
Dr. Alexey Portnov, Research Associate

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Education

- 2012-2015 **PhD degree.** CAGE - Centre for Arctic Gas Hydrate, Environment and Climate, UiT, The Arctic University of Norway, Tromsø, Norway. PhD thesis: “Role of subsea permafrost and gas hydrate in postglacial Arctic methane releases”. Study areas – South Kara Sea, Barents Sea, West Svalbard margin.
- 2003-2009 **Master’s degree.** Saint-Petersburg State University, Geological faculty, Department of Geophysics, Saint Petersburg, Russia. Specialty – “Geology and geophysics of sea and ocean”, Master’s degree thesis, “Identification of gas-saturated sediments in the upper section of the South Kara Sea sediment cover using high-resolution seismic and gas-geochemical data”.

Professional History

- 2021- Research Associate at the University of Texas at Austin, Jackson School of Geosciences, Austin, USA
- 2017-2020 Postdoctoral scholar at the Ohio State University, School of Earth Sciences, Columbus, USA
- 2016-2017 Postdoctoral scholar at CAGE - Centre for Arctic Gas Hydrate, Environment and Climate, UiT The Arctic University of Norway, Tromsø, Norway
- 2012-2015 PhD at CAGE - Centre for Arctic Gas Hydrate, Environment and Climate, UiT The Arctic University of Norway, Tromsø, Norway
- 2007-2010 Geophysicist at Otto Schmidt Laboratory. Saint-Petersburg, Russia and Kiel, Germany
- 2006-2012 Geophysicist at FSUE “I.S. Gramberg VNIIOkeangeologia”, Saint-Petersburg, Russia

Field Experience

- 2017 May Deep-water Gulf of Mexico. UT-GOM2-1 deep sea drilling project. Test of pressure coring technology in a gas hydrate reservoir. The effort is supported by the U.S. Department of Energy and links UTIG, the Department of Geological Sciences at the Jackson School of Geosciences, and the UT Department of Petroleum and Geosystems Engineering with Columbia University, Ohio State, the University of New Hampshire, the University of Oregon, the University of Washington, the USGS, and the BOEM.
- 2016 October Central Barents Sea, West Svalbard Margin. Installation of long-term marine bottom observatories in areas of active seafloor gas release. Scientific cruise of University of Tromsø and Centre of Excellence for Arctic Gas Hydrate, Environment and Climate
- 2016 June-July Fram Strait, West Svalbard Margin, Barents Sea (3D and 2D seismic survey, multibeam, OBS studies. Scientific cruise of University of Tromsø and Centre for Arctic Gas Hydrate, Environment and Climate)
- 2016 June Barents Sea, West Svalbard margin (ROV survey, hydroacoustic, biological, geochemical studies. Scientific cruise of University of Tromsø and Centre for Arctic Gas Hydrate, Environment and Climate)
- 2014 October Norwegian Sea, West Svalbard Margin (Scientific cruise of University of Tromsø and Centre for Arctic Gas Hydrate, Environment and Climate. Hydro-acoustic, 2D seismic and geological investigations in the areas of active gas plumes)
- 2014 June Norwegian Sea, West Svalbard Margin (Scientific cruise of University of Tromsø and Centre for Arctic Gas Hydrate, Environment and Climate. Hydro-acoustic, 2D seismic and geological investigations in the areas of intensive gas plumes)
- 2013 August Kara Sea (Supervisor in Rosneft and ExxonMobil joint project. Acoustic survey at the potential oil and gas fields)
- 2012 August Kara Sea, West Yamal Shelf (Complex gas-geochemical and high-resolution seismic survey)

- 2012 June Norwegian and Barents Sea (Scientific cruise of University of Tromsø, seismic survey 3D)
 2011 September Kara Sea (Scientific cruise in cooperation with “P.P. Shirshov Institute of Oceanology”, Moscow)
 2009-2011 Four expeditions in the South-China Sea (Gas-geochemical and seismic survey, under the contract with JSC “Vietgazprom”)
 2007 August Laptev Sea (Russian-German scientific cruise)
 2006 September Barents Sea (Geophysical and gas-geochemical survey, under the contract with JSC “Severneftegas”).

