Yunyue Elita Li

EDUCATION

Stanford University Ph.D. in Geophysics M.S. in Geophysics Advisor: Professor Biondo Biondi Integrated VTI model building with seismic, rock physics and geology China University of Petroleum B.S. in Information and Computational Science Outstanding Undergraduate Thesis	Stanford, CA Sep 2008 - Aug 2014 Sep 2008 - Sep 2010 Beijing, China Sep 2004 - Jul 2008		
		Purdue University	West Lafayette, IN
		Associate Professor, Department of EAPS and Mathematics by Courtesy	since Sep 2021
National University of Singapore	Singapore		
Adjunct Associate Professor, Department of Civil and Environmental Engineering	since Sep 2021		
National University of Singapore	Singapore		
Assistant Professor, Department of Civil and Environmental Engineering	Aug 2016 - Aug 2021		
Massachusetts Institute of Technology Postdoctoral Associate in Mathematics and Geophysics Supervisor: Professor Laurent Demanet	Cambridge, MA Aug 2014 - July 2016		
Shell Global Solutions International	Rijswijk, Netherlands		
Research Intern	Jun 2012 - Sep 2012		
Shell International Exploration & Production Company	Houston, USA		
Research Intern	Jun 2011 - Sep 2011		
Schlumberger - WesternGeco	Houston, USA		
Research Intern	Jun 2010 - Sep 2010		

AWARDS AND HONORS

- Engagement Award, Purdue College of Science Faculty/Staff Awards, 2024
- Mary J. Elmore New Frontiers Associate Professor, Purdue University, 2021-2024
- Young Innovator Award, Land Transport Excellence Award, Singapore Land Transport Authority, 2022
- Honorary Lecturer for South & East Asia, Society of Exploration Geophysicists, 2022
- Top papers presented at the SEG Annual Meeting (student author), 2018, Anaheim, California
- J. Clarence Karcher Award, Society of Exploration Geophysicists, 2018
- Top papers presented at the SEG Annual Meeting, 2017, Houston, Texas
- Honorable Mention, Best Paper in Geophysics, 2016
- Top papers presented at the SEG Annual Meeting, 2016, Dallas, Texas
- 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

TEACHING

- Co-Lecturer: Time series analysis, Purdue University, Spring 2024
- Lecturer: Computer-aided analysis for geoscience, Purdue University, Spring 2024
- Lecturer: Geophysical Inverse Theory, Purdue University, Spring 2023
- Lecturer: Sustainable geophysics, Purdue University, Fall 2022
- Lecturer: Great Issues: Fossil Fuel, Energy, and Society, Purdue University, Spring 2022, 2023
- Lecturer: Data visualization and analysis in Civil Engineering, National University of Singapore, 2021
- Lecturer: Geophysical imaging of the Earth interior, National University of Singapore, 2016 2021
- Lecturer: Geophysical inverse problem, National University of Singapore, 2016 2021
- Co-Lecturer: Computer Applications in Civil Engineering, National University of Singapore, 2016 2020
- Co-Lecturer: Fundamentals of exploration geophysics, Massachusetts Institute of Technology, 2015

PROFESSIONAL SERVICE

- Editorial board (Journals) Geophysics, Associate Editor (since 2019) Assistant Editor (since 2024) The Leading Edge, Associate Editor (since 2020) Journal of Geophysical Research: Solid Earth, Associate Editor (since 2020)
- Technical and Organizational Committee
 Member, 3rd SEG/EAGE Joint Workshop on Geophysical Applications in Smart Cities, Seoul, South Korea
 2024
 Co-Chair, IMAGE '24 Special Session on Geophysics for Urban Spaces and Infrastructure, Houston 2024
 Member, 2nd SEG/EAGE Joint Workshop on Geophysical Applications in Smart Cities, Hong Kong 2022
 Co-Chair, 1st IMAGE Post Convention Workshop on Geophysical Applications in Smart Cities, Denver 2021
 Member, 5th International Workshop on Rock Physics, Hong Kong 2019
 Chair, SEG/EAGE Joint Workshop on Geophysical Applications in Smart Cities, Singapore 2019

Chair, SEG/EAGE Joint Workshop on Geophysical Applications in Smart Cities, Singapore 2019 Member, CPS/SEG International Geophysical Conference and Exposition, Beijing 2018

• Reviewer (Journals) Geophysics, Geophysical Journal International, Geophysical Prospecting IEEE Signal Processing Magazine, IEEE Geosciences and Remote Sensing Journal of Geophysical Research: Solid Earth, Geophysical Research Letters

• Committee member SEG Translation Committee (Chairman 2014 - 2016), SEG Research Committee (2016-2023) SEG DL/HL Committee, SEG NSTS Committee OTC Asia 2018 Program - SEG subcommittee, OTC Asia 2020 Oversight Committee EAGE Research Committee

