Curriculum Vitae - Ji Hyun Yang

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Fields of Interest

Waveform Inversion
 - Optimal generalized inverse for the Laplace and Laplace-Fourier domain waveform inversion
 - Regularization for waveform inversion

Program optimization for geophysical software
 - Parallel computing optimization with CUDA and MPI

Machine Learning
 - try to integrate machine learning scheme in Geophysical inversion
 - try to use Radial Basis function network to enhance the performance of Laplace waveform Inversion

Signal Processing & Image processing
 - Interest in PCA methods.

Education

Phd Candidate (Expected 2023)
Geophysics, Colorado School of Mines, Golden, United States
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

Research Subjects

Researcher   Aug. 2018 ~.
Institute : Center for Wave Phenomena., Colorado School of Mines
Subject: Data Processing of DAS(Distributed Acoustic Sensing)

Researcher   Mar. 2016 ~ Feb 2018.
Institute : Geophysical Prospecting Lab., Seoul National University
Subject : Research on Exploration Technologies and an On-site Verification
      to Enhance the Fracturing Efficiency of a Shale Gas Formation
Funding : Ministry of Trade, Industry & Energy

Researcher   Mar. 2016 ~ Feb 2018.
Institute : Geophysical Prospecting Lab., Seoul National University
Subject : Iterative Direct Waveform Inversion for subsurface imaging
Funding : Ministry of Trade, Industry & Energy

Researcher & Algorithm Developer
Company: VisualCamp
Subject: Eye tracking in mobile device - Computational Optimization, Face landmark detection, prediction

Computer Skills	**Programming**
	  - Advanced programmer in Modern Fortran(Fortran90)
	  - Advanced programmer in C++
	  - Advanced programmer in MATLAB
	  - Advanced programmer in Python
	    Worked as a freelancer to create document auto-generating program for English tutoring
	    Worked as a private tutor to teach algorithms
	  - Advanced programmer in Java
	    Worked as a private tutor to instruct computer programming, algorithms
	    Worked as a freelancer programmer to create document auto-generating program for English tutoring
	  - Intermediate programmer in CUDA parallelization
	  - Intermediate programmer in MPI parallelization
	  - Experience in web framework Django: created personal blog
	  - Experience in OpenGL, OpenMP, OpenCV, Tensorflow Libraries, Raspberry Pi

Associations	Society of Exploration Geophysicists (SEG) Society of Petroleum Engineers (SPE)
Internships	**Visiting Scholar** Sep. 2017 ~ Dec. 2017 Geophysics Lab, Texas A&M University (Advisor: Dr. Gibson)
Languages	Fluent in Korean(Native) Fluent in English Performed English translation work of Inha University online public lecture (MOOC) for one year - Physics lecture subtitle translation - FTA Economy Lecture Subtitle Translation Worked as a support intern in Office of Public relations in Engineering department of Seoul National University to help foreign students TEPS(Test of English Proficiency developed by Seoul National University) 864 TOEIC 915 Novice level of Japanese, Spanish and French Exchange student experience (École des mines) and summer school activities (in Tokyo University) enable me to communicate with foreigners without any problems
External Activities	Staff and members of SNU's running club (Dalisha) - Half marathon and more than ten times of 10km marathon run 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)