Cooperation with national and international research groups

- Ohio State University (USA)
- University of Texas at Austin (USA)
- Bureau of Ocean Energy Management (USA)
- US Geological Survey (USA)
- Chevron (USA)
- CAGE - Center for Arctic Gas Hydrate Environment and Climate, The Arctic University of Norway (Norway)
- CEED - Centre for Earth Evolution and Dynamics, Oslo University (Norway)
- VBPR-Volcanic Basin Petroleum Research (Norway)
- Marine Research Center, Moscow State University (Russia)
- Earth Cryosphere Institute of Tyumen Scientific Centre SB RAS (Russia)
- VNIIOkeangeologia - I.S. Gramberg All-Russia Scientific Research Institute of Geology and Mineral Resources of the World Ocean (Russia)
- VSEGEI - A.P. Karpinsky Russian Geological Research (Russia)
- GEOMAR - Helmholtz Centre for Ocean Research Kiel (Germany)
- OGS-National Institute of Oceanography and Experimental Geophysics (Italy)
- GNS Science (New Zealand)
- MGMC - Marine Natural Resources - Environment Survey Center (Vietnam)

Projects with industry and academia

- 2019-2020 “Gulf of Mexico Hydrate Mapping and Interpretation Analysis” project of the US Bureau of Ocean Energy Management and the Ohio State University. Exploration for new gas hydrate reservoirs.
 2017-2019 “UT-GOM-2: Methane Hydrates in the Gulf of Mexico”. Project focusing on methane hydrate as an unconventional future energy resource; lead by The University of Texas at Austin.
 2014 “Arctic-2014”. Analyses and interpretation of high-resolution seismic data in the areas of gas seepage in the northern Kara Sea, Laptev Sea and Chukchi Sea. Under the contract with PJSC Rosneft.
 2013 “Marine geochemical survey within the license block VP-1”. Acquisition of multibeam data, side-scan sonar data and chirp. Supervisor from Rosneft-Shelf Far East.
 2012 “Regional geological and geophysical studies at the South Kara Sea, off-Yamal peninsula”. Contract with the Federal Subsoil Resources Management Agency of Russia.
 2011 “Complex interpretation of regional geophysical and geochemical studies within blocks 129-132 of Vietnam continental shelf” under the contract with JSC “Sevmorneftegeophysica”. 2D seismic data interpretation complexed with regional geochemical survey directed on the evaluation of petroleum potential.
 2010 “Offshore geochemical survey in blocks 129, 130, 131, 132 on Vietnam’s continental shelf”. Performance of laboratory analysis and interpretation under the contract with JSC “Vietgazprom”.
 2010 “Provision of detailed geochemical survey on the licensed drilling sites Kolskiy-1, Kolskiy-2, Kolskiy-3” within Kolsko-Kaninskaya monocline on the Barents Sea shelf”. Under the contract with JSC “Severneftegas”.
 2008-2009 “SEDORA” project under the contact with “Shell”. High-resolution seismic data interpretation within Russian Arctic shelf. Development of the database of gas-related acoustic anomalies in the Barents Sea, Kara Sea, and Laptev Seas.
 2007-2008 “Estimation of oil and gas potential of Angola shelf within blocks 12, 13, 29, 30 based on the 2D seismic data” under the contract with “Sevmorgeologia”. 2D seismic data interpretation.
 2006 “Marine geological engineering studies within licensed polygons JSC “Severneftegas”, Kolsko-Kaninskaya monocline on the Barents Sea continental shelf” under the contract with JSC “Severneftegas”. High-resolution seismic data interpretation.

2005-2006 “Hydro-geochemical survey within the licensed blocks of JSC “Severneftegas”, Kolsko-Kaninskaya monocline at the Barents Sea continental shelf” under the contract with JSC “Severneftegas”.

Invited talks

2020 December AGU Fall Meeting, USA
2020 February University of Texas at Austin, Institute for Geophysics, USA
2020 January University of Houston, Earth and Atmospheric Science Department, USA
2019 October Russian Academy of Science and Moscow State University, Russia
2019 May Chevron Oil Company, Houston, USA
2018 May Stockholm University, Department of Geological Sciences, Sweden
2018 June Minerals of The Ocean – 9 research conference, Saint-Petersburg, Russia
2017 December Ohio State University, School of Earth Sciences, USA

Grants and funding

2019 Active IODP Proposal “Linking sediment deposition during glacial cycles and methane hydrate occurrence”. A. Cook (Lead Proponent), A. Portnov (Data Lead), A. Malinverno, S. Phillips, K. Thirumalai, E. Arellano Torres, R. Colwell, E., Soloman, J. Hillman, K. Weitemeyer, and P. Flemings. 961-APL.