JOURNAL PUBLICATIONS

* - Student or PostDoc first author

- Yanlong Niu^{*}, Gang Fang, Yunyue Elita Li, SC Chian, Enhedelihai Nilot, 2024, "Multi-Mode Rayleigh Wave Dispersion Spectrum Inversion Using Wasserstein Distance Coupled with Bayesian Optimization", *Geophysics*, 89(3), 1-64
- Yuhan Zhou, Justin K.W. Yeoh, Yunyue Elita Li, and Wawan Solihin, 2023, "Large scale indoor occupant tracking using distributed acoustic sensing and machine learning", *Building and Environment*, DOI: 10.1016/j.buildenv.2023.111005
- 54. Yumin Zhao*, Yunyue Elita Li, and Bei Li, 2023, "On beamforming of DAS ambient noise recorded in an urban environment and Rayleigh-to-Love wave ratio estimation", JGR-Solid Earth, 128(8). DOI: 10.1029/2022JB026339
- 53. Yunhuo Zhang, Xiao Wei, Yunyue Elita Li, Seokho Jeong, and Taeseo Ku, 2023, "Sediment thickness and average Vs prediction using HVSR of ambient seismic noise: case studies in Singapore", Bulletin of Engineering Geology and the Environment, 82(5), 195, DOI: 10.1007/s10064-023-03195-3
- 52. Huaigu Tang^{*}, Arthur Cheng, **Yunyue Elita Li**, Xinding Fang, Ruijia Wang, and Xiang Wu, 2023, "Borehole acoustic full-waveform inversion", *Geophysics*, 88(4), D271-D293

- Enhedelihai Alex Nilot*, Gang Fang, Yunyue Elita Li, Yun Zhou Tan, and Arthur Cheng, 2023, "Realtime tunneling risk forecasting using vibrations from the working TBM", *Tunnelling and Underground Space Technology*, 139, 105213. DOI: 10.1016/j.tust.2023.105213
- Yanlong Niu^{*}, Siau Chen Chian, Yunyue Elita Li, and Gang Fang, 2023, "Laboratory Small-Strain Stiffness Measurement using Distributed Acoustic Sensing", *Geotechnical Testing Journal*, 46(5). DOI: 10.1520/GTJ20220204
- 49. Jinwei Fang, Hui Zhou, **Yunyue Elita Li**, and Ying Shi, 2023, "Time-domain Elastic Full Waveform Inversion with Frequency Normalization", *IEEE Transactions on Geoscience and Remote Sensing*, 61
- Heng Zhang, WT Zhang, WZ Huang, SP PEi, Enhedelihai Nilot, Yunyue Elita Li, JM Zhao, "A new application of fiber seismometer in the Yigong Lake, Tibetan Plateau", Chinese Journal of Geophysics, 2023, 66(3), 1153-1163
- Nan You*, Yunyue Elita Li, and Arthur Cheng, 2023, "Automatic facies classification from acoustic image logs using deep neural networks", *Interpretation*, 11(2), T441-T456. DOI:10.1190/INT-2022-0069.1
- Ahmed Zidan*, Yunyue Elita Li, and Arthur Cheng, 2023, "Information-based seismic amplitude inversion", Journal of Applied Geophysics, 210, 104940. DOI: 10.1016/j.jappgeo.2023.104940
- Yunyue Elita Li, Enhedelihai Alex Nilot, Yumin Zhao, and Gang Fang, 2023, "Quantifying urban activities using nodal seismometers in a heterogeneous urban space", Sensors, 23(3), 1322, DOI:10.3390/s23031322
- 44. Yumin Zhao*, Enhedelihai Alex Nilot, Bei Li, Gang Fang, Wei Luo, and Yunyue Elita Li, 2023, "Seismic attenuation extraction from traffic signals recorded by a single seismic station", *Geophysical Research Letters*, DOI: 10.1029/2022GL100548
