

Yunyue (Elita) Li

9 Engineering Drive 1
Block EA, #02-04
Singapore 117575

Phone: +65 66012696
Email: ceeliyy@nus.edu.sg
Webpage: www.mit.edu/~yunyueli/

EDUCATION AND RESEARCH

ACADEMIC RECORD

National University of Singapore Assistant Professor in Department of Civil and Environmental Engineering	Singapore <i>Aug 2016 ~</i>
Massachusetts Institute of Technology Research Affiliate in Department of Mathematics and Earth Resources Laboratory	Cambridge, MA <i>Aug 2016 ~</i>
Massachusetts Institute of Technology Postdoctoral Associate in Mathematics and Geophysics	Cambridge, MA <i>Aug 2014 - July 2016</i>

EDUCATION RECORD

Stanford University Ph.D. in Geophysics	Stanford, CA <i>Sep 2008 - Aug 2014</i>
Stanford University M.S. in Geophysics	Stanford, CA <i>Sep 2008 - Sep 2010</i>
China University of Petroleum B.S. in Information and Computational Science Outstanding Undergraduate Thesis	Beijing, China <i>Sep 2004 - Jul 2008</i>

RESEARCH INTERESTS

- **Computational geophysics:** Seismic imaging and model building as an inverse problem at reservoir and regional scales
- **Integrated model building:** Integration of data across different scales, measurements and disciplines; Joint inversion to build consistent models
- **Inversion with uncertainty quantification:** Uncertainty quantification for inversion results under statistical frameworks

AWARDS AND HONORS

- Centennial Teaching Assistant Award, 2012, Stanford University
- Best Oral Presentation Award, SUM/SEG Student Conference, 2012, Beijing, China
- The Robert G. Kirby Fellowship, 2008, Stanford University
- Michael L. Haider Fellowship in Earth Sciences, 2008, Stanford University
- Outstanding Undergraduate Thesis, 2008, China
- Mathematical Contest in Modeling, 2007, Honorable Mention, US
- Undergraduate Mathematical Contest in Modeling, 2006, Second Prize, China
- 22nd National Physics Championship, 2005, Third Prize, China
- First Prize Scholarship for Undergraduate Students, 2004 - 2008, China

INDUSTRY RESEARCH EXPERIENCE

Jun 2012 - Sep 2012 **Research Intern** Shell Global Solutions International, Rijswijk, Netherlands
Jun 2011 - Sep 2011 **Research Intern** Shell International Exploration & Production Company Houston, USA
Jun 2010 - Sep 2010 **Research Intern** Schlumberger Houston, USA

ACADEMIC RESEARCH EXPERIENCE

Massachusetts Institute of Technology

Frequency extrapolation for seismic imaging *Ongoing*
Collaborator: Prof. Laurent Demanet
Data- and image-space processing to expand the frequency content of seismic data

Joint inversion with seismic, fluid-flow and rock physics data *Ongoing*
Collaborator: Dr. Peter Kang and Yi Shen (Stanford)
Bayesian framework for elastic and flow parameter estimation

Stanford University

Integrated anisotropic model building (Thesis project) *Sep 2009 - Aug 2014*
Collaborator: Biondo Biondi, Gary Mavko, Dave Nichols (Schlumberger)

Rock physics modeling for seismic anisotropy *Jan 2013 - Sep 2013*
Collaborator: Gary Mavko

Sparse inversion with sparse constraints *Jun 2009 - Sep 2010*
Collaborator: Yang Zhang, Jon Claerbout

Automatic picking by simulated annealing *Sep 2008 - Jun 2009*
Collaborator: Biondo Biondi

PROFESSIONAL SERVICE

- Reviewer (Journals) - *Geophysics*, *Geophysical Journal International*.
- SEG Translation Committee - *Chairman since 2014*.

SELECTED PUBLICATIONS

1. **Yunyue Li**, Biondo Biondi, Robert Clapp and Dave Nichols, "Integrated VTI model building with seismic, geological and rock physics data: Part I - Theory and synthetic examples", *to appear in Geophysics*, 2016.
2. **Yunyue Li**, Biondo Biondi, Gary Mavko and Dave Nichols, "Integrated VTI model building with seismic, geological and rock physics data: Part II - Gulf of Mexico field examples", *to appear in Geophysics*, 2016.
3. **Yunyue Li** and Laurent Demanet, "Full waveform inversion with extrapolated low frequency data", *to appear in Geophysics*, 2016.
4. **Yunyue Li**, Mandy Wong and Robert Clapp, "Equivalent accuracy at a fraction of the cost: Overcoming temporal dispersion", *to appear in Geophysics*, 2016.
5. **Yunyue Li**, Biondo Biondi, Dave Nichols, and Robert Clapp, "Toward a closed loop from seismic imaging to earth-model building", *The Leading Edge*, 35, 2016.
6. **Yunyue Li** and Laurent Demanet, "Phase and amplitude tracking for seismic event separation", *Geophysics*, 80, 2015.
7. **Yunyue Li**, Yi Shen and Peter Kang, "Integration of seismic and fluid-flow data: a two-way road linked by rock physics", in *77th EAGE Conference & Exhibition*, 2015.
8. **Yunyue Li**, Biondo Biondi, Robert Clapp and Dave Nichols, "Wave equation migration velocity analysis for VTI models", *Geophysics*, 79, 2014.
9. Renè-Édouard Plessix and **Yunyue Li**, "Waveform acoustic impedance inversion with spectral shaping", *Geophysical Journal International*, 2013.
10. **Yunyue Li**, Yang Zhang and Jon Claerbout, "Hyperbolic estimation of sparse models from erratic data", *Geophysics*, 77, 2012.