



## Pavel Plotnitskii

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pavelplotnitskii

Github

Born 29<sup>th</sup> August 1994

### EDUCATION

August 2018 – present

#### PhD student in Earth Science and Engineering

**GPA: 3.34/4** | **King Abdullah University of Science and Technology (KAUST)**

- Research group: Seismic wave analysis group
- I have finished several courses related to Machine Learning, HPC and Computational Geophysics.
- Conducted **research** is focused on extrapolating low frequencies in FWI gradient data with convolutional neural network (CNN).

2016 – June 2018

#### Master of Science in Geology, specialization - Geophysics

**GPA: 4.82/5** | **Novosibirsk State University (NSU)** | **Geology-Geophysical department**

- **Thesis:** Localization of microseismic event hypocenters, based on numerical solution of eikonal equation in heterogeneous 3D velocity models
- **Program:** special Geophysical courses

2012 – 2016

#### Bachelor of Science in Geology, specialization - Geophysics

**GPA: 4.3/5** | **Novosibirsk State University (NSU)** | **Geology-Geophysical department**

- **Thesis:** Four-component borehole seismic tool analysis with application to data processing
- **Program:** General Mathematics, Physics, Geology courses

### WORK EXPERIENCE

July 2015 – July 2018

#### Research assistant - Laboratory of seismic dynamic analysis

**IPGG SB RAS, Laboratory of seismic dynamic analysis** | **Novosibirsk, Russia**

- Processing and interpretation of continuous microseismic monitoring data from oil-and-gas field
- Writing scientific papers and preparing data for them
- Automatization of routine seismic processing procedures in Matlab
- Participation in near-surface seismic exploration as a field personnel and processing geophysicist

### PROFESSIONAL INTERESTS

- Seismic and well logging data processing and interpretation
- HPC computing
- Application of Machine learning techniques for seismic problems.
- Microseismic monitoring of hydraulic fracturing and continuous microseismic monitoring of hydrocarbon fields

## PROGRAMMING SKILLS

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- **Matlab** (confident knowledge, 4 years)
- **Python** (intermediate knowledge, 1 year)
- **C** languages (beginner, 1.5 year)

## SOFT KNOWLEDGE

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- Knowledge of Unix, Windows OS
- Petrel
- Tensorflow, Keras (Python APIs for Machine learning)
- Git, Latex
- Experience in performing calculations on CPU and GPU clusters, using Slurm interface
- Understanding of Hadoop, Spark, MapReduce and Machine learning methods
- RadexPro for seismic applications
- Various geophysical soft for Electromagnetic methods (GPR, impulse electrical survey)

## LANGUAGES

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- English – Advanced, IELTS Academic 7.0 (tested in 2018)
- Russian – Native

## ACHIEVEMENTS

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- 2018 – 2022 KAUST PhD Fellowship | *annual funding of 71k \$ @ [KAUST, Saudi Arabia](#)*
- February 2019 Participation in NVIDIA-KAUST GPU Hackathon 2019 @ [KAUST, Saudi Arabia](#)
- April 2018 Having one of the top 25% places in technical case championship “Challengence” | *Participation within a team @ [Novosibirsk, Russia](#)*
- November 2018 – January 2018 21st place out of 50 in the EAGE Laurie Dake challenge 2018 | *Organization of the team and participation with it @ [Novosibirsk, Russia](#)*

## PERSONAL SKILLS

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Continuous Learning | Adaptability | Networking | Perseverance | Responsibility | Punctuality

## MEMBERSHIPS

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EAGE, SEG, Petroleum Exploration Society of Australia (PESA)

## Additional details

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- Russian citizenship
- Driving license

## REFEREES

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- Tariq Alkhalifah, Professor at KAUST
- Anton Duchkov, Head of Laboratory of Seismic dynamic analysis at the Institute of Petroleum Geology and Geophysics SB RAS, PhD
- Sergey Yaskevich, Researcher at IPGG SB RAS, PhD

## SELECTED PUBLICATIONS

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1. Plotnitskii P. S. Conversion of four-component borehole tool records into standard three-component form on the example of real data. Materials of the 54th International Scientific Student Conference ISSC 2016: Geology / NSU Novosibirsk, 2016; p. 55.
2. Plotnitskii P. S. Localization of microseismic event hypocenters, based on numerical solution of eikonal equation in 3D velocity models. Materials of the 55th International Scientific Student Conference ISSC 2017: Geology / NSU Novosibirsk, 2017.
3. 9M02 About Usage of Weak Anisotropy Model in Downhole Microseismic Monitoring Applications. S.V. Yaskevich\* (Novosibirsk State University), A.A. Duchkov (IPGG SB RAS, NSU), P.S. Plotnitskiy (NSU) & A.V. Myasnikov (Skoltech). Horizontal Wells 2017 Challenges and Opportunities, EAGE conference, Kazan, 15-19th of May 2017.
4. Tu SP1 02 The use of four-component data redundancy in microseismic preprocessing - P. Plotnitski\* (Novosibirsk State University, IPGG SB RAS). e-Poster presentation, 79th EAGE Conference and Exhibition 2017, 13-15 June. Student section.
5. ISSN 0747-9239, Seismic Instruments, 2018, Vol. 54, No. 4, pp. 401–407. © Allerton Press, Inc., 2018. Original Russian Text © P.S. Plotnitskii, S.V. Yaskevich, A.A. Duchkov, 2017, published in Seismicheskie Priboi, 2017, Vol. 52, No. 4, pp. 26–36.
6. Seismic model low wavenumber extrapolation by a deep convolutional neural network. Authors: Pavel Plotnitskii, Tariq Alkhalifah, Oleg Ovcharenko & Vladimir Kazei. Conference AEGC 2019, poster presentation, 3-5 September 2019.