

## Biot Equation in Seismic Wave Propagation

Chair: Dr. Pratap Sahay  
CICESE, Mexico

### Session I (13:30 – 15:45; June 8, 2009, Room 569)

- 90 L. De Barros & M. Dietrich (France)  
*Estimation of The Poroelastic Parameters from Seismograms Using The Biot Theory*
- 41 Christina Morency, Yang Luo & Jeroen Tromp (USA)  
*Spectral-Element Simulations of Wave Propagation in Porous Media: Finite-Frequency Sensitivity Kernels based upon Adjoint Methods*
- 16 Florian Karpfinger, Boris Gurevich & Andrey Bakulin (Australia)  
*Axisymmetric waves in fluid-saturated porous Structures*
- 92 Boris Gurevich, Dina Makarynska & Marina Pervukhina (Australia)  
*A New Squirt-Flow Model of Elastic Wave Attenuation and Dispersion in Fluid-Saturated Rocks*
- 76 B.B.S.A. Vogelaar & D.M.J. Smeulders (Netherlands)  
*Effective Biot Theory for The Speed And Attenuation of Seismic Waves in Saturated Rocks Containing Small Gas Fractions*
- 79 Tobias M. Muller & Pratap N. Sahay (Mexico)  
*Compressional Wave Attenuation and Dispersion due to Conversion Scattering into Slow Shear Wave*

### Session II (16:00 – 18:15; June 8, 2009; Room 555)

- **Keynote** Prof. Jerry M. Harris (USA)  
*Differential Acoustic Resonance Spectroscopy: A Laboratory Method for the Estimation of Compressibility and Attenuation of Porous Materials at Low Frequencies*
- 49 Patrick N.J. Rasolofosaon & Bernard E. Zinszner (France)  
*Poroelastic Equations Closely Examined by Ultrasonic Experiments in Rocks*
- \* Youcef Bouzidi & Douglas R. Schmitt (Canada)  
*Laboratory Observations of the Transmissivity and Reflectivity of a Water-saturated Porous Plate*
- 39 F.C. Schoemaker & D.M.J. Smeulders (Netherlands)  
*Experimental Determination of the Electrokinetic Coupling Coefficient*
- 35 Menne D. Schakel & David M.J. Smeulders (Netherlands)  
*Seismoelectric Reflection Coefficients: Measurements and Theoretical Predictions*

**Session III** (13:00 – 15:15; June 9, 2009; Room 569)

- 2 Maria Todorovska & Yousef Al Rjoub (USA)  
*Soil-Structure Interaction and Biot's Theory of Wave Propagation in Poroelastic Media as Possible Explanation for Observed Changes of Apparent Frequencies of Vibration of A Building with Heavy Rainfall*
- 230 Donald G. Albert, Stephen N. Decato & Frank E. Perron, Jr. (USA)  
*Experimental Measurements of the Biot Slow Wave in Natural Snow Covers*
- 47 Robert J. Galvin & Boris Gurevich (Australia)  
*Interaction of A Longitudinal Wave with A Circular Crack in A Fluid-Saturated Porous Medium*
- 137 Valeri A. Korneev, Andrey A. Ponomarenko & Boris M. Kashtan (USA)  
*Stoneley Slow Wave: What is Missing in Biot's Theory*
- 162 M. Markov, E. Kazatchenko & A. Mousatov (Mexico)  
*Propagation of Low Frequency Surface Waves in Poroelastic Media*
- 25 K.N. van Dalen, A. Mahdad, G.G. Drijkoningen & D.M.J. Smeulders (Netherlands)  
*Wave Modes at The Interface of a Fluid and A Fluid-Saturated Poroelastic Solid*