

Curriculum Vitae

Nataliya A. Marchenko

- D.B.: **30.06.1966**
- Status: Married, three children (31, 25 and 23 y. o.)
- Nationality: Russian
- Home address: Longyearbyen, Vei. 238-23B-H0101, Norway – 9170
- Work Address: The University Centre in Svalbard. Arctic Technology department
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Current occupation:

Since 2011 - Research Associate; The University Centre in Svalbard (UNIS), Arctic Technology department

Current projects:

SAMCoT – (2011-2019) [Sustainable Arctic Marine and Coastal Technology](#)

AOCEC – (2018-2020) [Arctic offshore and coastal engineering in changing climate](#)

MARPART – (2014-2020) [Maritime preparedness in the high north – institutional partnership and coordination](#)

MAREC – (2018-2020) [The Inter-organizational coordination of mass rescue operations in complex environments](#)

Education:

1983-1988 BS/MS (Geography), Moscow State University, Faculty of Geography

1988-1991 Post-Graduate Course, Pacific Ocean Institute of Geography Far East Branch of Russian Academy of Science, (Vladivostok)

Qualifications:

1988 - BS/MS National Diploma in Geography.

1992 - PhD. (Environmental and Land use), Institute of geography of Russian Academy of Science and Higher Classification Board under the Council of Ministers of the USSR. Thesis: "Estimation of forest fire danger on the base of analysis of natural territorial complexes state"

2006 – The qualification of teacher of highest category

Work Experience:

1988-1991 Junior Researcher, Laboratory of Explosion and Fire Securing,
Institute of Applied Mathematics, Far Eastern Branch of Academy Science of the
USSR, Vladivostok.

1991- 2006 Scientific Researcher, Faculty of Geography, Moscow State University, Moscow

2007 -2010 Scientific Assistant; Arctic Technology department. UNIS, PetroArctic project.

2008 -2010 Project secretary; UNIS, Arctic Technology department, NFR Cooperation Program
with Russia projects.

Field Work Experience:

1986, 1987 – expeditions for the study of mountain regions on Russia (Caucasus, Yakutia, etc)

1990, 1991 – expeditions in Sikhote-Alin for forest fire condition and effects investigation.

2000 - 2006 - expeditions in Central Russia for landscape-ecological studies.

2008 – per now – Sea Ice research on Svalbard

Teaching Experience:

1992-2006 – lecturer and practical educator on introduction in geography and landscape study,
leader of landscape field practice for students on Faculty of Geography, Moscow
State University (MSU)

2001-2006 – supervisor of pedagogical practice of students of Faculty of Global processes,
(MSU)

2000-2006 – lecturer and practical educator on geography and geographical information systems
on college of Faculty of Geography of (MSU)

2003-2006 – lecturer and practical educator, supervising of course and diploma student works, on
Faculty of Geography and Faculty of Global processes, (MSU)

Honours:

1992 - 1997 - Stipend of the President of Russian Federation for young outstanding scientists

Grants:

“Estimation of forest fire danger in Far East of Russia” (1989-1991)

“Evolution of man-landscapes interaction in Moscow region in the second millennium a.d” (Russian
foundation of fundamental researches, 1999-2001)

«Landscape-geoecological investigation for optimization of historical-culture areas”
(Integration of University and Academic Science, 2001)

«The main principles of formation and evolution of structure of cultural-historical
landscapes of Central Russia» (Russian foundation of fundamental researches, 2005-2007)

Scientific Interests:

- Arctic environment
- Geographical information systems, Laser scanning
- Navigation, risk assessment
- Remote sensing
- Landscape study and landscape ecology

List of recent publication:

Marchenko N. (2019). "Marine Emergencies in the Arctic" - GIS Online Resource for Preparedness, Response and Education. ISOPE – the 29th International Offshore and Polar Engineering Conference.

Marchenko N. (2019). Ice at its southern limit in the Barents Sea: field investigation near Bear Island in April 2017-2018. Proceedings of the 25th International Conference on Port and Ocean Engineering under Arctic Conditions. Delft, The Netherlands.

Marchenko A., Marchenko N. (2019). Characteristics of ice drift and waves on Spitsbergen-banken. Proceedings of the 25th International Conference on Port and Ocean Engineering under Arctic Conditions. Delft, The Netherlands.

Iurov F., Marchenko N. (2019). Laser scanning as a tool for monitoring road deformations in Svalbard. Proceedings of the 25th International Conference on Port and Ocean Engineering under Arctic Conditions. Delft, The Netherlands.