- Ahmed Zidan*, Yunyue Elita Li, and Arthur Cheng, 2022, "Generalization of Bayesian inversion with application to PP reflection in a vertical transverse isotropy medium", *Geophysical Prospecting*, DOI: 10.1111/1365-2478.13235
- 42. Ahmed Zidan^{*}, **Yunyue Elita Li**, and Arthur Cheng, 2022, "Regularized seismic amplitude inversion via variational inference", *Geophysical Prospecting*, DOI: 10.1111/1365-2478.13248
- 41. Yanlong Niu^{*}, **Yunyue Elita Li**, Siau Chen Chian, Enhedelihai Nilot and Gang Fang, May 2022, "In-situ physical properties of reclaimed lands in Singapore", *The Leading Edge*, 306-312
- Yanwen Wei, Yunyue Elita Li, Jizhong Yang, Haohuan Fu, and Mengyao Sun, 2022, "Deep Learning-Based P- and S-Wave Separation for Multicomponent Vertical Seismic Profiling", *IEEE Transactions on Geoscience* and Remote Sensing, 60, 1-16
- Yumin Zhao*, Yunyue Elita Li, Enhedelihai Nilot, and Gang Fang, 2022, "Urban Running Activity Detected Using a Seismic Sensor during COVID-19 Pandemic", Seismological Research Letters 93(1), 181-192
- Bo-Ye Fu*, Arthur Cheng, Yunyue Elita Li, and Jingjing Zong, 2022, "Factors that influence fluid flow in a single fracture", *Geophysical Prospecting*, 70(1), 135-151
- Bei Li* and Yunyue Elita Li, 2021, "Neural Network-Based CO₂ Interpretation From 4D Sleipner Seismic Images", JGR: Solid Earth, 126(12), e2021JB022524
- Yunhuo Zhang*, Yunyue Elita Li, Taeso Ku, 2021, "Soil/rock interface profiling using a new passive seismic survey: Autocorrelation seismic interferometry", *Tunnelling and Underground Space Technology*, 115, 104045
- Jingjing Zong^{*}, Jizhong Yang, Arthur Cheng, Yunyue Elita Li, Yukai Wo, and Yue Du, 2021, "Fractured basement imaging using random-space-shift reverse-time-migration: a vertical seismic profile survey in Bohai Bay Basin, China", *Geophysics*, 87(1), 1-37, 2021
- Ahmed Zidan*, Yunyue Elita Li, and Arthur Cheng, 2021, "A Pareto Multi-Objective Optimization Approach for Anisotropic Shale Models", JGR: Solid Earth, 126(7), e2020JB021476
- Nan You*, Yunyue Elita Li, and Arthur Cheng, 2021, "3D Carbonate Digital Rock Reconstruction Using Progressive Growing GAN", JGR: Solid Earth, 126(5), e2021JB021687
- 32. Heng Zhang, D Zhao, J Zhao, Yunyue Elita Li, H Liu, M Ding, Y Jiang and X Xu, 2021, "Upper mantle heterogeneity and radial anisotropy beneath the western Tibetan Plateau", *Tectonics*, 40(2), e2020TC006403
- Jinwei Fang, Hui Zhou, Yunyue Elita Li, Qingchen Zhang, Lingqian Wang, Pengyuan Sun, and Jianlei Zhang, 2020, "Data-driven low-frequency signal recovery using deep-learning predictions in full-waveform inversion", *Geophysics*, 85(6), A37–A43
- Jizhong Yang*, Yunyue Elita Li, Yuzhu Liu, Yanwen Wei and Haohuan Fu, 2020, "Mitigating the cycleskipping of full-waveform inversion by random gradient sampling", *Geophysics*, 85(6), R493–R507

