

Anatoli Shatsila

Email: anatoli.shatsila@doctoral.uj.edu.pl

Mobile: +48-730-380-766

I am interested in complex abelian varieties, Jacobians, Prym varieties, tensors and their invariants.

EDUCATION

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- **Jagiellonian University, Faculty of Mathematics and Informatics** Krakow, Poland
PhD in Mathematics *October 2023 -*
 - **Jagiellonian University, Faculty of Mathematics and Informatics** Krakow, Poland
Master of Mathematics (Pure Mathematics); GPA: 4.96/5.0 (distinction) *October 2021 - July 2023*
 - **Jagiellonian University, Faculty of Mathematics and Informatics** Krakow, Poland
Bachelor of Mathematics (Pure Mathematics); GPA: 4.95/5.0 *October 2018 - July 2021*

PUBLICATIONS AND PREPRINTS

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- P. Pielasa, M. Šafránek, A. Shatsila, *Exact values of generic subrank*, *Advances in Mathematics* (2025), vol. 469.
 - P. Borówka and A. Shatsila, *Hyperelliptic genus 3 curves with involutions and a Prym map*, *Mathematische Nachrichten* (2024), published online.
 - A. Shatsila, *Geometry of elliptic normal curves of degree 6*, *Communications in Algebra* (2023), 1-15.
 - W. Guifeng, T. Disheng, A. Shatsila and X. Zhang, *MICA: Multi-channel Representation Refinement Contrastive Learning for Graph Fraud Detection*, *APWeb-WAIM 2023*.

PREPRINTS

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- J. Jagieła, P. Pielasa, A. Shatsila, *Characteristic numbers of algebras*, preprint (2025).
 - V. Borovik, C. Flavi, P. Pielasa, A. Shatsila, J. Song *On the construction of a counterexample to Strassen's rank additivity conjecture*, preprint (2025).
 - P. Borówka and A. Shatsila, *Pryms of $\mathbb{Z}/3\mathbb{Z} \times \mathbb{Z}/3\mathbb{Z}$ coverings of genus 2 curves*, preprint (2025).

GRANTS AND RESEARCH ACTIVITIES

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- Principal investigator in Polish National Science Center project Preludium K/NCN/000481 *"Low degree coverings of genus two curves"* (in Polish: Nakrycia niskiego stopnia krzywych genusu 2). *02.2025-present*
 - Research student in Polish National Science Center project 2019/35/D/ST1/02385 *"Klein coverings of complex curves"* (in Polish: nakrycia Kleina krzywych zespolonych). Principal investigator: Paweł Borówka *10.2021-07.2023*
 - Reviewer on Zentralblatt MATH

SCHOLARSHIPS

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- Franciszek Leja scholarship – awarded to the best Master student(s) at Jagiellonian university (2023)
 - Minister's of Education and Sciences scholarship – the scholarship was awarded to 3 mathematics students at the university (2023)
 - Excellence Initiative programme – awarded to 5 best students in the cohort (2021/22 and 22/23)
 - Rector's Scholarship – awarded to best 10% students in the cohort (2021/22 and 22/23)
 - "Szkoła orłów" Scholarship – Ministry of Science and Higher Education programme awarded to 20 students at Jagiellonian University (2019)
 - Franciszek Mertens Scholarship – A full 5-year scholarship for international students; awarded to 4 students (2nd edition, 2018)

HONORS AND AWARDS

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- International Mathematics Competition for University Students, 2019 – Second Prize; 2020, 2021, 2022 – First Prize
 - Student Thesis in Mathematics Contest named after Józef Marcinkiewicz, January 2022 - Third Diploma
 - Mirror of William Lowell Putnam Mathematical Competition, 2018 – Second Prize, 2019 – Third prize
 - International Tournament of Young Mathematicians: 2017 – First Prize, 2018 – Grand First Prize (Team Belarus)
 - Final Stage of Belarusian National School Olympiad in Mathematics, 2015 – First Prize; 2016, 2017, 2018 – Second Prize

CONFERENCES AND SUMMER SCHOOLS

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| • SYMPAAN 2025 - Symposium of the ALGANT Alumni Network | <i>Bedlewo, Poland</i> | <i>23-27.07.2025</i> |
| • GAEL XXXII
<i>Poster 'Prym map of $\mathbb{Z}/3\mathbb{Z} \times \mathbb{Z}/3\mathbb{Z}$-covers of genus 2 curves'</i> | <i>Toulouse, France</i> | <i>16-20.06.2025</i> |
| • Birational Geometry: from moduli to geography | <i>Barcelona, Spain</i> | <i>05-07.02.2025</i> |
| • Syzygies and Hilbert Schemes | <i>Kraków, Poland</i> | <i>24-28.09.2024</i> |
| • MATH AMSUD workshop on Algebraic Geometry | <i>Nice, France</i> | <i>17-21.06.2024</i> |
| • 5th National Polish Conference "Oblicza Algebry" | <i>Kraków, Poland</i> | <i>01-04.06.2023</i> |
| • Quiver Representations, Quiver Varieties and Combinatorics | <i>Bologna, Italy</i> | <i>22-26.05.2023</i> |
| • Explicit Algebraic Geometry | <i>Bedlewo, Poland</i> | <i>16-20.04.2023</i> |
| • Algebraic Geometry on the occasion of Sandro Verra's 70th birthday
<i>Poster 'Geometry of elliptic normal curves of degree 6'</i> | <i>Rome, Italy</i> | <i>14-17.06.2022</i> |

TALKS

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| • Prym varieties: a bridge between curves and abelian varieties | <i>SYMPAAN 2025</i> | <i>24.07.2025</i> |
| • Exact values of generic subrank | <i>IMPANGA</i> | <i>06.06.2025</i> |
| • The Prym map of non-cyclic 9-coverings of genus 2 curves | <i>AG Seminar at JU</i> | <i>17.03.2025</i> |
| • Hyperelliptic genus 3 curves with involutions and Prym map
<i>Seminari de Geometria Algebraica de Barcelona</i>
<i>25.10.2024</i> | | |
| • Hyperelliptic genus 3 curves with involutions and Prym map
<i>MATH AMSUD workshop on Algebraic Geometry</i>
<i>19.06.2024</i> | | |
| • Elliptic normal curves of degree 6 | <i>Oblicza Algebry Conference</i> | <i>04.06.2023</i> |
| • Additional involutions on hyperelliptic genus 3 curves and a Prym map | <i>AG Seminar at JU</i> | <i>24.04.2023</i> |
| • Linear algebraic groups. Parabolic and Borel subgroups | <i>AG Seminar at JU</i> | <i>09.01.2023</i> |
| • Relations between two criteria for supersingularity of an elliptic curve | <i>NT Seminar at JU</i> | <i>24.11.2022</i> |
| • Introduction to Intersection Theory in Algebraic Geometry | <i>AG Seminar at JU</i> | <i>15.11.2021</i> |
| • Geometry of elliptic normal curves of degree 6 | <i>AG Seminar at JU</i> | <i>25.10.2021</i> |

FOREIGN VISITS

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- University of Barcelona (Spain), 2 weeks, 2024
 - University of Konstanz (Germany), 2 weeks, 2023

COMPUTER SKILLS AND LANGUAGES

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- **Programming:** Python (Pytorch, Tensorflow), Haskell, C++, Git
 - **Mathematics software:** L^AT_EX, Sage, Magma, Macaulay2
 - **Languages:** English (proficient), Polish (proficient), Belarusian (native), Russian (native)