

YANA KHUSANOVA

Max-Planck-Institute for Astronomy
Königstuhl 17, 69117 Heidelberg, Germany
khusanova@mpia.de
<https://khusanova.github.io>
<https://orcid.org/0000-0002-7220-397X>

EMPLOYMENT

11/2019 – now	Postdoctoral researcher at Max Planck Institute for Astronomy , in "Supermassive Black Holes and Galaxies in the epoch of reionization" group lead by Eduardo Bañados
---------------	--

RESEARCH INTERESTS

Galaxies and quasars at high-redshift, radio-loud quasar host galaxies, cosmic star formation history, observations (from optical to mm)

EDUCATION

2016 – 2019	PhD in the Laboratoire d'Astrophysique de Marseille Thesis "The properties of the galaxies at the end of HI reionization epoch", supervisor: Olivier Le Fèvre
2014 – 2016	Erasmus Mundus Master Course in Astrophysics - Astromundus (by 5 partner universities: University of Innsbruck, University Roma Tor Vergata, University of Belgrade, University of Göttingen, University of Padova) Thesis "LSST Software Stack: Adaptation to ESO-NTT SOFI camera and application to a Ks-band dataset for reduction and analysis", supervisors: Giovanna Temporin and Darko Jevremović
2009 – 2014	Specialist Degree in Astronomy in Ural Federal University Thesis "Doppler Imaging of a Young Binary Star V 4046 Sgr" Supervisor: Dmitriy Kononov
2012 – 2014	Additional qualification in pedagogy at the Center for Pedagogical Education of Ural Federal University

AWARDED SCHOLARSHIPS

2014-2016	Erasmus Mundus Joint Master Scholarship (Astromundus)
-----------	---

APPROVED TELESCOPE PROPOSALS

PI:

2022 "The origin of extreme [CII] and FIR continuum emission in the radio and X-ray brightest quasars at $z>6$ "
IRAM, NOEMA (28h)

Co-I (selected proposals):

2020-2022 "The host galaxies of the most distant radio quasars at $z>6$ ", series of proposals, PI: Eduardo Bañados
IRAM, NOEMA (24h)

2021 "The JWST-legacy narrow-band survey of H-alpha and [OIII] emitters in the epoch of reionization" PI: Eduardo Bañados
JWST (18.4h)

TALKS

2018 The growth of galaxies in the Early Universe", Sesto, Italy
"Luminosity Function of the galaxies in the end of Reionization"

2018 The Franco-Indian School "From Reionization to Large Scale Structure. A multi-wavelength approach", Pune, India
"Luminosity Function of the galaxies in the end of Reionization"

2019 The growth of galaxies in the Early Universe, Sesto, Italy
"The properties of the galaxies in the end of Reionization"

2020 Galaxy Coffee in Max Planck Institute for Astronomy
"The dust-hidden star formation rate density at $z>4$ "

2020 Summer All Zoom Epoch of Reionization Astronomy Conference, virtual
"The dust-hidden star formation rate density at $z>4$ "

2021 Summer All Zoom Epoch of Reionization Astronomy Conference, virtual
"The host galaxies of radio-loud quasars at $z>6$ "

2021 European Astronomical Society Annual Meeting
"The host galaxies of radio-loud quasars at $z>6$ "

2022 The National Astronomy Meeting (NAM)
"The host galaxies of radio-loud quasars at $z>6$ "

2022 Café Club in Laboratoire d'Astrophysique de Marseille
"The host galaxies of radio-loud quasars at $z>6$ "

2022 Galaxy Coffee in Max Planck Institute for Astronomy
"The host galaxies of radio-loud quasars at $z>6$ "

POSTER PRESENTATIONS

2014 The 43rd Student Scientific Conference "Physics of Space",
Kourovka Observatory, Russia
"Spektralnye issledovaniya molodoy dvoynoy zvezdy V 4046
Sgr (*Spectral analysis of young binary V 4046 Sgr*)"

2016 LSST@Europe2, Belgrade, Serbia
"Adaptation of LSST Software Stack to ESO-NTT SOFI
Near-Infrared Camera"

2021 European Astronomical Society Annual Meeting
"Main sequence at $z>4$ with ALMA Large Program to
INvestigate [CII] at Early times (ALPINE)"

2022 From galaxies to cosmology with deep spectroscopic surveys,
A tribute to Olivier Le Fèvre, Marseille, France
"Star-forming galaxies at $z>5$ with VUDS"

OUTREACH COMMUNICATIONS

2016 Talk "Enigmas of galaxy evolution" at the Conference of the
Application of Esperanto in Science and Technology in
Modra, Slovakia