- Bei Li^{*}, Yunyue Elita Li, and Jizhong Yang, 2020, "Q-interface imaging using accumulative attenuation estimation", *Geophysics*, 85(6), R509–R523
- 28. Jizhong Yang^{*}, **Yunyue Elita Li**, Yuzhu Liu, and Jingjing Zong, 2020, "Least-squares extended reverse time migration with randomly sampled space shifts", *Geophysics*, 85(6), S357–S369
- 27. Heng Zhang, Dapeng Zhao, Changhui Ju, Yunyue Elita Li, Guohui Li, Min Ding, Shuze Chen, and Junmeng Zhao, 2020, "Upper Mantle Deformation of the Terror Rift and Northern Transantarctic Mountains in Antarctica: Insight From P Wave Anisotropic Tomography", *Geophysical Research Letters*, 47(9)
- Gang Fang*, Yunyue Elita Li, Yumin Zhao, and Eileen Martin, 2020, "Urban Near-surface Seismic Monitoring using Distributed Acoustic Sensing", *Geophysical Research Letters*, 47(6), e2019GL086115
- 25. Yunhuo Zhang^{*}, **Yunyue Elita Li**, Taeso Ku, 2020 "A modified seismic reflection approach for engineering geology investigation in fractured rock zones", *Engineering Geology*, 270(5)
- 24. Nan You*, Yunyue Elita Li, and Arthur Cheng, 2020, "Shale anisotropy model building based on deep neural networks", JGR: Solid Earth, 125(2)
- Sung-Woo Moon, Robin E. Kim, Arthur C.C. Cheng, Yunyue Elita Li, and Taeseo Ku, 2020, "Post-processing of background noise from SCPT auto source signal: A feasibility study for soil type classification", Measurement, 156
- 22. Jizhong Yang^{*}, **Yunyue Elita Li**, Arthur Cheng, Yuzhu Liu, and Liangguo Dong, 2019, "Least-squares reverse time migration in the presence of velocity errors", *Geophysics*, S567 S580, 84(6)
- Yunyue Elita Li, Arthur Cheng, and Nan You, 2019, "Shale anisotropy estimation from logs in vertical wells", JGR: Solid Earth, 124(7), 6602-6611
- Yunhuo Zhang*, Yunyue Elita Li, and Taeseo Ku, 2019, "Geotechnical site investigation for tunneling and underground works by advanced passive surface wave survey." *Tunnelling and Underground Space Technology*, 319-329
- Guohui Li, Yunyue Elita Li, Heng Zhang, Wenlan Li, Qinghui Cui, Ling Bai, and Yuanze Zhou, 2019, "Detection of a low-velocity layer atop the mantle transition zone beneath northeastern South China Sea from triplicated waveform modeling", BSSA, 1181-1193, 109(4)
- 18. Jizhong Yang^{*}, **Yunyue Elita Li**, Yanwen Wei, Haohuan Fu, and Yuzhu Liu, 2019, "Full-waveform inversion with randomized space shift", *The Leading Edge*, 197-203, 38(3)
- Qiaomu Qi*, Arthur Cheng, and Yunyue Elita Li, 2019, "Determination of formation shear attenuation from dipole sonic log data", *Geophysics*, D73-D79, 84(3)
- 16. Yunhuo Zhang^{*}, **Yunyue Elita Li**, Heng Zhang, and Taeseo Ku, 2019, "Near-surface site investigation by seismic interferometry using urban traffic noise in Singapore", *Geophysics*, B169-B180, 84(2)
- 15. Yue Du^{*}, **Yunyue Elita Li**, Jizhong Yang, Arthur Cheng, and Xinding Fang, 2019, "Source independent converted wave imaging using acoustic propagators", *Geophysics*, S17-S27, 84(1)
- 14. Jizhong Yang^{*}, Yuzhu Liu, **Yunyue Elita Li**, Arthur Cheng, and Liangguo Dong, 2019, "Joint least-squares reverse time migration of primary and prismatic waves" *Geophysics*, S29-S40, 84(1)
- 13. Joseph Ho Yin Ma^{*}, **Yunyue Elita Li**, and Arthur Cheng, 2019, "Dependency of flow and transport properties on aperture distributions and compression states", *Geophysical Prospecting*, 900-912, 67(4)
- Heng Zhang, Yunyue Elita Li, Dapeng Zhao, Junmeng Zhao and Hongbing Liu, 2018, "Formation of rifts in central Tibet: Insight from P-wave radial anisotropy", *Journal of Geophysical Research: Solid Earth*, 8827-8841, 123
- 11. Yunyue Elita Li, Yue Du, Jizhong Yang, Arthur Cheng, and Xinding Fang, 2018, "Elastic reverse time migration using acoustic propagators", *Geophysics*, S399-S408, 83(5)
- Yi Shen, Jack Dvorkin, and Yunyue Elita Li, 2018, "Improving seismic Q_P estimation using rock-physics constraints", *Geophysics*, MR187-MR198, 83(3)
- Yunyue Elita Li and Laurent Demanet, 2016, "Full waveform inversion with extrapolated low frequency data", *Geophysics*, R339-R348, 81(6)
- Yunyue Elita Li, Biondo Biondi, Robert Clapp and Dave Nichols, 2016, "Integrated VTI model building with seismic, geological and rock physics data: Part I - Theory and synthetic examples", *Geophysics*, C177-C191, 81(5)
- Yunyue Elita Li, Biondo Biondi, Gary Mavko and Dave Nichols, 2016, "Integrated VTI model building with seismic, geological and rock physics data: Part II - Gulf of Mexico field examples", *Geophysics*, C205-C218, 81(5)