2019 Bureau of Ocean Energy Management Award “Gulf of Mexico Hydrate Mapping and Interpretation Analysis” (109 700\$). A. Cook (PI), Alexey Portnov (Project Lead). Award #140M0119P0041

2016-2018 postdoc scholarship at UiT- The Arctic University of Norway 1.48 mln NOK (~177 000\$). Project proposal for postdoctoral fellowship entitled “Coupled response of gas hydrate and permafrost systems in Arctic petroleum provinces to post-glacial ice sheet retreat”

Awards

01.11.2019 – Certificate of Appreciation from Program Committee of “Marine Research and Education-2019” for being an invited lecturer at Moscow State University.

28.12.2009 – Diploma of “I.S. Gramberg VNIIOkeangeologia” for long-term conscientious working activity and scientific contribution in the research of ore stock of Russian shelf and the World ocean by the results of 2009 year.

28.12.2010 – Diploma of “I.S. Gramberg VNIIOkeangeologia” for long-term conscientious working activity and scientific contribution in the research of ore stock of Russian shelf and the World ocean by the results of 2009 year.

M.S., thesis mentor

Stuart Skopec, M.S. 2021 (expected). Topic: Gas hydrate exploration and characterization in the Gulf of Mexico

Gabriel Martinez, M.S. 2021 (expected). Topic: Sediment mass transport in the Gulf of Mexico. Ohio State University. Co-supervisor.

Ryan Heber, M.S. 2020. Topic: Gas hydrates offshore Norway. Ohio State University. Co-supervisor.

Academic Service

Reviewer for: *Geology, Journal of Geophysical Research, G-cubed, Marine and Petroleum Geology, Geosciences, Global Change Biology, Journal of Environment and Earth Science, Marine Geophysical Research.*

December 2018, AGU Fall Meeting Session Co-Convener and Co-Chair. Geological and Geophysical Characterization of Marine Gas Hydrate Reservoirs.

September 2018, co-organizer of GOM2 Gas Hydrate Drilling Workshop at the Ohio State University.

March 2018, discussion Leader at Gordon Research Conference on Natural Gas Hydrate Systems.

September 2016, co-organizer of Gas in Marine Sediments conference, Tromso, Norway.

June 2012, co-organizer of Minerals of The Ocean - 6 conference, Saint-Petersburg, Russia.

Outreach

- Geo-visualization channel on Youtube “Visualization Lab”, showing various techniques helping to communicate marine geophysical research, first presented at AGU conference, New Orleans, USA. “Make it fun for everyone: visualization techniques in geoscience”:
<https://www.youtube.com/c/VisualizationLabAlexeyPortnov>
- Invited speaker on Deloitte company YouTube podcast.
- Interviewed by several media-resources in English and Russian, e.g.
<https://www.smithsonianmag.com/science-nature/tiny-world-glacier-microbes-has-outsized-impact-global-climate-180959817/>
<http://barentsobserver.com/en/arctic/2015/01/alarm-over-kara-sea-permafrost-thawing-09-01>
http://www.gazeta.ru/science/2014/12/23_a_6355645.shtml

Training courses and seminars

October 2016	Geological course in Sicily, CAGE, The Arctic University of Norway
May 2015	Scientific presentation workshop (conducted by Melissa Marshall, Pennsylvania State University)
April 2014	ArcGIS training course, Arctic University of Norway, Tromsø, Norway
March 2014	QPS Fledermaus training course, Portsmouth, New Hampshire, USA
March 2010	HPR & HiPAP Acoustic Positioning courses, Kongsberg Maritime - Subsea Training Centre, Horten, Norway
May 2009	Saint-Petersburg State University, “Shell” company seminar, Saint-Petersburg, Russia
April 2008	Saint-Petersburg State University, “Schlumberger” company seminar, Saint-Petersburg, Russia

Additional information

PC – experienced user (Petrel, The Kingdom Suite, Fledermaus, Global Mapper, Surfer, ArcGIS, Geolog, Corel Draw, Mapinfo, Sonar Wiz, Microsoft Office and other)

Native Russian language, fluent English language, basics of Norwegian

Driving license – B category

Personal skills: excellent social skills, self-discipline, analytical thinking, responsible, punctual, result-oriented.