

Jihyun Yang

Contact Information	Mobile : +1 979-402-9447 Email : jihyunyang@mymail.mines.edu Homepage: https://jhgeeyang.github.io
Doctoral Projects and Experience	Distributed Acoustic Sensing (DAS) <ul style="list-style-type: none">- Processing DAS data to recover Rayleigh wave component- Surface wave inversion using field low-frequency Dark Fiber DAS dataset- Designing a monitoring system with DAS Full Waveform Inversion (FWI) <ul style="list-style-type: none">- Optimal generalized inverse for the Laplace and Laplace-Fourier domain waveform inversion- Regularization for waveform inversion Program optimization for geophysical software <ul style="list-style-type: none">- Parallel computing optimization with CUDA and MPI: 2D Elastic Wave Modeling, Domain Decomposition, FWI parallelization Machine Learning <ul style="list-style-type: none">- Data-Driven inversion of CO2 leakage simulation data- Designing event detection systems via FCN(Fully Connected Network) using Pytorch- Develop novel method for Pseudo - Labeling Signal Processing & Image processing <ul style="list-style-type: none">- Deblurring Kernels- Compressive Sensing
Education	Ph.D. Student <u>Geophysics</u> , Colorado School of Mines, Golden, United States Minor in <u>Computational and Applied Mathematics</u> Master of Engineering (February 2018) Energy Resource Engineering, Seoul National University, Seoul, Republic of Korea Bachelor of Engineering (February 2016) Energy Resource Engineering, Seoul National University, Seoul, Republic of Korea Bachelor of Science (February 2016) Computational Science, Seoul National University, Seoul, Republic of Korea
Work Experience	Summer Research Intern June. 2019 ~ Aug. 2019 Los Alamos National Laboratory The Information Science & Technology Institute (ISTI) summer school <u>AML(Applied Machine Learning)</u> in Geosciences (Advisor: Dr. Youzuo Lin) Visiting Scholar Sep. 2017 ~ Dec. 2017 Geophysics Lab, Texas A&M University (Advisor: Dr. Gibson)
Awards and Scholarship	SEG/ExxonMobil Student Education Program(SEP) 2019 2019 Los Alamos National Lab Student Symposium Winner Jihyun Yang, Renan Rojas-Gomez (NSEC) - <i>Data-Driven FWI Methods for Seismic Imaging: Generalization and Robustness Study</i> Korea Scholarship Foundation (2011~2016)
Publications	Shragge, J., Yang, J., Issa, N. A., Roelens, M., Dentith, M., & Schediwy, S. (2019). Low-frequency ambient Distributed Acoustic Sensing (DAS): Useful for subsurface investigation?. In <i>SEG Technical Program Expanded Abstracts 2019</i> (pp. 963-967). Society of Exploration Geophysicists.

Research Experience	<p>Researcher Aug. 2018 ~. <i>Institute</i> : Center for Wave Phenomena., Colorado School of Mines <i>Subject</i>: Data Processing of DAS(Distributed Acoustic Sensing)</p> <p>Researcher Mar. 2016 ~ Feb 2018. <i>Institute</i> : Geophysical Prospecting Lab., Seoul National University <i>Subject</i> : Research on Exploration Technologies and an On-site Verification to Enhance the Fracturing Efficiency of a Shale Gas Formation <i>Funding</i> : Ministry of Trade, Industry & Energy</p> <p>Researcher Mar. 2016 ~ Feb 2018. <i>Institute</i> : Geophysical Prospecting Lab., Seoul National University <i>Subject</i> : Iterative Direct Waveform Inversion for subsurface imaging <i>Funding</i> : Ministry of Trade, Industry & Energy</p> <p>Researcher & Algorithm Developer <i>Company</i>: VisualCamp <i>Subject</i>: Eye tracking in a mobile device - Computational Optimization, Face landmark detection, prediction</p>
Computer Skills	<ul style="list-style-type: none"> - Advanced programmer in: Modern Fortran(Fortran90), C++, C, MATLAB, Python, Java - Proficient in: CUDA, MPI, OpenMP parallelization - Libraries: Pytorch, Tensorflow, Keras, OpenCV, Scikit-Learn
Associations	<p>Society of Exploration Geophysicists (SEG) Society of Petroleum Engineers (SPE)</p>
Volunteer Work and External Activities	<p>Staff and members of SNU's running club (Dalisha) Member of SNU Computer Science Society (SCSC) - Participate in Python education activities and machine learning seminars Samsung Dream Class Mentoring - Mathematics and English Teaching of Low Income Middle School Students (2013 ~ 2014)</p>