- Yunyue Elita Li, Mandy Wong and Robert Clapp, 2016, "Equivalent accuracy at a fraction of the cost: Overcoming temporal dispersion", *Geophysics*, T189-T196, 81(5)
- Yunyue Elita Li, Biondo Biondi, Dave Nichols, and Robert Clapp, 2016, "Toward a closed loop from seismic imaging to earth-model building", *The Leading Edge*, 135-139, 35
- Yunyue Elita Li and Laurent Demanet, 2015, "Phase and amplitude tracking for seismic event separation", Geophysics, WD59-WD72, 80(6)
- 3. Yunyue Elita Li, Biondo Biondi, Robert Clapp and Dave Nichols, 2014, "Wave equation migration velocity analysis for VTI models", *Geophysics*, WA59-WA68, 79(3)
- Renè-Édouard Plessix and Yunyue Elita Li, 2013, "Waveform acoustic impedance inversion with spectral shaping", *Geophysical Journal International*, 301-314
- 1. Yunyue Elita Li, Yang Zhang and Jon Claerbout, 2012, "Hyperbolic estimation of sparse models from erratic data", *Geophysics*, V1-V9, 77(1)

PEER-REVIEWED CONFERENCE PAPERS

- 61. Yunyue Elita Li and Arthur Cheng, "Applied geophysical research for sustainable societies", Second IMAGE Meeting, 2022.
- Nan You, Yunyue Elita Li and Arthur Cheng, "ML-based facies classification on acoustic image logs from Brazilian pre-salt region", Second IMAGE Meeting, 2022.
- 59. Yumin Zhao, Yunyue Elita Li, Bei Li, Wei Luo, Zhaoyin Liu and Yuxuan Zhou, "Seismic attenuation extracted from isolated traffic signals", *Second IMAGE Meeting*, 2022.
- Yanlong Niu, Yunyue Elita Li and Siau Chen Chian, "Full phase-velocity spectrum inversion of multimode Rayleigh waves", Second IMAGE Meeting, 2022.
- 57. Enhedelihai Nilot, Gang Fang, Yun Zhou Tan, Yanlong Niu, Heng Zhang, and **Yunyue Elita Li**, "Subsurface monitoring during tunnel excavation area using auto-correlation", *Second IMAGE Meeting*, 2022.
- 56. Gang Fang, Yun Zhou Tan, Enhedelihai Nilot, Yanlong Niu, **Yunyue Elita Li** and Arthur Cheng, "Monitoring tunneling construction using distributed acoustic sensing", *Second IMAGE Meeting*, 2022.
- 55. Sayan Mukherjee and Yunyue Elita Li, "Poisson binomial-based random undersampling scheme for nearsurface compressive sensing", *Second IMAGE Meeting*, 2022.
- Enhedelihai Nilot, Gang Fang, Yunyue Elita Li, and Yumin Zhao, "Characterizing ambient seismic sources in an urban environment", *First IMAGE Meeting*, 2021.
- 53. Yunyue Elita Li, Enhedelihai Nilot, Yumin Zhao, and Gang Fang, "Urban activity monitoring using wireless geophones in Singapore", *First IMAGE Meeting*, 2021.
- 52. Gang Fang, **Yunyue Elita Li**, Enhedelihai Nilot, Yumin Zhao, and Arthur Cheng, "Anonymous vehicle identification on seismic spectrograms", *First IMAGE Meeting*, 2021.
- 51. Yumin Zhao, **Yunyue Elita Li**, and Bei Li, "Estimation of Rayleigh to Love waves ratio from ambient noise recorded by DAS", *First IMAGE Meeting*, 2021.
- 50. Yanwen Wei, **Yunyue Elita Li**, and Haohuan Fu, "Building training dataset for deep learning-based P- and S-wave separation: field data case", *First IMAGE Meeting*, 2021.
- Nan You, Yunyue Elita Li, and Arthur Cheng, "2D-to-3D reconstruction of carbonate digital rocks using Progressive Growing GAN", First IMAGE Meeting, 2021.
- 48. Bei Li, and **Yunyue Elita Li**, "Neural network-based CO2 interpretation from Sleipner 4D seismic images", *First IMAGE Meeting*, 2021.
- 47. Ahmed Zidan, **Yunyue Elita Li**, and Arthur Cheng, "Regularized Amplitude Inversion using Kernelized Stein Discrepancy", *First IMAGE Meeting*, 2021.
- 46. Yunyue Elita Li, Enhedelihai Nilot, and Xuan Feng, "Observation of guided and reflection P-waves in urban ambient noise cross-correlograms", *SEG Annual Meeting*, 2020.
- 45. Enhedelihai Nilot, **Yunyue Elita Li**, and Karen Kythgoe, "Bedrock detection based on seismic interferometry using ambient noise in Singapore", *SEG Annual Meeting*, 2020.
- 44. Huaigu Tang, Arthur Cheng, **Yunyue Elita Li**, and Xinding Fang, "Borehole acoustic full-waveform inversion", *SEG Annual Meeting*, 2020.
- Jingjing Zong, Jizhong Yang, Arthur Cheng, and Yunyue Elita Li, "A walkaway VSP survey for fracturedbasement imaging using RSS-RTM", SEG Annual Meeting, 2020.

