

# Curriculum Vitae

Sergey E. Kaposov

## Contact information

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## Education

- PhD in Astrophysics, *magna cum laude*; University of Heidelberg (2006–2009).  
Dissertation: “Understanding the Milky Way Halo through Large Surveys” Advisor: Prof. Hans-Walter Rix.
- Master’s degree in Astrophysics, diploma with distinction (GPA 5.0/5.0); Moscow State University (2000–2006).  
Diploma thesis: ”Evolution of the Tully-Fisher relationship”. Advisor: Prof. Hans-Walter Rix.
- Independent University of Moscow (2000–2003)

## Employment

- Professor, Personal Chair in Astronomy; Institute for Astronomy, University of Edinburgh (2024 – Now)
- Reader in Observational Astronomy; Institute for Astronomy, University of Edinburgh (2020 – 2024)
- Assistant/Associate professor; McWilliams Center for Cosmology, Department of Physics, Carnegie Mellon University (2017 – 2020)
- STFC Ernest Rutherford Fellow; University of Cambridge (2016 – 2017).
- Senior Research Associate; University of Cambridge; supported the European Research Council research grant (2014 –2016).
- Post-doctoral Research Associate; University of Cambridge; supported by the STFC galaxy formation and evolution rolling grant and the European Research Council research grant (2009 –2014).

## Visiting positions/affiliations

- Affiliated associate professor/lecturer at the Institute of Astronomy, University of Cambridge (2017 – Now)
- Medium Term Kavli Visitor to the Institute of Astronomy, University of Cambridge (2019 – 2024)
- Dunlap Visitor, Dunlap Institute, University of Toronto (2024)

## Fellowships, grants and awards

- STFC astronomy grant “Probing dark matter distribution in the Milky Way with the DESI survey” (2023; ST/Y001001/1 ; PI 446,000 £)
- ARC discovery project “Seeing Dark with Light: Revealing the Milky Way with Stellar Streams“ (2022; partner investigator; DP220102254; 700,000 AUS \$)
- NSF Award: “Collaborative Research: Finding the Double Sunsets - Stellar Multiplicity Across the Milky Way Halo” (2019; PI; AST-1909584; 570,000 \$)
- NSF Award: “Collaborative Research: Dark Matter and Substructure in the Galactic Halo with Gaia and Multi-Object Spectroscopy” (2018; Co-PI; AST-1813881; 585,988 \$)
- Scialog/Heising-Simons award: “Data at your fingertips: A real-time discovery engine for Gaia” (2018; Co-PI; 100,000 \$)
- Scialog fellow in the “Time Domain Astrophysics” program (2018)
- Ernest Rutherford fellowship with the proposal “Testing the cold dark matter paradigm with dwarf galaxies and stellar streams in Gaia and LSST” (2016; PI; ST/N004493/1; 423,000 £)
- UK/Chile CONICYT International research project “Near-Field Cosmology in the Era of Large Surveys” (2014; Co-I)

- Amazon AWS research grant for the project “Analyzing stellar streams to complete Milky Way picture”(2009)
- Marie Curie visiting Fellowship (“EARA-EST” programme) for PhD research at the Institute of Astronomy in Cambridge (2007)
- Google Summer of Code award for the project “Enhanced aggregate support” for the PostgreSQL database (2006)
- D.Ya. Martynov Award of Sternberg Astronomical Institute of Moscow State University for the best student diploma work (2006).
- M.V. Lomonosov stipend for excellent studies (2005)
- L.A. Artsimovitsch Award for excellent studies (2004)
- Grant of the Russian Foundation for Basic Research for young scientists, undergraduates and PhD’s (2003)
- Grant “Student-2002”, provided by International Soros Science Education Program and Moscow government

