

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)