

# Yulia PETROVA

## PERSONAL DATA

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PLACE AND DATE OF BIRTH: Ukhta, Republic of Komi, Russia | 29 June 1991  
PHONE: +7 952 2222410  
EMAIL: [yu.pe.petrova@yandex.ru](mailto:yu.pe.petrova@yandex.ru)  
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## RESEARCH INTERESTS

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- Gaussian processes
- Partial differential equations
- Spectral theory
- Displacement of viscous fluids in porous media

## EDUCATION

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2013–2018 | PhD student in Mathematical Physics, St. Petersburg State University, Russia. Supervisor: [Prof. Nazarov A. I.](#) Date of defence: November 2018. PhD thesis: «Exact  $L_2$ -small ball asymptotics for finite-dimensional perturbations of Gaussian processes» (in Russian)

2008–2013 | Specialist in Mathematics, chair of Mathematical Physics, St. Petersburg State University, Russia

## PROFESSIONAL EXPERIENCE

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2018–PRESENT | Teaching at «[Modern programming](#)», Department of Mathematics and Computer Science, Saint Petersburg State University, Russia.

2017–PRESENT | Researcher at [Chebyshev laboratory](#), Saint Petersburg State University, Russia. Participant of industrial projects with PJSC «Gazprom Neft».

2014–2018 | Assistant at [Department of Mathematics and Information Technology](#), Saint Petersburg Academic University, Russia.

2012–15 | Assistant at [Institute of Physics, Nanotechnology and Telecommunications](#), Saint Petersburg Polytechnic University, Russia.

## RESEARCH GRANTS AND AWARDS

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- 2019 | Participant of the [President grant MD-1791.2019.1](#).
- 2019 | [Laureat of the «Young Mathematician» prize of the Saint-Petersburg Mathematical Society](#)
- 2018–19 | [«Gazprom Neft» stipendiat](#)
- 2018 | [Winner of 22nd Möbius Contest](#) in nomination «Undergraduates and graduates»
- 2017–18 | Participant of RNF Grant 17-11-01003: Asymptotic spectral analysis: gaps, near-threshold anomalies, “invisibility” and eigenvalues
- 2016–18 | Participant of RFBR Grant 16-01-00258a: Approximation of stochastic processes and functionals of them
- 2013–16 | Participant of St Petersburg State University Grant 6.38.670.2013: Partial Differential Equations and applications
- 2009 | Euler Fellowship for undergraduate students

## RESEARCH PAPERS

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- 2020 | Bakharev F., Campoli L., Enin A., Matveenko S., Petrova Y., Tikhomirov S., Yakovlev A. [Numerical investigation of viscous fingering phenomenon for raw field data](#). Transport in Porous Media, 2020, Pages 1–22.
- 2019 | Yu. Petrova,  [\$L\_2\$ -small ball asymptotics for a family of finite-dimensional perturbations of Gaussian functions](#). arXiv:1905.07804.
- 2018 | Yu. Petrova, [On spectral asymptotics for a family of finite-dimensional perturbations of operators of trace class](#). Doklady Math., 2018, Volume 98, №1, Pages 367–369.
- 2017 | Yu. Petrova, [Exact  \$L\_2\$ -small ball asymptotics for some Durbin processes](#). Zap. nauchn. sem. POMI, 2017, Volume 466, Pages 211–233. In Russian.
- 2016 | Yu. Petrova, [Spectral asymptotics for problems with integral constraints](#). Mat. Zametki, 2017, Volume 102, Issue 3, Pages 405–414.
- 2015 | A. I. Nazarov, Yu. P. Petrova [The small ball asymptotics in Hilbertian norm for the Kac–Kiefer–Wolfowitz processes](#). Teor. Veroyatnost. i Primenen., 2015, Volume 60, Issue 3, Pages 482–505 (Translated)

## PRESENTATIONS AT CONFERENCES

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AUG 2019	Third ZiF Summer School «Randomness in Physics and Mathematics» From Stochastic Processes to Networks. Bielefeld, Germany. Poster.
MAY 2019	Stochastic models II . Euler Institute, Saint-Petersburg. Talk.
JAN 2018	The third Indo-Russian meeting in probability and statistics. Talk: Exact small ball asymptotics in $L_2$ -norm for finite-dimensional perturbations of Gaussian processes: spectral method
DEC 2017	Saint-Petersburg winter conference on Probability Theory and Mathematical physics. PDMI-MIAN. Talk: On exact spectral asymptotics of finite-dimensional perturbations of integral operators of trace class
JUNE 2017	Symposium on Probability Theory and Random Processes. Talk: Exact small ball asymptotics in $L_2$ -norm for some perturbations of the Brownian bridge
APRIL 2017	International conference on partial differential equations — Silkroad Mathematics Center series international conferences (Beijing, China, 10–21 April 2017). Poster: Spectral asymptotics in some problems with integral constraints.
JUNE 2016	Days of Diffraction-2016. Talk: Spectral asymptotics in some problems with integral constraints.
MAY 2016	The 2nd Russian-Indian Joint Conference in Statistics and Probability. Talk: Small ball asymptotics for detrended Green Gaussian processes of arbitrary order.
SEPT 2015	Yu.V.Linnik Centennial Conference. Talk: The small ball asymptotics in $L_2$ -norm for the Kac-Kiefer-Wolfowitz processes
JULY 2015	7th St.Petersburg Conference in Spectral Theory. Talk: Asymptotics of eigenvalues for some integro-differential operators
JULY 2014	Students school on Partial Differential Equations and Geometric Measure Theory, CIME, Italy
JULY 2010	XIII Diffiety School on Mathematics, Santo Stefano del Sole (AV)
JULY 2009	XII Diffiety School on Mathematics, Santo Stefano del Sole (AV)

## LANGUAGES

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RUSSIAN:	Native speaker
ENGLISH:	Fluent
SPANISH:	Fluent
PORTUGUESE:	Reading and writing

## ADDITIONAL EXPERIENCE

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2012–2017	Teaching in <a href="#">Formulo de Integreco</a> — Educational Center for gifted high-school Students
JAN 2019	Lecturer of the course «Random walks» in Educational Program in mathematics and computer science at Educational Center «Sirius»
NOV 2019	Assistant to the course «Dynamical systems» in COMSATS University Islamabad, Lahore Campus, Pakistan. <a href="#">ICTP-CUI Visiting Scholars Program for Training and Research in Mathematics</a>