

Artem Semidetnov

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Education

BS	Saint-Petersburg State University , Mathematics	2021 – 2025
BS	Neapolis University Of Pafos , Applied Computer Science JetBrains Program	2022 – 2024

Publications

On the geometry of free nilpotent groups ↗	May 2021
Artem Semidetnov , Ruslan Magdiev	
https://doi.org/10.48550/arXiv.2106.00095 ↗	

Awards and Scholarships

Scholarship by "Rodnye Goroda" (a social investment program of PJSC "Gazprom нефт"), 2023-2024

JetBrains Scholarship in Neapolis University

Travel grant of Chebyshev laboratory for [Winter student school in mathematics and CS of HSE and MCS](#) [↗](#), Moscow

Teaching Experience

Sirius educational center , Teaching assistant on the course "Groups of intermediate growth" ↗	Sochi, Russia Apr 2024 – May 2024
Laboratory for continuous mathematical education , mathematics teacher for gifted students. I was teaching introduction to group theory.	Saint-Petersburg, Russia 2021 – 2023
Mathematics and Computer Science faculty program for prospective students , Teaching assistant on the course "Braid and knot theory"	Saint-Petersburg, Russia June 2023

Selected Talks

On the geometry of free nilpotent groups	Novosibirsk, Russia 2021
• Siberian summer conference	
"On the Poisson boundary of lamplighter groups" ↗	Saint-Petersburg, Russia
• St. Petersburg Seminar on Representation Theory and Dynamical Systems	
"Twisting numbers on braid and Thompson's groups" ↗	N.Novgorod, Russia 2024
• Topological Methods in Dynamics and Related Topics VII	

Work Experience

JetBrains , Research Intern in HoTT and Dependent Types Lab	Pafos, Cyprus June 2024 – Sept 2024
• I was developing the official library in the Arend language. I formalized different results in algebra and homotopy type theory, including following.	
• Formalized Eckmann-Hilton argument, Eilenberg-MacLane spaces, Homologies of types.	
• Formalized automorphisms of groups, Schur's Lemma, Maschke's Lemma, Group actions characterizations. (Some of these results are in the 1.10 release ↗)	
IPONWEB (acquired by Criteo) , Machine Learning Intern	Pafos, Cyprus May 2023 – Sept 2023

- Criteo has a ML tool that analyzes sites and produces word-2-vec representations. In IPONWEB I was trying to reverse-engineer the behaviour of this tool and analyze its possible applications.

Miscellaneous

- Finalist of 2020 Intel ISEF
- Intel ISEF alumni
- Winner of 2019 Baltic SEF, PDMI special prize in 2019 Baltic SEF
- 3rd team place in 2019 [International Tournament of Young Mathematicians](#) in Barcelona, Spain
- Organizer of the [Euler International Mathematical Institute's functional analysis seminar](#)
- English level C1 (IELTS 8.0/9, taken in 2020, 2024)
- Invited judge in Saint-Petersburg Tournament of Young Mathematicians (since 2021)
- Created mathematical problem for 2024 International Tournament of Young Mathematicians ([10th in here](#)).
- Invited judge in International Tournament of Young Mathematicians 2024