- 42. Jizhong Yang, Jingjing Zong, Arthur Cheng, and **Yunyue Elita Li**, "The behavior of least-squares extended reverse time migration for vertical seismic profiling data", *SEG Annual Meeting*, 2020.
- 41. Joseph Ma, Yu Qiu, **Yunyue Elita Li**, Bo-Ye Fu, and Arthur Cheng, "Inversion of fracture aperture distribution from permeability-velocity relations", *SEG Annual Meeting*, 2020.
- 40. Bo-Ye Fu, Arthur Cheng, and **Yunyue Elita Li**, "The Poisson effect influence on the stress dependent fluid migration properties of a fracture", *SEG Annual Meeting*, 2020.
- Gang Fang, Yunyue Elita Li, and Ohad Barak, "The seismic aircraft footprint: probing near surface and tracking aircraft", SEG Annual Meeting, 2020.
- 38. Yanwen Wei, **Yunyue Elita Li**, Jizhong Yang, JIngjing Zong, Jinwei Fang and Haohuan Fu, "Multi-task learning based P/S wave separation and reverse time migration for VSP", *SEG Annual Meeting*, 2020.
- 37. Yumin Zhao, and **Yunyue Elita Li**, "On beamforming of ambient noise recorded by DAS", *SEG Annual Meeting*, 2020.
- Yong Zheng Ong, Nan You, Yunyue Elita Li, and Haizhao Yang, "Digital rock image inpanting using GANs", SEG Annual Meeting, 2020.
- 35. Yunhuo Zhang, **Yunyue Elita Li**, Heng Zhang, and Taeseo Ku, "Near-surface bedrock profiling using urban ambient noise: An autocorrelation approach", *SEG Annual Meeting*, 2019.
- Yumin Zhao, Fang Fang, and Yunyue Elita Li, "Extracting subsurface information based on extremely short period of DAS recordings", SEG Annual Meeting, 2019.
- 33. Yanwen Wei, Haohuan Fu, Yunyue Elita Li, and Jizhong Yang, "A new P-wave reconstruction method for VSP data using conditional generative adversarial network", SEG Annual Meeting, 2019.
- Nan You, Yunyue Elita Li, and Arthur Cheng, "Shale anisotropy model building based on deep neural networks", SEG Annual Meeting, 2019.
- Jizhong Yang, Yunyue Elita Li, and Yuzhu Liu, "Least-squares reverse time migration with random space shift", SEG Annual Meeting, 2019.
- 30. Yunyue Elita Li, Jizhong Yang, Arthur Cheng, and Jiubing Cheng, "Simulating kinematics of P- and S-wave scattering using scalar wave equations", *SEG Annual Meeting*, 2019.
- Bei Li, Yunyue Elita Li, and Jizhong Yang, "Robust data-driven Q-interface imaging", SEG Annual Meeting, 2019.
- 28. Enhedelihai Nilot, Yunhuo Zhang, **Yunyue Elita Li**, and Xuan Feng, "Deep bedrock detection based on ambient noise recorded by a short geophone array: A Singapore case study", *SEG Annual Meeting*, 2019.
- 27. Jizhong Yang, **Yunyue Elita Li**, Yuzhu Liu, "Robust reverse time migration with random space shifts", *EAGE Annual Meeting*, 2019.
- 26. Yunhuo Zhang, **Yunyue Elita Li**, Heng Zhang and Taeseu Ku, "Optimized passive seismic interferometry for bedrock detection: A Singapore case study", *SEG Annual Meeting*, 2018.
- Gang Fang, Yunyue Elita Li, Yue Du, Joseph Ma, Eileen Martin and Diming Yu, "Near-surface monitoring enabled by Distributed Acoustic Sensing: An example of the Stanford Array Data", SEG Annual Meeting, 2018.
- Joseph Ma, Qiaomu Qi, Yu Qiu, Yunyue Elita Li and Arthur Cheng, "Inferring static elastic properties of fractures from flow measurements", SEG Annual Meeting, 2018.
- Bei Li, Yunyue Elita Li and Jizhong Yang, "Q-interface imaging based on data-domain attenuation estimation", SEG Annual Meeting, 2018.
- 22. Jizhong Yang, **Yunyue Elita Li**, Yanwen Wei, Haohuan Fu and Yuzhu Liu, "Full-waveform inversion based on gradient sampling algorithm with randomized space shift", *SEG Annual Meeting*, 2018.
- Jizhong Yang, Yunyue Elita Li, Arthur Cheng, Yuzhu Liu and Liangguo Dong, "Least-squares reverse time migration with velocity errors", SEG Annual Meeting, 2018.
- Yue Du, Yunyue Elita Li, Jizhong Yang, Arthur Cheng and Xinding Fang, "Multicomponent and source-free converted-wave reverse-time migration for VSP", SEG Annual Meeting, 2018.
- 19. Yunyue Elita Li, Yue Du, Jizhong Yang, Arthur Cheng and Xinding Fang, "A separated formulation of the elastic wave equation in P-and S-potential Fields", *EAGE Annual Meeting*, 2018.
- Yue Du, Yunyue Elita Li, Jizhong Yang, Arthur Cheng and Xinding Fang, "Source-free converted-wave reverse-time migration using acoustic propagators", CPS/SEG Beijing 2018 International Geophysical Conference and Exposition, 2018.

