

## **James R. Rice: Harvard**

Born: 3 December 1940, Frederick, MD

### **Employment:**

9/81-present, Gordon McKay Professor of Engineering Sciences and Geophysics, Department of Earth and Planetary Sciences and Division of Engineering and Applied Sciences, Harvard University.

1/99-1/00: on leave as Blaise Pascal International Research Professor, Ecole Normale Supérieure, Paris.

2/95-12/95: on leave as Allan Cox Visiting Professor, Dept. of Geophysics, Stanford.

9/88 - 8/89: on leave as Sherman Fairchild Distinguished Scholar, Div. of Engineering and Applied Sciences, Caltech.

9/64-8/81: Postdoc 9/64-6/65, Assistant Professor 7/65-6/68, Associate Professor 7/68-6/70, Professor 7/70-8/81, and L. Herbert Ballou Professor of Theoretical and Applied Mechanics 7/73-8/81, Division of Engineering, Brown University.

9/71-8/72: on leave as NSF Senior Postdoctoral Fellow, Department of Applied Mathematics and Theoretical Physics, University of Cambridge, and Overseas Fellow, Churchill College.

Address: 224 Pierce Hall, 29 Oxford Street, Cambridge, MA 02138.

### **Education:**

Lehigh University, Bethlehem, PA: B.S., Engineering Mechanics, 6/62; M.S., Applied Mechanics, 6/63; Ph.D., Applied Mechanics, 10/64.

### **Professional activities/awards (current or recent):**

Member and fellow, AGU, ASME. Member, APS, ASCE.  
Committee on Seismology, NRC Com. on Phys. Sci., Math. and Resources, 1992-8.  
Committee on Science of Earthquakes, NRC Com. on Phys. Sci., Math. and Resources, 1996-9.  
Francis Birch Lecturer, AGU, 1993. Timoshenko Medal, ASME, 1994.  
National Academy of Engineering, 1980-. National Academy of Sciences, 1981-.  
Foreign Member of the Royal Society (London), 1996-.  
Honorary Doctor of Science: Lehigh, 1985; Northwestern, 1996; Brown, 1997; Paris VI, 1999.

### **Five most relevant publications:**

Geubelle, P. H., and J. R. Rice, "A Spectral Method for Three-Dimensional Elastodynamic Fracture Problems", *J. Mech. Phys. Solids*, 43, 1995, pp. 1791-1824.  
Rice, J. R., and Y. Ben-Zion, "Slip complexity in earthquake fault models", *Proc. Nat. Acad. Sci. USA*, 93, 1996, pp. 3811-3818.

Ben-Zion, Y., and J. R. Rice, "Dynamic simulations of slip on a smooth fault in an elastic solid"; *J. Geophys. Res.*, 102, 1997, pp. 17771-17784.  
Taylor, M. A. J., R. Dmowska and J. R. Rice, "Upper-plate Stressing and Seismicity in the Subduction Earthquake Cycle", *Journal of Geophysical Research*, 103, 1998, pp. 24523-24542.  
Zheng, G., and J. R. Rice, "Conditions under which velocity-weakening friction allows a self-healing versus a crack-like mode of rupture", *Bull. Seismol. Soc. Amer.*, 88, 1998, pp. 1466-1483.

**Associates, last 4 years:**

Collaborators: M. Cocco, R. Dmowska, R. Madariaga, P. Segall, W. D. Stuart, J. R. Willis, Y. Ben-Zion, E. Bouchaud, J.-P. Bouchaud, G. Perrin, P. Geubelle, A. Cochard, J. Schmittbuhl, T. Tada, J.-S. Wang, G. E. Beltz, N. Lapusta, J. Kysar, Y. Sun, S. Mesarovic, M. A. J. Taylor and G. Zheng.  
Thesis advisor F. P. Beer, postdoctoral advisor D. C. Drucker.

**Students graduating within last three years (J. R. Rice):**

Gutuan Zheng, Ph.D. 1997, male, oriental, China, 6 years to complete.  
Mark A. J. Taylor, Ph.D. 1998, male, caucasian, England, 5 years to complete.  
John W. Morrissey, Ph.D. 1998, male, caucasian, USA, 6 years to complete.  
Jeffrey W. Kysar, Ph.D. 1998, male, caucasian, USA, 6 years to complete.