

Nishant Kamath

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Objective: To obtain a full-time research position in the oil and gas industry in the field of seismic exploration.

Expected date of graduation: January 2015

Education

- Aug 2010–Dec 2015 (expected) **PhD. in Geophysics**, *Colorado School of Mines*, Golden, CO, USA.
GPA 3.88/4
- Aug 2003–May 2008 **MS & BS Exploration Geophysics**, *Indian Institute of Technology*, Kharagpur, India.
GPA 8.38/10

Experience

- May 2014–Aug 2014 **Summer intern**, *Marine Deployment*, BP, Houston, Texas.
Full-waveform Inversion (FWI) tests for different model parameterizations on synthetic and real data
- Jun 2012–Aug 2012 **Summer intern**, *Global Seismic Processing*, Shell International Exploration and Production, Houston, Texas.
FWI tests on real data in order to gain an understanding of the trade-off between parameters being inverted for
- Aug 2010–Present **Research Assistant**, *Center for Wave Phenomena*, Colorado School of Mines, Golden, Colorado.
Working on FWI to estimate P- and S-wave vertical velocities and anisotropy parameters in VTI media
- Oct 2008–Jul 2010 **On Board Seismic Data Processor**, *WesternGeco*, Schlumberger, Gatwick, London.
Processing marine and land seismic data in office and on board; building and Quality Control (QC) of velocity fields and interpreting velocity
- Aug. 2006–Apr 2008 **Research undergraduate project**, *Dept. Geology and Geophysics*, Indian Institute of Technology, Kharagpur, India.
Ray-traced and stacked Receiver Functions to obtain the mantle Transition Zone Thickness (TZT) beneath the Bengal Basin (India); investigated the influence on the TZT of the young sedimentary deposits on the Bengal Basin
- May 2007–Jul 2007 **Summer Intern**, United States Geological Survey (USGS), Menlo Park, California.
Inverted Receiver Functions to obtain the shear-wave velocity structure beneath the western Basin and Range Province, California, and investigated implications for crustal scale tectonic models in the region
- May 2006–Jul 2006 **Summer Intern**, *Planetary and Space Sciences*, Institut de Physique du Globe de Paris (IPGP), Paris, France.
Studied the electron density and electromagnetic fluctuations in the Ionosphere due to seismic-triggered acoustic waves
- May 2005–Jun 2005 **Summer Research Fellow**, Center for Mathematical Modeling and Computer Simulation (CMMACS), Bangalore, India.
Imaged the shear-wave velocity of the crust beneath the Aravalli Fold Belt from Receiver Function analysis of broadband seismic data from Mt. Abu

Computational Skills

Software Madagascar, SU.
Programming C, Fortran95, Matlab, Python.

Scientific Interests

–Anisotropy
–Imaging
–Inverse problems
–Migration Velocity Analysis (MVA)

Publications

Kamath, N., S. Leslie, and W. D. Mooney. Shear-wave velocity structure beneath the western Basin and Range Province, eastern California: implications for crustal-scale tectonic models. *AGU Fall Meeting Abstracts*, page A1210, December 2007.

E. Alam Kherani, Philippe Lognonné, **Nishant Kamath**, Francois Crespon, and R. Garcia. Response of the Ionosphere to seismic-triggered acoustic waves: electron density and electromagnetic fluctuations. *Geophysical Journal International*, 176(1):1–13, 2009.

Nishant Kamath and Ilya Tsvankin. Full-waveform inversion of multicomponent data for layered VTI media. *SEG Technical Program Expanded Abstracts*, 31:1–5, 2012.

Kamath, N. and I. Tsvankin. Full-waveform inversion of multicomponent data for horizontally layered VTI media. *Geophysics*, 78(5):WC113–WC121, 2013.

Nishant Kamath and Ilya Tsvankin. Gradient computation for elastic full-waveform inversion in 2D VTI media. *SEG Technical Program Expanded Abstracts*, 32:1073–1078, 2013.

Nishant Kamath and Ilya Tsvankin. Elastic full-waveform inversion of transmission data in 2D VTI media. *SEG Technical Program Expanded Abstracts*, pages 1157–1161, 2014.

Nishant Kamath and Ilya Tsvankin. Sensitivity analysis for elastic full-waveform inversion in VTI media. *SEG Technical Program Expanded Abstracts*, pages 1162–1166, 2014.

Kamath, N. and I. Tsvankin. Elastic fullwaveform inversion for VTI media: Methodology and sensitivity analysis. Submitted to *Geophysics*, 2015.