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Vaclav Vitek

Harold Pender Professor
Materials Science and Engineering (MSE)
Mechanical Engineering and Applied Mechanics (MEAM)

Email

Honors and Awards: Progress in Materials Science Festschrift - 2011, Honorary Member of the Japan Institute of Metals - 2010, Elected to the National Academy of Engineering - 2006, Alexander von Humboldt Senior Scientist Award - 1992, Acta Metallurgica Gold Medal - 1996, Elected Fellow of the Minerals, Metals and Materials Society - 1999, Ernst Mach Medal in Physical Sciences awarded by the Czech Academy of Sciences - 1999, Honorary Doctorate of the Technical University of Brno, Czech Republic - 1999

Research Expertise: Mechanics of Materials | Nanostructured Materials | Material Interfaces

The thrust of Vasek's research is multiscale modeling of deformation and fracture behavior of materials that links electronic, atomic, nano, and macroscopic scales. He works principally on the atomic level, which includes development of interatomic potentials that reflect both metallic and covalent aspects of bonding, as well as properties such as ferromagnetism. This modeling involves atomistic studies of dislocations and their glide modes, structure and properties of interfaces, and interactions of these extended defects with other crystal defects.

Member of:

- [Laboratory for Research on the Structure of Matter \(LRSM\)](#)
- [Penn Center for Energy Innovation](#)

Education:

PhD Physics 1966 - Czechoslovak Academy of Sciences
BS Physics 1962 - Charles University in Prague



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