Morozov E., Marchenko A., Filchuk K., Kowalik Z., Marchenko N., Ryzhov I. Sea ice evolution and internal wave generation due to a tidal jet in a frozen sea. *Applied Ocean Research* 2019 ;Volum 87. s. 179-191

Marchenko N., Andreassen N., Borch O. J., Kuznetsova S., Ingimundarson V., & Jakobsen U. (2018). Arctic Shipping and Risks: Emergency Categories and Response Capacities. *TransNav, International Journal on Marine Navigation and Safety of Sea Transportation*, ISSN - 2083-6473 Volume, 12; Number 1, p. 107-114. doi:10.12716/1001.12.01.12

Marchenko N. (2018). Reconstruction of Ice Drifting lines in the Barents Sea, using IFREMER sea ice products. ISOPE – the 28th International Offshore and Polar Engineering Conference. Proceedings, ISBN 978-1-880653-87-6, ISSN – 1098-6189, Sapporo, Japan, June 10–15, 2018, Volume 1. Paper number 0886, p. 1661 - 1668

Marchenko N. (2018). Sea ice observation and comparison with ice maps during the cruise in the Western Barents Sea in April 2017 Proceedings of the 24th IAHR International Symposium on Ice, ISSN – 2414-6331, Vladivostok, Russia Paper number -011, 8 pages.

Marchenko N. (2018). The Northernmost Airport Runway. How And Why Should We Perform Laser Scanning? Proceedings of the 24th IAHR International Symposium on Ice, ISSN – 2414-6331, Vladivostok, Russia Paper number -010, 8 pages.

Marchenko AV, Morozov EG and Marchenko NA (2017). "Supercooling of Seawater Near the Glacier Front in a Fjord." *Earth Science Research* 6(1): 12.

Marchenko N, Taylor T, Marchenko A (2017). Safety of Industrial Development and Transportation Routes in the Arctic (SITRA) –collaboration project for research and education of future High North experts. The interconnected Arctic. UArctic Congress 2016. K. Latola, Savela, H., Springer

Marchenko N, Marchenko A,(2017). Investigation of large ice rubble field in the Barents Sea. Proceedings of the 24th International Conference on Port and Ocean Engineering under Arctic Conditions. Busan, Korea.

Marchenko NA, Sakharov A (2017). Laser scanning in mechanical ice tests. Proceedings of the 24th International Conference on Port and Ocean Engineering under Arctic Conditions. Busan, Korea: 10.

Marchenko, N. A., O. J. Borch, N. Andreassen, S. Y. Kuznetsova, V. Ingimundarson and U.

Jakobsen (2017). Navigation Safety and Risk Assessment Challenges in the High North. 12th International Conference on Marine Navigation and Safety of Sea Transportation *TransNav*. Gdynia, Poland, CRC Press, Taylor and Francis Group.

Marchenko NA (2016) Comparison of Sea Ice Products and data of drifting buyos. Proc. Of 23rd IARH International Symposium on Ice (IAHR-ICE 2016). AnnArbor, Michigan-US. May 31- June 3, 2016 ISSN: 2414-6331

Marchenko NA, Borch OJ, Markov SV, Andreassen N, (2016) Maritime safety in the High North – risk and preparedness. Proc. of the 26th International Ocean and Polar Engineers conference (ISOPE-2016). Rhodes, Greece. June 26-July 1, 2016 ISBN 978-1-880653-88-3; ISSN 1098-6189

Abramova A, Chernianskii S, Marchenko N, Terskaya E. (2016) Distribution of polycyclic aromatic hydrocarbons in snow particulates around Longyearbyen and Barentsburg settlements, Spitsbergen. Polar Record .DOI: <http://dx.doi.org/10.1017/S0032247416000243>

Roud E.K. Borch OJ, Jakobsen U, Marchenko NA. (2016) Maritime Emergency Management Capabilities in the Arctic. Proc. of the 26th International Ocean and Polar Engineers conference (ISOPE-2016). Rhodes, Greece. June 26-July 1, 2016. ISBN 978-1-880653-88-3; ISSN 1098-6189

Marchenko NA, (2015) Ship traffic in the Svalbard area and safety issues. Proc. of the 23rd Int. Conf. on Port and Ocean Eng. under Arctic Conditions (POAC 2015). Trondheim

Marchenko NA, Marchenko A.V. (2015) Sea currents and ice drift in western part of Barents Sea. A comparison of data from floating and fixed on ice buoys. Proc. of the 23rd Int. Conf. on Port and Ocean Eng. under Arctic Conditions (POAC 2015). Trondheim

Marchenko NA, Borch OJ, Markov SV, Andreassen N, (2015) Maritime activity in the High North – the range of unwanted incidents and risk patterns. Proc. of the 23rd Int. Conf. on Port and Ocean Eng. under Arctic Conditions (POAC 2015). Trondheim

