or cell-based therapies.

Increasingly, her focus has included a focus on translation and manufacturing of engineered biotech platforms. Since 2013, Van Vliet has served as the faculty lead for MIT’s Advanced Manufacturing Innovation activities, including MIT’s participation in the U.S. Advanced Manufacturing Partnership 2.0.

Karl Koster is the Executive Director of MIT Corporate Relations. MIT Corporate Relations includes the MIT Industrial Liaison Program and MIT Startup Exchange.

In that capacity, Koster and his staff work with the leadership of MIT and senior corporate executives to design and implement strategies for fostering corporate partnerships with the Institute. Koster and his team have also worked to identify and design a number of major international programs for MIT, which have been characterized by the establishment of strong, programmatic linkages among universities, industry, and governments. Most recently these efforts have been extended to engage the surrounding innovation ecosystem, including its vibrant startup and small company community, into MIT’s global corporate and university networks.

Koster is also the Director of Alliance Management in the Office of Strategic Alliances and Technology Transfer (OSATT). OSATT was launched in Fall 2019 as part of a plan to reinvent MIT’s research administration infrastructure. OSATT develops agreements that facilitate MIT projects, programs and consortia with industrial, nonprofit, and international sponsors, partners and collaborators.

He is past chairman of the University-Industry Demonstration Partnership (UIDP), an organization that seeks to enhance the value of collaborative partnerships between universities and corporations.

He graduated from Brown University with a BA in geology and economics, and received an MS from MIT Sloan School of Management. Prior to returning to MIT, Koster worked as a management consultant in Europe, Latin America, and the United States on projects for leading corporate clients.