

Oleg Ovcharenko

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github.com/ovcharenkoo

INTERESTS

Geophysics & Machine Learning

Inverse problems, Numerical Modeling, HPC, Entrepreneurship**EDUCATION****King Abdullah University of Science and Technologies, Saudi Arabia****PhD Candidate** in Computational Geophysics, GPA: 3.61/4.00 2016 - 2021

Developing a multi-task learning pipeline for bandwidth extrapolation of seismic data. Explored adversarial learning for seismic data denoising and reconstruction. Proposed to extrapolate patterns in frequency domain by a convolutional model to improve convergence of full-waveform inversion. Introduced an automatic variance-based approach for salt body reconstruction. Supervised by Prof. Daniel Peter

Paris VII Diderot, Institut de Physique du Globe de Paris, France**Master of Science** in Exploration geophysics, GPA: 14.15/20.00 2014 - 2015

Developed an accurate finite difference operator for synthetic seismogram calculation in 2D transversely isotropic elastic media with regular meshing. Supervised by Prof. Nobuaki Fuji and Dr. Roland Martin

Lomonosov Moscow State University, Russia**Master of Science** in Physics, GPA: 4.0/5.0 2009 - 2014

Derived analytical solutions for viscous flow in the lithosphere subject to exogenous processes and isostasy. Supervised by Dr. Yuriy L. Rebetskiy

WORK EXPERIENCE**Geoscience (ML) Intern at ExxonMobil, Houston, USA** Sep 2020 - Dec 2020

- Developing nextgen processing methods

Machine Learning Engineer Intern at CGG, Crawley, UK Aug 2019 - Feb 2020

- Engineering a module for pre-processing of seismic data for deep learning pipeline.
- Developed a generative adversarial framework for unsupervised seismic data denoising and extrapolation.
- Published a conference paper

Co-founder at MedSeis, Thuwal, Saudi Arabia 2018 - 2019

- Proposed radiation-free dental imaging based on seismic inversion.
- Raised 30k\$. Built a team of 5.
- Failed trying to make a single large leap toward the final product, instead of approaching the goal gradually.

Venture Capital Intern at KAUST Innovation Fund, Thuwal, Saudi Arabia 2017

- Assisted investment managers to evaluate university-based startups
- Participated in planning of the Arabian Venture Forum

Engineer at department of Tectonophysics, IPE RAS, Moscow, Russia 2013 - 2014

- Reconstructed stress state from data on focal mechanisms at multiple scales
- Published a paper

PROGRAMMING AND TOOLS	Python , MATLAB, CUDA C PyTorch, Keras	LaTeX, HTML, CSS Madagascar, SeismicUnix
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HONORS AND AWARDS	ExxonMobil Upstream Research Company Scholarship NVIDIA-KAUST GPU Hackathon , won 1st award out of 7 teams EAGE GeoQuiz , won 3rd award out of 37 teams worldwide KAUST PhD Scholarship , annual funding of 70k\$, Saudi Arabia GPX Master Scholarship from IPGP and MINES ParisTech, France	2019 2018 2017 2016 - 2020 2014 - 2015
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LANGUAGES	Russian Native English Fluent	French Intermediate Arabic Elementary
CERTIFICATES	Cornell Graduate School of Management Certificate in Entrepreneurship	2018
LEADERSHIP	President of SEG Student Chapter at KAUST	2017
MEMBERSHIPS AND SERVICE	Member of SEG, EAGE Reviewer for journals Geophysics, Geophysical Journal International	
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JOURNAL ARTICLES	<ol style="list-style-type: none"> Deep learning for low-frequency extrapolation from multi-offset seismic data O Ovcharenko, V Kazei, M Kalita, D Peter, T Alkhalifah GEOPHYSICS Mapping seismic data cubes to vertical velocity profiles by deep learning: New full-waveform inversion paradigm? V Kazei, O Ovcharenko, P Plotnitskii, D Peter, X Zhang, T Alkhalifah submitted to GEOPHYSICS Variance-based model interpolation for improved full-waveform inversion in the presence of salt bodies O Ovcharenko, V Kazei, D Peter, T Alkhalifah GEOPHYSICS Present stress field of the crust in South-West Europe and Mediterranean Sea Rebetskiy, Yu., Ovcharenko, O., Savvichev, P. Bulletin of Kamchatka Regional Association "Educational-Scientific Center". Earth Sciences, No. 2(24) 	2019 2019 2018 2014
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CONFERENCE PAPERS	<ol style="list-style-type: none"> Deep Learning for Seismic Data Reconstruction: Opportunities and Challenges O Ovcharenko, S Hou First EAGE Digitalization Conference and Exhibition 2020 Style transfer for generation of realistically textures subsurface models O Ovcharenko, V Kazei, D Peter, T Alkhalifah SEG Technical Program Expanded Abstracts, 2019 Transfer learning for low frequency extrapolation from shot gathers for FWI applications O Ovcharenko, V Kazei, D Peter, T Alkhalifah 81th EAGE Conference and Exhibition 	2020 2019 2019
REFERENCES	<i>Available upon request</i>	