# Curriculum Vitae for Evgeniy Lokharu

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**Contact information**
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**Personal information**
Date of birth: December 2, 1985
Nationality: Russian
Adress: Storskiftesgatan 1,
58 334 Linköping, Sweden

**Academic position**

Postdoctoral researcher — April 2019 to March 2021
Linköping University
Linköping, Sweden
Advisor: Vladimir Kozlov (vladimir.kozlov@liu.se)

**Education**

(2nd) Ph.D., Linköping University, MAI, Linköping, Sweden — 2017

- Thesis: *Small-amplitude steady water waves with vorticity*
- Advisor: Vladimir Kozlov (vladimir.kozlov@liu.se)

(1st) Ph.D., , V. A. Steklov Institute of Mathematics, St. Petersburg, Russia — 2011

- Thesis: *Multiplicative inequalities for maximal functions measuring smoothness*
- Advisor: Sergey Kislyakov (skis@pdmi.ras.ru)

Specialist (equivalent to B.S. + M.S.), Saint-Petersburg State University, Russia. — 2008

- Thesis: *On isomorphic classification of spaces of analytic functions*
- Advisor: Sergey Kislyakov (skis@pdmi.ras.ru)
- graduated cum laude

**Awards and Grants**

- Romberg Grant for participating in Heidelberg Laureate Forum, Germany — 2016
- Rokhlin stipendium for young researchers from St. Petersburg Mathematical Society, Russia. — 2011 - 2012
- Finalist of Möbius Contest for young researchers, Moscow, Russia — 2011
- Chebyshev's Laboratory scholarship for PhD researchers, Russia — 2010 - 2012
- Intel ISEF 2nd Award in Mathematics for school students, USA. — 2003

**Previous employments**

**Postdoctoral fellow** — April 2017-March 2019
Lund University, Sweden
Supervisor: Erik Wahlén (erik.wahlen@math.lu.se)
Research time: 100%
Project: three-dimensional steady water waves with vorticity over Beltrami flows

**PhD student** — January 2013-March 2017
Linköping University, Sweden
Supervisor: Vladimir Kozlov (vladimir.kozlov@liu.se)
Research time: 80%, Teaching time: 20%
Project: small-amplitude steady water waves with vorticity

**Young researcher** — January 2011-April 2012
Chebyshev Laboratory, Saint-Petersburg, Russia

Research time: 100%

**Teaching assistant** January 2009-March 2012
Peter the Great St. Petersburg Polytechnic University, Russia.
Teaching time: 100% (problem solving, grading)
Courses: calculus, analysis of one variable, ordinary differential equations, linear algebra, geometry.

## Research experience

**Colloquium talk** Linköping University, Sweden October 10, 2018
Title: Three-dimensional steady water waves with vorticity

**Seminar talk** Lund University, Sweden February 9, 2018
Title: Separation of singularities of analytic functions

**Invited talk** Conference on Mathematics of Wave Phenomena July 23–27, 2018
Karlsruhe, Germany
Title: Multi-modal and non-symmetric steady water waves with vorticity

**Invited speaker** Workshop on Fluid Dynamics and Dispersive Equations June 25–29, 2018
Lund, Sweden
Title: Local bifurcation of three-dimensional doubly-periodic steady water waves with vorticity

**Participation to** Summer School Waves in Flows August 27–31, 2018
Prague, Czech Republic

**Participation to** Workshop on Nonlinear water waves - an interdisciplinary interface December 4–7, 2017
Vienna, Austria

**Seminar talk** Trondheim University, Norway November 13, 2017
Title: Small-amplitude steady water waves with vorticity

**Invited talk** Meeting of the Catalan, Spanish, Swedish Math Societies June 12–15, 2017
Umeo, Sweden
Title: Small-amplitude steady water waves with vorticity

**Seminar talk** Saarland University, Germany May 17, 2017
Title: Small-amplitude steady water waves with vorticity

**Participation to** Heidelberg Laureate Forum September 18–23, 2016
Heidelberg, Germany

**Contributed talk** Conference on Nonlinear waves – Theory and Applications June 25–28, 2016
Beijing, China
Title: Steady gravity water waves of small amplitude

