



**Title(Tutorial) Seismic interferometry,
who needs a seismic source?**



Speaker Prof. Roel Snieder
W.M. Keck Distinguished Chair of
Exploration Science, and the Interim Head of
the Department of Geophysics at
the Colorado School of Mines.

Date & Time Tuesday, March 26, 2019 2:00 p.m.- 4:00 p.m.

Place 543, West Zone 2, Ito Campus, Kyushu University

Abstract Seismic interferometry is a technique for imaging without coherent sources. The idea is to combine waveforms, generated by ambient noise, that are recorded at different receivers in a way to provide the waves that would propagate between these receivers as if there was a source at one of these receivers. This obviates the need to have a source located at one of the receivers. In the tutorial I cover different formulations of the theory that explain seismic interferometry, and present examples with field data that show the possibilities that are opened up with this new technique. With the advent of permanent networks of seismometers in exploration seismology and global seismology, seismic interferometry opens up new methods for imaging and time-lapse monitoring.

About the Speaker

Roel Snieder holds the W.M. Keck Distinguished Chair of Professional Development Education at the Colorado School of Mines. He received in 1984 a Masters degree in Geophysical Fluid Dynamics from Princeton University, and in 1987 a Ph.D. in seismology from Utrecht University. In 1993 he was appointed as professor of seismology at Utrecht University, where from 1997-2000 he was appointed as Dean of the Faculty of Earth Sciences. Roel served on the editorial boards of Geophysical Journal International, Inverse Problems, Reviews of Geophysics, the Journal of the Acoustical Society of America, and the European Journal of Physics. In 2000 he was elected as Fellow of the American Geophysical Union. He is author of the textbooks "A Guided Tour of Mathematical Methods for the Physical Sciences", "The Art of Being a Scientist", and "The Joy of Science" that are published by Cambridge University Press. In 2011 he was elected as Honorary Member of the Society of Exploration Geophysicists, and in 2014 he received a research award from the Alexander von Humboldt Foundation. In 2016 Roel received the Beno Gutenberg Medal from the European Geophysical Union and the Outstanding Educator Award from the Society of Exploration Geophysicists. From 2000-2014 he was a firefighter in Genesee Fire Rescue where he served for two years as Fire Chief.

Host : Prof. Takeshi Tsuji

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