

CURRICULUM VITAE

Efthimios Kaxiras

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Education: *Massachusetts Institute of Technology*

Ph.D. in Physics	1987
B.S. in Physics	1981
<i>National Technical University of Athens, Greece</i>	1977-78
Electrical Engineering (transferred to MIT)	

Positions: <i>Gordon McKay Professor of Applied Physics and Professor of Physics</i>	1998-
<i>Associate Professor of Physics and Applied Physics</i>	1995-98
<i>Assistant Professor of Physics and Applied Physics</i>	1991-95
Department of Physics and School of Engineering and Applied Sciences Harvard University	
<i>Associate Director</i>	2001-02
Materials Research Science and Engineering Center, Harvard University	
<i>Director</i>	2002-04
Biomedical Research Institute, Foundation for Research and Technology - Hellas	
<i>Visiting Professor and Acting Chair</i>	2002-04
Department of Materials Science and Technology, University of Ioannina - Greece	
<i>Affiliated Scientist</i>	1996-
Institute of Electronic Structure and Lasers, FORTH	
<i>Consulting Research Physicist</i>	1989-91
Complex Systems Theory Branch, Naval Research Laboratory	
<i>Postdoctoral Research Associate</i>	1987-89
IBM Research Division, T.J. Watson Research Center, Yorktown Heights	

Honors:

- IBM Research Division Award (1991)
“For contributions to the development of a new mechanism for Si/Ge heteroepitaxy”
- IBM Predoctoral Fellowship (1985-87)
- Chartered Physicist and Fellow of the Institute of Physics (London), since 1999
- Fellow of the American Physical Society, since 2003

Professional Activities:

- Member of: American Physical Society, Materials Research Society, American Chemical Society, Sigma Xi - Scientific Research Society, Institute of Physics.
- Editorial Board of
 - *Modeling and Simulation in Materials Science and Engineering*
 - *Computer Aided Materials Design*
 - *Surface Review and Letters*
 - *International Journal for Multiscale Computational Engineering*
 - *Computing in Science and Engineering* (Advisory Committee)

Research Interests and Activities:

Prof. Kaxiras leads a group of students, postdoctoral fellows and visiting scientists working in computational materials and condensed matter physics, with interests spanning a wide range of topics. Examples of problems which have been addressed include the electronic properties of crystalline and amorphous solids and their dependence on the atomic structure, the physics and chemistry of covalently bonded nano-clusters, the properties of nano-structured surfaces and interfaces including growth phenomena and catalytic behavior, the nature of electronic states in biomolecules and the function of enzymes, the effects of large external loads on the structure of solids, the microscopic origin of brittle or ductile response of solids, the physics of dislocations in metallic and covalent solids and their interaction with chemical impurities. Many of these topics have been addressed from a multiscale point of view, with the aim of capturing the behavior of complex physical systems starting at a fundamental level with a first-principles quantum mechanical description and reaching all the way to the macroscopic scale.