**Invited talk** Nordic Congress 2016 March 16–20, 2016
Stockholm, Sweden
Title: Quasi-periodic steady water waves with vorticity

**Invited talk** Conference Algoritmy 2016 March 13–18, 2016
Podbanske, Slovakia
Title: Steady water waves with vorticity

**Invited talk** Meeting of Swedish Mathematical Society November 20, 2015
Norrköping, Sweden
Title: On the Benjamin-Lighthill conjecture for water waves with vorticity

**Contributed talk** Conference WAVES 2015 July 20–24, 2015
Karlsruhe, Germany
Title: Uniqueness and stability results on the gravity water waves with vorticity

**Contributed talk** Conference EquaDiff 2015 July 6–10, 2015
Lyon, France
Title: Uniqueness and stability results on steady water waves with vorticity

**Invited talk** Workshop on Mathematical Theory of Water Waves April 12–18, 2015
Obervolfach, Germany
Title: Non-existence of solitary waves of depression in the presence of vorticity

**Participation to** Summer school Mini-courses on analysis and PDEs June 22–26, 2014
Padova, Italy

**Participation to** European-Nordic Congress of Mathematicians June 9–13, 2013
Lund, Sweden

**Guest research visit**, Kent State University, Ohio. October-November 2012

## Teaching experience

**Linköping university, Sweden**

*Instructor* 2013 to 2017
- Mathematical analysis, linear algebra.
- Responsibilities: problem solving, grading exams.

*Supervision* 2017
- Bachelor thesis in mathematics.
- Responsibilities: formulation of the problem, supervision.

**Peter the Great St. Petersburg Polytechnic University**

*Teaching Assistant*, all semesters 2009 - 2012
- linear algebra, geometry, calculus, ordinary differential equations.
- Responsibilities: problem solving, designing tests, grading.

*Trainer* spring 2011
- Mathematics.
- Responsibilities: training a team in order to participate to a mathematical Olympiad.

**Laboratory of continuous mathematical education (school)**

*Lecturer* 2004 - 2008

- Advanced courses in mathematics (introduction to metric spaces, measure theory, linear vector spaces, group theory)
- Responsibilities: lectures, problem solving, grading.

**Publications**


[1] Lokharu, E., Wahlén, E.: *Variational principle for three-dimensional water waves with vorticity*, Nonlinear Analysis, Vol. 184 (2019), 193–209.

[2] Kozlov, V., Kuznetsov, N., Lokharu, E.: *Two-dimensional solitary waves of elevation over constant vorticity flows with a near-bottom stagnation*, preprint arXiv:1904.00401.

[3] Kozlov, V., Lokharu, E.: *Small-amplitude steady water waves with critical layers: non-symmetric waves*, Journal of Differential Equations (2019).

[4] Kozlov, V., Lokharu, E.: N-Modal Steady Water Waves with Vorticity, J. Math. Fluid Mech. Vol. 20 (2018), 853–867.

[5] Kozlov, V., Kuznetsov, N., Lokharu, E.: On the Benjamin–Lighthill conjecture for water waves with vorticity. Journal of Fluid Mechanics, 825, (2017), 961–1001.

[6] Kozlov, V., Kuznetsov, N., Lokharu, E.: On bounds and non-existence in the problem of steady waves with vorticity. Journal of Fluid Mechanics, 765, R1, (2015), 961–1001.

[7] Kozlov, V., Kuznetsov, N., Lokharu, E.: Steady water waves with vorticity: an analysis of the dispersion equation. Journal of Fluid Mechanics, 751, R3 (2014).

[8] Lokharu, E.: Interpolation inequalities for maximal functions that measure smoothness, St. Petersburg Math. J. 24 (2013), 327–351.

[9] Lokharu, E.: Gagliardo–Nirenberg inequality for maximal functions measuring smoothness, J. Math. Sci. (2012) 182: 663.

[10] Lokharu, E.: Maximal functions measuring smooytness: counterexamples , Zap. Nauchn. Sem. POMI, Vol. 397 (2011), 53–72.