

# Characterization of the seismic response of gas-hydrate bearing sediments

Juan E. Santos<sup>a</sup>, Patricia M. Gauzellino<sup>b</sup>, José M. Carcione<sup>c</sup>, Jing Ba<sup>1</sup>

<sup>a</sup>*Laboratorio de Ingeniería de Reservorios, Instituto del Gas y del Petróleo, Facultad de Ingeniería, Universidad de Buenos Aires  
Av. Las Heras 2214 Piso 3, C1127AAR, Buenos Aires, Argentina  
lmacias@fi.uba.ar*

<sup>b</sup>*Instituto del Gas y del Petróleo, Facultad de Ingeniería, Universidad de Buenos Aires, CONICET  
and Universidad de La Plata*

*and Department of Mathematics, Purdue University, 150 N. University Street, West Lafayette, Indiana, 47907-2067, USA, santos@math.purdue.edu*

<sup>c</sup>*Istituto Nazionale di Oceanografia e di Geofisica Sperimentale (OGS), Borgo Grotta Gigante 42c, 34010 Sgonico, Trieste, Italy, jcarcione@inogs.it*

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## Abstract

We analyze the influence of capillary pressure on the seismic response of

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## References

## References

- 35 [1] R. Feynman, F. Vernon Jr., The theory of a general quantum system interacting with a linear dissipative system, Annals of Physics 24 (1963) 118–173. doi:10.1016/0003-4916(63)90068-X.

- [2] P. Dirac, The lorentz transformation and absolute time, *Physica* 19 (1-12) (1953) 888–896. doi:10.1016/S0031-8914(53)80099-6.