I will describe the mission, structure and activities of the new interdisciplinary Rensselaer Center for Materials, Devices and Integrated Systems (cMDIS). The system seeks to create a research ecosystem that integrates fundamental discovery, assembly of new device structures, and the development of system level technologies. Broadly, there are four main goals for the Center: (i) To act as a unified voice for the physical/chemical sciences and engineering community at Rensselaer, (ii) To maintain major shared experimental platforms (such as the cleanroom and the characterization core), (iii) To sustain existing areas of research excellence and (iv) To develop new areas of research excellence. I will describe opportunities for faculty, students and research staff to participate in these activities. Finally, because I cannot resist it, I will summarize some recent advances in my own group relating to development of new fabrication and characterization techniques for studying evolution of electronic materials at the nanoscale.

Robert Hull is the Henry Burlage Professor and Director for the Center of Materials, Devices and Integrated Systems at Rensselaer Polytechnic Institute. He received a Ph.D. in Materials Science from Oxford University. He then spent ten years at AT&T Laboratories in the Physics Research Division. He next joined the faculty of the MSE Department at the University of Virginia, where he was the Charles Henderson Professor of Engineering, and Director of both the Center on Nanoscopic Materials Design and the Institute for Nanoscale and Quantum Engineering, Science and Technology. He has published about 250 journal and conference papers, and given almost 300 invited talks and seminars at (inter)national conferences, universities and government and industrial laboratories. His recent research at RPI focuses upon new techniques for nanoscale assembly, fabrication and characterization using focused ion and electron beams for electronic, electrochemical, energy and structural materials. He is a member of multiple editorial and advisory boards. He is a Fellow of the APS and of the MRS. He has served as President of the MRS, and as Chair of the University Materials Council.