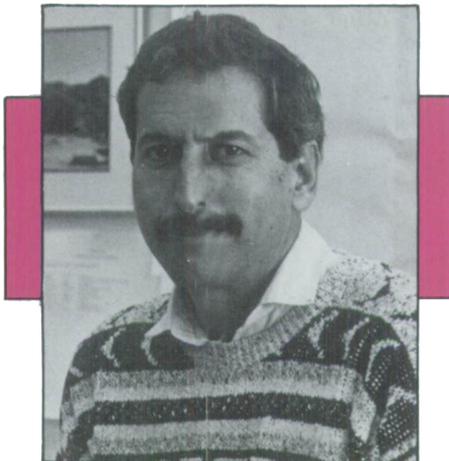


Spring Meeting Plenary Questions Earthquake Prediction Theories

Mark D. Zoback, plenary speaker at the 1990 MRS Spring Meeting in San Francisco, will present some intriguing data that suggest that the recent quake in San Francisco was not accurately predicted, and that as a result all the models may be seriously in error.

Substantial evidence supports the applicability of frictional faulting theory and laboratory-derived coefficients of friction to the mechanics of faulting and the resulting state of stress within continents. But, according to Zoback, a professor of geophysics at Stanford University, "an equally convincing body of evidence indicates that major strike-slip faults, like the San Andreas, can slip at extremely low levels of shear stress."

"The implications of these observations," says Zoback, "are that we must re-examine long-held assumptions about the physics of faulting, the nature of the earthquake cycle, and long-term earthquake probability assessment." Also included in this re-



1990 Spring Meeting Plenary Speaker, Mark D. Zoback, professor of geophysics at Stanford University, will shake a few theories about earthquake prediction when he offers "Some New Views of the State of Stress Along the San Andreas Fault."

examination would be assumptions about the style of crustal deformation along strike-slip plate margins and assumptions about the fundamental stress boundary conditions that constrain the driving mechanisms of plate tectonics.

Zoback has BS, MS, and PhD degrees in geophysics from the University of Arizona and Stanford University. He served as a visiting scientist at the Ruhr University in Bochum and worked with the U.S. Geological Survey as chief of the In-Situ Stress Measurement Project, deputy chief of the Office of Earthquake Studies, and chief of the Branch of Tectonophysics before joining the Stanford faculty in 1984. The author of numerous papers and member of several professional societies, he is also a Fellow of the Geological Society of America and the American Association for the Advancement of Science. Zoback serves on several advisory bodies and editorial boards in his field and has been a member of the National Earthquake Prediction Evaluation Council since 1984.

Short Course Program

1990
Spring
Meeting

April 16-22, 1990



San Francisco
California

Telephone
(412) 367-3003
FAX (412) 367-4373

Selected Short Courses covering the latest developments in materials science and technology will be offered in conjunction with the Materials Research Society 1990 Spring Meeting and Equipment Exhibit. These up-to-date courses are at the forefront of science and technology and complement Spring Meeting symposium topics. SPECIALTY, REVIEW AND SURVEY courses are designed to meet needs of professional scientists, engineers, technical staff and managers who want to know the latest techniques in characterization and fabrication of materials. CLASS SIZES ARE LIMITED. Early telephone registrations are encouraged.

ADVANCED MATERIALS

- M-04 Optoelectronic Materials, Processes, and Devices**
Instructor: Mool C. Gupta
Friday-Saturday, April 20-21 \$510
- M-05 Fabrication, Characterization, and Applications of High-Temperature Superconducting Materials**
Instructors: Terry P. Orlando and Robert E. Schwall
Monday-Tuesday, April 16-17 \$510
- M-06 Growth and Characterization of Diamond and Diamond Films**
Instructors: Daniel L. Flamm, Thomas R. Anthony, and Jeffrey T. Glass
Tuesday, April 17 \$395
- M-09 Polysilicon Thin Films and Interfaces - A Submicron VLSI Manufacturing Perspective**
Instructors: Bruha Raicu, Joseph P. Ellul, and Mahboob Khan
Friday-Saturday, April 20-21 \$510
- PREPARATION AND FABRICATION OF MATERIALS**
- P-07 Sol-Gel Processing of Glass**
Instructors: C. Jeffrey Brinker and George W. Scherer
Saturday-Sunday, April 21-22 \$580

P-09 Materials Processing in Thermal Plasmas

- Instructors: Maher I. Boulos, Pierre Fauchais, and Emil Pfender
Thursday-Saturday, April 19-21 \$775
- P-14 Film Formation, Adhesion, Surface Preparation, and Characterization of Thin Film Structures**
Instructor: Donald M. Mattox
Friday-Saturday, April 20-21 \$535
- P-15 Ohmic Contacts to Semiconductors**
Instructor: Peter A. Barnes
Friday, April 20 \$345
- P-17 Materials Processing by Vapor Phase Techniques**
Instructor: Toivo Kodas
Thursday, April 19 \$345
- P-19 Compound Semiconductor Epitaxy and Processing**
Instructors: Ami Appelbaum and L. Ralph Dawson
Tuesday-Thursday, April 17-19 \$750
- F-01 Film and Coating Deposition Techniques**
Instructor: Donald M. Mattox
Tuesday-Wednesday, April 17-18 \$535
- F-02 Plasma Etching for Microelectronic Fabrication**
Instructor: G. Kenneth Herb
Thursday, April 19 \$345
- F-05 Ceramic Packaging of Integrated Circuits: Designs, Processes and Applications**
Instructor: George C. Phillips
Tuesday-Wednesday, April 17-18 \$510
- F-09 Microwave Interactions with Dielectric Materials**
Instructors: Hal D. Kimrey, Ralph W. Bruce, and Magdy F. Iskander
Monday, April 16 \$345

TECHNIQUES

- T-07 Ion Source Fundamentals**
Instructor: Ian G. Brown
Wednesday, April 18 \$345

CHARACTERIZATION OF MATERIALS

- C-03 Surface and Thin Film Analysis**
Instructors: Leonard C. Feldman and James W. Mayer
Friday-Saturday, April 20-21 \$580
- C-19 Practical Transmission and Analytical Electron Microscopy: Theory, Practice, and Specimen Preparation**
Course fee includes 1990 Spring Meeting registration fee
Instructors: Alton D. Rornig, Jr., David B. Williams, and Ron M. Anderson
Tuesday-Thursday, April 17-19 \$795
- C-20 Optical Characterization of III-V Semiconductor Epitaxial Layers**
Instructor: Gary W. Wicks
Friday, April 20 \$345

SPECIAL DISCOUNTS:

For those who register for MRS Short Courses F-01 and P-14 the special discounted tuition will be \$895. Facilities registering three or more persons at the same time in one MRS Short Course receive a 20% discount for the third and all additional persons.

REGISTRATION INFORMATION: Call (412) 367-3003 and ask for the Short Course Office to request information about student scholarships.

890329