- 17. Joseph Ho Yin Ma, Yunyue Elita Li, and Arthur Cheng, "Modelling electrical resistance of stressed rough fractures", APGCE, 2017.
- 16. Yunyue Elita Li, Fangyan Huang, and Arthur Cheng, "Anisotropic model building from well logs and seismic amplitudes", APGCE, 2017.
- 15. Yunyue Elita Li, Arthur Cheng and Aaron Fong, "Anisotropic model building from logs in vertical wells", *SEG Annual Meeting*, 2017, Ranked in the top 39 papers out of 1100 presented.
- 14. Yunyue Elita Li, and Laurent Demanet, "Extrapolated full-waveform inversion: An image-space approach", *SEG Annual Meeting*, 2017.
- 13. Jizhong Yang, Yuzhu Liu, Liangguo Dong, **Yunyue Elita Li**, and Arthur Cheng, "Least-squares reverse time migration incorporating prismatic waves", *SEG Annual Meeting*, 2017.
- 12. Qiaomu Qi, Arthur Cheng, and **Yunyue Elita Li**, "Estimating formation shear attenuation from frequencydependent dipole-flexural wave attenuation", *SEG Annual Meeting*, 2017.
- 11. Joseph Ho Yin Ma, **Yunyue Elita Li** and Arthur Cheng, "The effects of aperture distribution and compression on transport properties in rock fractures", *SEG Annual Meeting*, 2017.
- 10. Yunyue Elita Li, "Extrapolated Full Waveform Inversion via Model Extension", EAGE, 2017.
- 9. Yunyue Elita Li, and Laurent Demanet, "Extrapolated full-waveform inversion (EFWI) with synthesized low-frequency data", *SEG Annual Meeting*, 2016, Ranked in the top 30 papers out of 1100 presented.
- 8. Yunyue Elita Li, Biondo Biondi, Gary Mavko, and Dave Nichols, "Integrated VTI Model Building with Seismic, Geological and Rock Physics Data", in 77th EAGE Conference & Exhibition, 2015.
- Yunyue Elita 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.
- Yunyue Elita Li, Gary Mavko and Dave Nichols, "Stochastic rock physics modeling for seismic anisotropy", in SEG Expanded Abstracts, 33, 2014.
- 5. Yunyue Li, "Image-guided WEMVA for azimuthal anisotropy", in SEG Expanded Abstracts, 32, 2013.
- 4. Yunyue Li, Peng Shen and Colin Perkins, "VTI migration velocity analysis using RTM". SEG Extanded Abstracts, 31, 2012.
- Yunyue Li and Biondo Biondi, "Migration velocity analysis for anisotropic models", SEG Extended Abstracts, 30, 2011.
- 2. Yunyue Li, Dave Nichols, Konstantin Osypov and Ran Bachrach, "Anisotropic tomography using rock physics constraints", *EAGE 73rd Conference and Exhibition*, 2011.
- 1. Yunyue Li, Yang Zhang and Jon Claerbout, "Geophysical applications of a novel and robust L1 solver", *SEG Extended Abstracts*, 29, 2010.

INVITED ARTICLES

- 2. Yunyue Elita Li, Daniel O'Malley, JGR Guest Editors, "Machine Learning Developments and Applications in Solid-Earth Geosciences: Fad or Future?", 2023, JGR: Solid Earth
- Yunyue Elita Li, "President's Page Urban geophysics: Where geophysics meets society head-on", 2022, The Leading Edge, 41(8)

PLENARY AND KEYNOTE SPEECHES

- 10. "Monitoring groundwater level using wind turbine generated noise", Oct 17, 2023, Session Keynote at 7th International Conference on Engineering Geophysics, Al Ain, UAE
- 9. "Carbon sequestration in the subsurface: the atlas and the monitoring", May 25, 2022, Plenary Speaker at MIT ERL Annual Founding Members Meeting, Cambridge, MA, USA
- 8. "Making sense of urban noise", Plenary Speaker at Business of Applied Geophysics (BAG) session, September 2021, *IMAGE Meeting*, Denver, US
- 7. "Listening to Singapore: Harvesting urban noise for space, water, and geohazard", Plenary Speaker at Business of Applied Geophysics (BAG) session, September 2021, *SEG*, US (Presented remotely)
- "Wave mode separation from VSP data: Conventional vs. NN methods", Keynote Speaker, 5-7 November 2019, 2019 SEG 3rd International Workshop on Mathematical Geophysics: Traditional vs Learning, Beijing, China

- "Shale anisotropy estimation from well logs based on Hudson-Cheng model and deep neural network", Keynote Speaker, 25-27 October 2019, 2nd SEG Rock Physics Workshop: Challenges in Deep and Unconventional Oil/Gas Exploration, Qingdao, China
- "Active and passive seismic investigation for bedrock mapping in an urban environment: Cases studies in Singapore", Keynote Speaker, 29-31 July 2019, SEG Geophysics for Smart City Development Workshop, Beijing, China
- 3. "Theory and implementations of multicomponent elastic wave imaging", Plenary Speaker, 11-14 March 2019, SIAM Conference on Mathematical and Computational issues in the Geosciences, Houston, US
- "Coupled optical and seismic modeling for a realistic DAS record", Keynote speaker, 28-30 October 2018, SEG Borehole Geophysics Workshop, Guilin, China
- 1. "Geophysical applications in urban environments", Plenary Speaker, 17th October 2018, SEG Annual Meeting, Anaheim, US

