# Aknazar Kazhymurat

NIS Almaty for Physics and Mathematics

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Born: August 14, 2001-Almaty, Kazakhstan

Nationality: Kazakhstan

## Education

2016

2017

12th grade of high school in NIS PM Almaty, GPA 5.0/5.0. Standardized test scores: ACT composite 36, TOEFL 118

## Awards and honours

Student of the year, NIS PM Almaty

Ranked among the top 5 astrophysicists in Kazakhstan at the national selection camp and represented Kazakhstan at the International Astronomy & Astrophysics olympiad 2016

2017 Golden medal, International Physics Olympiad

Golden medal, S.-T. Yau Science Competition (Mathematics)

Research presentation ranked  $1^{st}$  at 'Geometry and topology' section of ISSC (international scientific conference for undergraduate students)

Ranked  $3^{rd}$  in Saint-Petersburg Olympiad in topology (international olympiad in topology for un-

dergraduate students)

2018 Golden medal, Asian Physics Olympiad

Silver medal, International Earth Science Olympiad

## Extracurricular activities

- •Participant of Research Science Institute 2018 (MIT)
- •Sole organizer of mathematics seminar at NIS Almaty  $(9^{th}-12^{th})$  grades). Seminar is devoted to the study of college-level mathematics (calculus, linear algebra, finite group theory). Responsible for choice of topics and preparation of talks. Level of involvement: 5 hours per week, 32 weeks per year
- •One of the 5 principal founders of the NISOLYMP ( $11^{th}-12^{th}$  grades), an online science olympiad preparation system (the first one in Kazakhstan). The system targets students of Nazarbayev Intellectual School around Kazakhstan focusing on explanation of advanced topics in natural science. Involvement: 3 hours per week. Impact: 2,500+ unique visitors monthly
- •A blog on mathematics 'In Riemann's footsteps'  $(9^{th}-12^{th}$  grades), involvement 4 hours per week. Impact: 5,000+ unique visitors monthly •An active user of MathOverflow  $(11^{th}-12^{th}$  grades) question&answer site for professional
- •An active user of MathOverflow  $(11^{th}-12^{th} \text{ grades})$  question&answer site for professional mathematicians. The questions and answers asked at the site are typically at the level of graduate students in mathematics or above. Involvement: 2 hours per week. Impact: 21,000 mathematicians reached through questions and answers

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# Research publications

- •Noncommutative geometry: an introduction, Proceedings of  $7^{th}$  European Congress of Mathematicians (peer-reviewed)
- •On a lower bound for the energy functional on a family of Hamiltonian minimal Lagrangian tori in  $\mathbb{C}P^2$ , Volume 59, Issue 4, Sib. Math. Journal
- Topological uniqueness results for Lefschetz fibrations over the disc, preprint arXiv:1808.06656

# Research presentations

- •54th International scientific students conference, Novosibirsk State University, April 2016, "On the number of reducible elements in a general linear system"
- •7th European congress of Mathematicians, 'Complex and algebraic geometry' section, July 2016, "Noncommutative geometry: an introduction"
- •4th school students conference "Young Al-Farabi", Kazakh National University, February 2017, "Indices of commuting differential operators with meromorphic coefficients"
- •55th International scientific students conference, Novosibirsk State University, April 2017, "Lower energy estimates for Lagrangian tori in  $\mathbb{C}P^2$ "
- •Contemporary Problems of Pure and Applied Mathematics, Institute of mathematics and mathematical modelling (Almaty), August 2017, "Lower estimates for the energy functional on a family of Hamiltonian-minimal Lagrangian tori in  $\mathbb{C}P^2$ "
- •Geometry Days in Novosibirsk, Novosibirsk State University, September 2017, "Energy estimates for a family of Lagrangian tori in  $\mathbb{C}P^2$ "
- •Workshop 'Young Researchers in String Mathematics', MPIM Bonn, November 2017, "Lower energy estimates for Lagrangian tori in  $\mathbb{C}P^2$ " (on organizers' financial aid)

## Attended conferences

- •Geometry Days in Novosibirsk, Novosibirsk State University, September 2016
- •Dynamics in Siberia, Novosibirsk State University, February 2017 (on organizers' financial aid)
- •Arbeitstagung on "Physical Mathematics", MPIM Bonn, June 2017
- •The International Winter School 'Partition functions and Automorphic Forms, JINR Dubna, January 2018 (on organizers' financial aid)
- •Dynamics in Siberia, Novosibirsk State University, February 2018 (on organizers' financial aid)
- •Current developments in geometry, Novosibirsk State University, August 2018 (on organizers' financial aid)