

# Michael (Misha, Mykhailo) Rashkovetskyi

PhD student in astrophysics

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## Fields of interest

Cosmology, plasma and high energy astrophysics; quantum field theory.

## Education

- **Harvard University** Cambridge, Massachusetts, US  
*Ph.D. in Astronomy* 2020 – 2026
  - Center for Astrophysics | Harvard & Smithsonian
  - Advisor: Prof. Daniel Eisenstein
- **Tel Aviv University** Tel Aviv-Yafo, Israel  
*B.Sc. in Physics, Summa Cum Laude (GPA: 98/100)* 2019 – 2020
  - Raymond & Beverly Sackler School of Physics & Astronomy
  - Advisor: Dr. Omer Bromberg
- **Moscow Institute of Physics and Technology** Dolgoprudny, Russia  
*B.Sc. in Physics, unfinished* 2015 – 2018
  - Department of General and Applied Physics
  - Advisor: Prof. Vasily Beskin
- **Richelieu Lyceum** Odesa, Ukraine  
*High school, specialization in physics* 2010 – 2015

## Research topics and publications

- Analytical-empirical covariance matrices for DESI with `RascalC` code
- Double-squeezed 4-point correlation function and squeezed 3-point correlation function
- Inhomogeneous recombination relieving Hubble tension
  - Michael Rashkovetskyi, Julian B. Muñoz, Daniel J. Eisenstein, and Cora Dvorkin. Small-scale clumping at recombination and the Hubble tension. *Phys. Rev. D*, 104(10):103517, November 2021. doi:10.1103/PhysRevD.104.103517. arXiv:2108.02747
- The dynamics of highly magnetized jets propagating in the medium
- Orthogonal radiopulsars and their statistics
  - E. M. Novoselov, V. S. Beskin, A. K. Galishnikova, M. M. Rashkovetskyi, and A. V. Biryukov. Orthogonal pulsars as a key test for pulsar evolution. *MNRAS*, 494(3):3899–3911, April 2020. doi:10.1093/mnras/staa904. arXiv:2004.03211
- Pulsar losses mechanisms

- V. S. Beskin, A. K. Galishnikova, E. M. Novoselov, A. A. Philippov, and M. M. Rashkovetskyi. So how do radio pulsars slow-down? In *Journal of Physics Conference Series*, volume 932, page 012012, December 2017. doi:10.1088/1742-6596/932/1/012012
- Pulsar radiation propagation
  - H. L. Hakobyan, A. A. Philippov, V. S. Beskin, A. K. Galishnikova, E. M. Novoselov, and M. M. Rashkovetskyi. On the Light-Curve Anomalies of Radio Pulsars. In *Astronomical Society of the Pacific Conference Series*, volume 515, page 295, August 2018
  - H. L. Hakobyan, A. A. Philippov, V. S. Beskin, A. K. Galishnikova, E. M. Novoselov, and M. M. Rashkovetskyi. On the light-curve anomalies of radio pulsars. In *Journal of Physics Conference Series*, volume 932, page 012018, December 2017. doi:10.1088/1742-6596/932/1/012018

## Teaching experience

- **Astronomy 130 - Introduction to Cosmology** Harvard College  
*Teaching Fellow* *Fall 2022*

## Schools, conferences and practices

- **DESI June Meeting** Berkeley, CA, USA  
*DESI Collaboration* *June 21-24, 2022*
- **CMB-S4 Summer Meeting** online  
*CMB-S4 Collaboration* *August 9-13, 2021*
- **CMB-S4 Spring Meeting** online  
*CMB-S4 Collaboration* *March 8-12, 2021*
- **15th School of Modern Astrophysics** Dolgoprudny, Russia  
*Moscow Institute of Physics and Technology* *July 1-12, 2019*
- **Physics of Neutron Stars - 2017** Saint-Petersburg, Russia  
*Ioffe Institute, Sternberg Astronomical Institute* *July 10-14, 2017*
- **13th School of Modern Astrophysics** Dolgoprudny, Russia  
*Moscow Institute of Physics and Technology* *July 3-21, 2017*
- **International School of Subnuclear Physics - 2017** Erice, Italy  
*"Ettore Majorana" Foundation and Centre for Scientific Culture* *June 14-23, 2017*
- **International school on particles, fields and strings** Moscow, Russia  
*National Research University "High School of Economics"* *April 17-24, 2017*
- **Astronomical practice** Nizhniy Arkhyz, Russia  
*Special Astrophysical Observatory* *June 25 – July 2, 2016*

## Awards, grants and honors

Dean's Certificate in Recognition of Outstanding Academic Achievements (TAU) . . . . 2019–2020  
Stipend for excellent students of MIPT in the name of A.Abramov . . . . . 2016–2017  
International Physics Olympiad, bronze medal . . . . . Mumbai, 2015  
International Physics Olympiad, silver medal . . . . . Astana, 2014

## Languages

- Russian: mother tongue
- Ukrainian: fluent
- English: advanced
- Hebrew: advanced
- German: intermediate