# Krishna Rajan

"Data-driven Discovery for Imaging and Spectroscopy"

Krishna Rajan is on the faculty of the Materials Science and Engineering Department at Iowa State University. He is director of the National Science Foundation's International Materials Institute for the Combinatorial Sciences and Materials Informatics Collaboratory, an international research and education center promoting the use of informatics and combinatorial experimentation for materials discovery and design. He has established the first major educational and research initiative at a major U.S. university in the field of materials informatics. His group is engaged in applying materials informatics to a wide range of applications, including diffraction and imaging techniques.

This talk will outline a process called "materials informatics," which permits one to survey complex, multiscale information in a high-throughput, statistically robust, and yet physically meaningful manner. Examples will be provided in a number of different applications of imaging and spectroscopy including neutron diffraction, EELS images, and other microanalysis techniques. The integration of informatics with spectroscopy data in combinatorial experiments will be shown as a means of significantly accelerating the interpretation of complex data from high-throughput experiments. The talk will conclude with a discussion on the value of including a materials informatics component for addressing the challenges of data deluge from large-scale scattering sources.
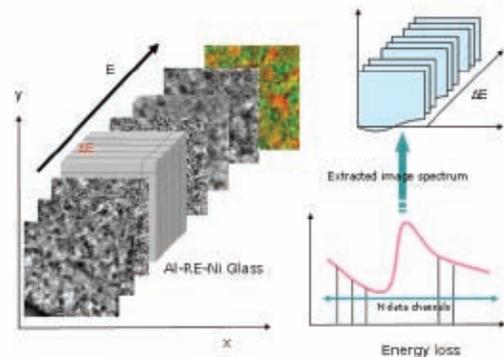
Wednesday, June 7, 2006
3:00 p.m.
Bldg. 402, APS Auditorium • Argonne National Laboratory

APS Colloquium