

# Artem Semidetnov

📍 Geneve, Switzerland 📩 artemsemidetnov@gmail.com

## Education

---

<b>BSc</b>	<b>Saint-Petersburg State University</b> , Mathematics	2021 – 2025
<b>BSc</b>	<b>Neapolis University Of Pafos</b> , Applied Computer Science JetBrains Program	2022 – 2024
<b>MSc</b>	<b>Geneva University</b> , Mathematics	2025 – 2027

## Work Experience

---

<b>JetBrains</b> , Research Intern in HoTT and Dependent Types Lab	Remote Nov 2025 – present
<b>JetBrains</b> , Research Intern in HoTT and Dependent Types Lab <ul style="list-style-type: none"><li>I was developing the official library in the Arend language. I formalized different results in algebra and homotopy type theory, including following.</li><li>Formalized Eckmann-Hilton argument, Eilenberg-Maclane spaces, Homologies of types.</li><li>Formalized automorphisms of groups, Schur's Lemma, Maschke's Lemma, Group actions characterizations. (Some of these results are in the \href{https://arend-lang.github.io/2024/07/05/Arend-1.10.0-released.html}{1.10 release}).</li></ul>	Pafos, Cyprus June 2024 – Sept 2024
<b>IPONWEB (acquired by Criteo)</b> , Machine Learning Intern <ul style="list-style-type: none"><li>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.</li></ul>	Pafos, Cyprus May 2023 – Sept 2023

## Publications

---

<b>On the geometry of free nilpotent groups</b> ↗	May 2021
<b>Artem Semidetnov</b> , Ruslan Magdiev <a href="https://doi.org/10.48550/arXiv.2106.00095">https://doi.org/10.48550/arXiv.2106.00095</a> ↗	
<b>The operad associated to a crossed simplicial group</b> ↗	2025

**Artem Semidetnov**

<https://doi.org/10.48550/arXiv.2512.14498> ↗

## Awards and Scholarships

---

Scholarship by "Rodnye Goroda" (a social investment program of PJSC "Gazprom neft"), 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

[Excellence Master Fellowship at Geneva University](#) ↗

## Teaching Experience

---

<b>Sirius educational center</b> , Teaching assistant on the course "Groups of intermediate growth" ↗	Sochi, Russia Apr 2024 – May 2024
<b>Laboratory for continuous mathematical education</b> , mathematics teacher for gifted students	Saint-Petersburg, Russia 2021 – 2023

## Selected Talks

---

<b>On the geometry of free nilpotent groups</b>	Novosibirsk, Russia
• Siberian summer conference	2021
<b>"On the Poisson boundary of lamplighter groups"</b> ↗	Saint-Petersburg, Russia
• St. Petersburg Seminar on Representation Theory and Dynamical Systems	
<b>"Twisting numbers on braid and Thompson's groups"</b> ↗	N.Novgorod, Russia
• Topological Methods in Dynamics and Related Topics VII	2024
<b>"Plus construction and simplicial methods"</b> ↗	Pushkin, Russia
• Conference "Algebraic Topology, geometry, combinatorics, and data analysis"	Aug 2025

## 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, 2025
- A member of Scientific Organization Committee in ETEAM 2025 ↗