INVITED TALKS

- 35. "Carbon sequestration in the subsurface: The atlas and the monitoring", Nov 21, 2023, *SEG/SPE Student Chapter Event*, National University of Colombia, Colombia (Presented remotely)
- 34. "Listening to cities: a noisy, fun, and informative data mining experience", Oct 26, 2023, Department Seminar, Northwestern University, Chicago, IL, USA
- 33. "Carbon sequestration in the subsurface: The atlas and the monitoring", Sep 25, 2023, Department Seminar, Tongji University, Shanghai, China
- 32. "Machine Learning Applications in Solid-Earth Geosciences A Review", Sep 28, 2023, Department Seminar, Zhejiang University, Hangzhou, Zhejiang, China
- 31. "Applied geophysics research around the circular economy", July 10, 2023, Civil Engineering Department Seminar, Shandong University, Jinan, Shandong, China
- 30. "Applied geophysics research around the circular economy", May 30, 2023, Geophysics Department Seminar, China University of Petroleum, Beijing, China
- "Machine Learning Applications in Solid-Earth Geosciences A Review", May 1, 2023, Computational Mathematics Seminar, University of Maryland, USA
- "Techno-Socio-Economic analysis of CCS in ASEAN", Apr 23, 2023, TCCS Consortium Meeting, University of Texas, Austin, Houston, TX, USA
- 27. "Seismic monitoring: the best case, the lucky case, and the optimal case", Mar 10, 2023, ExxonMobil Research Seminar, USA (Presented remotely)
- 26. "Connecting urban ambient noise with groundwater", January 13, 2023, 1st SEG Women Geoscientist Leadership Forum, Beijing, China (Presented remotely)
- 25. "Applied geophysics research for sustainable societies", November 3, 2022, USTC, Hefei, China (Presented remotely)
- 24. "Applied geophysics research for sustainable societies", June 29, 2022, Central South University, Changsha, China (Presented remotely)
- 23. "Carbon sequestration in the subsurface: the atlas and the monitoring", March 31, 2022, SPE Student Chapter, Stanford, CA, USA
- 22. "Carbon sequestration in the subsurface: the atlas and the monitoring", March 16, 2022, *Heiland Lecture, Colorado School of Mines*, Golden, CO, USA
- 21. "Illuminating the darkness: smart urban underground space", February 2022, *LEAP Conference*, Riyadh, Saudi Arabia
- 20. "Listening to Singapore: Harvesting urban noise for space, water, and hazard mitigation", February 2022, *AEG-ASCE Chicago Chapter*, US (Presented remotely)
- 19. "Seismic observations of urban ambient noise from tunnel boring machines", December 2021, AGU Annual Conference, New Orleans, USA
- 18. "Passive seismic imaging/monitoring in urban settings: the Singapore examples", October 2021, Gypsum Seminar, USA (presented remotely)
- 17. "Harvesting urban noise for space, water, and human activities", March 2021, Hubei University of Technology, China (presented remotely)

- 16. "Listening to Singapore: Seismology for urban monitoring", Jan 2021, *Isterre Grenoble*, France (presented remotely)
- 15. "Towards Wave-mode separation on field data using deep neural networks", Nov 2020, Artificially Intelligent Earth Exploration Workshop, UAE (presented remotely)
- 14. "Waveform inversion, space extension, and model space sampling", July 2020, SIAM Imaging Science, Canada (presented remotely)
- 13. "Urban geophysical sensing and applications", Jun 2020, *Pennsylvania State University*, USA (presented remotely)
- 12. "Listening to Singapore: Harvesting urban noise for space, water, and geohazard", Jun 2020, Geotechnical Society of Singapore, Singapore (presented remotely)
- 11. "Waveform inversion with gradient sampling new understanding of spatial shifts", Feb 2020, MIT Earth Resources Laboratory, Boston, USA
- 10. "Listening to Singapore: Harvesting urban noise for space, water, and geohazard", Feb 2020, MIT Department of Civil and Environmental Engineering, Boston, USA
- 9. "Solving large-scale geophysical inverse problems physics and learning", Feb 2020, *Purdue University*, West Lafayette, USA
- 8. "Multicomponent elastic imaging: Theory, practice, and limitations", Jul 2019, Southern University of Science and Technology, Shenzhen, China
- 7. "Elastic reverse time migration and inversion", Apr 2019, University of Science and Technology of China, Hefei, China
- 6. "Full waveform inversion with random space shifts", Dec 2018, China University of Petroleum, Beijing, China
- 5. "Elastic reverse time migration: new insights from old equations", Dec 2018, *Peking University*, Beijing, China
- 4. "Distributed Acoustic Sensing: A Stereoscopic Urban Monitoring System", Dec 2018, ExxonMobil Research and Engineering Company, Clinton, US
- 3. "Mitigating nonconvexity of seismic inverse scattering problem", Sep 2018, Workshop on Qualitative and Quantitative Approaches to Inverse Scattering Problems, Institute for Mathematical Sciences, Singapore
- 2. "Elastic imaging: new insights from old equations", Mar 2018, Workshop on Seismicity near the Hutubi Underground Gas Storage and Mechanism of Induced Earthquakes, CUHK, China
- 1. "Least-squares reverse time migration in the presence of velocity errors", Oct 2017, Mathematical Geophysics Workshop, Harbin, China