Marchenko A.V., Kowalik Z. Brazhnikov D, Marchenko NA, Morozov EG, (2015) Characteristics of sea currents in navigational strait Akselsundet in Spitsbergen. Proc. of the 23rd Int. Conf. on Port and Ocean Eng. under Arctic Conditions (POAC 2015). Trondheim

Kowalik Z. Marchenko A.V., Brazhnikov D, Marchenko NA (2015) Tidal currents in the western Svalbard Fjords. OCEANOLOGIA Volume: 57 Issue: 4 Pages: 318-327

Marchenko NA (2014) Northern Sea Route. Modern State and Challenges. Proceedings of the 32nd International Conference on Ocean, Offshore and Arctic Engineering. OMAE2014. 06-10 June, 2014, San Francisco, US, ISBN 978-0-7918-4556-1

Marchenko NA (2014) Floating Ice Induced Ship Casualties. Proceeding of 22nd IAHR International Symposium on Ice, Singapore, 11-15 August, 2014, ISBN: 978-981-09-0750-1

Marchenko NA, Brazhnikov D, Marchenko AV, Finseth J, (2014) Monitoring of sea currents and waves in Spitsbergen fjords, Geophysical Research Abstracts, Vol. 16, EGU2014-12294, EGU General Assembly, Vienna, Austria, 27 April – 02 May, 2014, eISSN-1607-7962.

Marchenko NA (2014) Geo-information system for Arctic technologies on Svalbard // Complex investigations of the Svalbard and offshore nature: proceeding of the International Scientific Conference. Murmansk, Russia, 6-8 November 2014, Issue 12. – Moscow: GEOS, ISBN 978-5-89118-668-2. p. 205-210.

Abramova A.S., Marchenko N.A., Terskaja E.V. (2014) Studies on contamination of the snow cover around the towns of Longyearbyen and Barentsburg (Svalbard) in 2013 // Complex investigations of the Svalbard and offshore nature: proceeding of the International Scientific Conference. Murmansk, Russia, 6-8 November 2014, Issue 12. – Moscow: GEOS, ISBN 978-5-89118-668-2. p. 7-13

Marchenko NA (2013) International collaboration for education of future Arctic experts. Proc. Of the Annual conference "society for research in Higher Education, Newport, England, 12-14 Dec.r, 2013.

Marchenko NA et al (2013) Safety of Maritime Operation and Sustainable Industrial Development in the Arctic (SMIDA). In: Proceedings of the 11th International Conference and Exhibition for Oil and Gas Resources Development of the Russian Arctic and CIS Continental Shelf (RAO / CIS Offshore 2013), St.Petersburg, Russia, 9-12 September 2013. ISBN 978-5-93808-219-9. p.451-456

Marchenko NA (2013) Navigation in the Russian Arctic. Sea Ice Caused Difficulties and Accidents Proceedings of the 32nd International Conference on Ocean, Offshore and Arctic Engineering. OMAE2013. Nantes, France, June 19-24, 2013, ISBN: 978-0-7918-5540-9

Marchenko NA (2013) Geographical Informational Systems for Sustainable Arctic Technology.

Proceedings of the 22nd International Conference on Port and Ocean Engineering under Arctic Conditions. Espoo, Finland, June 9-13, 2013. ISBN 978-952-60-3635-9;

Marchenko NA (2012) Russian Arctic Seas. Navigational conditions and accidents. Springer – XXII, 274 p. 113 illus. ISBN 978-3-642-22125-5

Marchenko NA (2011) Dangerous ice conditions and accidents in Russian Arctic. In: Proceedings of the 21th international conference on port and ocean engineering under Arctic conditions, Montreal, Canada, 10–15 July 2011 ISSN 0376-6756

Marchenko NA (2010) The data base ‘Shipwrecks and other accidents in the Russian Arctic Seas’. In: Proceedings of State Oceanographic Institute, Vol.212, Moscow, 212:272–300
ISBN 978-5-9900791-6-8

Marchenko NA (2009) Experiences of Russian Arctic navigation. In: Proceedings of the 20th international conference on port and ocean engineering under Arctic conditions, Luleå, Sweden, 9–12 June 2009 ISSN 2077-7841

Marchenko NA (2009) Ice conditions and human factors in marine accidents in the Arctic. Marine navigation and the safety of sea transport. In: Proceedings of the 8th international navigational symposium, Gdynya, Poland, 17–19 June 2009. CRC, Boca Raton, FL ISBN: 978-0-415-80479-0