## Service

- Referee for the Astrophysical Journal/Letters, Astronomy and Astrophysics/Letters, Monthly Notices of Royal Astronomical Society/Letters, Advances in Astronomy, Astronomy Letters, Astronomy and Computing, New Astronomy.
- Served as a reviewer for the European Research Council (ERC), Dutch research council (NWO), German Research Foundation (DFG), Royal Society, Science Technology and Facilities Council (STFC), The National Fund for Scientific and Technological Development (FONDECYT; Chile), Canada-France-Hawaii Telescope Time allocation committee.
- Served as an examiner at PhD defences at the University of Cambridge, Rutgers University, Carnegie Mellon University, University of Edinburgh, University of Barcelona.
- Committee work: IfA internal selection panels for fellowships (ERF, FLF, Elizabeth Gardner) (2021-), IfA Computing strategy group convener (2024-), School of Physics Computing Committee (2024-), DESI Spare Fibre Task Force (2024), Mellon College of Science Working Group on Scientific Data Analysis (2020), DESI External Collaborator Committee member (2019-2020), McWilliams fellowship selection committee (2017-2020), Physics department hiring committee (2018-2019), McWilliams cosmology seminar committee (2018-2020), Physics colloquium committee (2018-2020)
- Personal Tutor of a cohort of 35 undergraduate students in the University of Edinburgh (2021-Now)

## Teaching

- Undergraduate courses: “Galaxy Evolution” (lecturer; Edinburgh; 2023-2025), “Numerical recipes” (lecturer, course organiser; Edinburgh; 2021-2025), “Research methods in Physics” (project advisor, 2023-2025), “Telescope group project” (project advisor, 2024-2025), “Mapping the Galaxy” (lecturer; CMU; 2019), “Advanced computational physics” (lecturer; CMU; 2019-2020), “Experimental physics” (CMU; 2018-2020), “CCD photometry in modern astronomy“ (Heidelberg, 2009)
- Graduate courses: “Introductory astrophysics” (CMU; 2017-2018); ”Statistical techniques in astronomy and their implementation in Python”, (Institute of Astronomy, Cambridge; 2013-2016)
- Mini-course “STAN probabilistic language” (Institute of Astronomy, Cambridge; June 2017)

## Supervision of students

Undergraduate students projects: more than 30 students over last 10 years

Graduate students: Jon Budzynski (Cambridge; 2010–2012; co-supervised; industry); Nadia Blagorodnova (Cambridge; 2012–2015; co-supervised; researcher in University of Barcelona); Iulia Simion (Cambridge; 2014–2016; co-supervised; professor in Shanghai Normal University); Jonathan Diaz (Cambridge; 2014–2016; co-supervised; University of Western Australia); Gabriel Torrealba (Cambridge; 2014–2017; co-supervised, industry); Kuldeep Sharma (CMU; 2018–2020; industry) ; Zhaozhou An (CMU; 2018–2021; industry) ; Jeffrey Patrick (CMU; 2017–2023, industry) ; Kuan-Wei Huang (CMU; 2018–2021, industry); Rachel Buttry (CMU; 2019–), Sill Verberne (Leiden/Edinburgh; 2021–2025); Amanda Bystrom (2022–); Manuel Cavieres Carrera (2024–)

## Selected press coverage based on publications and press releases

Press releases were covered by CNN, Guardian, NYTimes, Washington Post, Forbes, Newsweek, Sky & Telescope, New Scientist and other outlets:

“One dozen streams: twelve for dinner” (Jan 2022); “VVV-WIT-08: the giant star that blinked” (June 2021); “A runaway star ejected from galactic heart of darkness” (November 2019); “Gaia spots a ‘ghost’ galaxy next door” (November 2018); “The Gaia Sausage: The major collision that changed the Milky Way galaxy” (July 2018); “Hiding in plain sight - Star Cluster Gaia 1” (November 2017); “Massive holes ‘punched’ through a trail of stars likely caused by dark matter” (September 2016); “New dwarf galaxies discovered in orbit around the Milky Way” (March 2015); “A beast with four tails” (November 2011)

## Recent Outreach activities

- Public talk at Dalgety Bay Astronomy Club (2024)
- Public talks at the Royal Observatory Open Days (2020-2024)
- *Gaia*-mission stand at the Royal Observatory Open Day (2022-2024)
- Public Talk “Milky Way and its galactic neighbors” (Allegheny observatory; Pittsburgh; 2018)

## Publication Record (from NASA ADS, as of March 2025)

- ORCID: 0000-0003-2644-135X, Researcher ID: F-2754-2012
- Total number of refereed publications: 260+
- Total number of citations: 43000+
- Total number of refereed first author publications: 18
- Total number of first-author citations: 3000+
- H-index: 89