2016 Guest on the internet-podcast <https://kern.punkto.info/> for the
topic "Galaxies"

2020 Online talk "Astrophysicists and climate change" at the
Conference of the Application of Esperanto in Science and
Technology (online)

2020 Talk "Galaxy evolution" at the Esperanto Astronomy
Day (online)

2020 Talk "Galaxies far, far away" for the IAU Outreach Global
Project "100 Hours of Astronomy"

TEACHING EXPERIENCE

09/2013 – 10/2013 Pedagogical practice in High School Nr. 9
• Teaching Astronomy

SERVICE ROLES

2017-2019	Member of the Seminar Organizing Committee at Laboratoire d'Astrophysique de Marseille
2022-now	MPQueer network of Max Planck Society, member of the steering committee

LANGUAGE SKILLS

Russian (mother tongue), English (C1), German (C1), French (B2), Esperanto (C1)

COMPUTER SKILLS

Programming languages: Python
Astronomical software: GILDAS, IRAF, DS9, CASA, ESO-MIDAS

LIST OF PUBLICATIONS

First author publications:

- Khusanova Y., Bañados E., Mazzucchelli C., et al., 2022, A&A, 664, A39. doi: 10.1051/0004-6361/202243660 "The [CII] and FIR properties of $z>6$ radio-loud quasars"
- Khusanova Y., Béthermin M., Le Fèvre O., et al., 2021, A&A, 649, A152. doi: 10.1051/0004-6361/202038944 "The ALPINE-ALMA [CII] survey. Obscured star formation rate density and main sequence of star-forming galaxies at $z>4$ "
- Khusanova Y., Le Fèvre O., Cassata P., et al., 2020, A&A, 634, A97. doi: 10.1051/0004-6361/201935400 "The UV and $\text{Ly}\alpha$ Luminosity Functions of galaxies and the Star Formation Rate Density at the end of HI reionization from the VIMOS Ultra-Deep Survey (VUDS)"

Other publications:

- Faisst A. L., Yan L., Béthermin M., Cassata P., [.....], Khusanova, Y., et al., 2022, Univ, 8, 314. doi:10.3390/universe8060314 "ALPINE: A Large Survey to Understand Teenage Galaxies"
- Rojas-Ruiz S., Bañados E., Neeleman M., Connor T., Eilers A. C., Venemans B. P., Khusanova Y., et al., 2021, ApJ, 920, 150. doi:10.3847/1538-4357/ac1a13 "The Impact of Powerful Jets on the Far-infrared Emission of an Extreme Radio Quasar at $z \sim 6$ "
- Pozzi F., Calura F., Fudamoto Y., [.....], Khusanova, Y., et al., 2021, A&A, 653, A84. doi:10.1051/0004-6361/202040258 "The ALPINE-ALMA [CII] survey. Dust mass budget in the early Universe"
- Lemaux B. C., Fuller S., Bradač M., [.....], Khusanova, Y., et al., 2021, MNRAS, 504, 3662. doi:10.1093/mnras/stab924 "The size and pervasiveness of $\text{Ly } \alpha$ -UV spatial offsets in star-forming galaxies at $z \sim 6$ "

- Thomas R., Pentericci L., Le Fèvre O., [.....], Khusanova, Y., et al., 2021, A&A, 650, A63. doi:10.1051/0004-6361/202038438 "Less and more IGM-transmitted galaxies from $z \sim 2.7$ to $z \sim 6$ from VANDELS and VUDS"
- Loiacono F., Decarli R., Gruppioni C., [.....], Khusanova, Y., et al., 2021, A&A, 646, A76. doi:10.1051/0004-6361/202038607 "The ALPINE-ALMA [C II] survey. Luminosity function of serendipitous [C II] line emitters at $z \sim 5$ "
- Gruppioni C., Béthermin M., Loiacono F., [.....], Khusanova, Y., et al., 2020, A&A, 643, A8. doi:10.1051/0004-6361/202038487 "The ALPINE-ALMA [CII] survey. The nature, luminosity function, and star formation history of dusty galaxies up to $z \approx 6$ "
- Dessauges-Zavadsky M., Ginolfi M., Pozzi F., [.....], Khusanova, Y., et al., 2020, A&A, 643, A5. doi:10.1051/0004-6361/202038231 "The ALPINE-ALMA [C II] survey. Molecular gas budget in the early Universe as traced by [C II]"
- Fudamoto Y., Oesch P. A., Faisst A., Béthermin M., Ginolfi M., Khusanova Y., et al., 2020, A&A, 643, A4. doi:10.1051/0004-6361/202038163 "The ALPINE-ALMA [CII] survey. Dust attenuation properties and obscured star formation at $z \sim 4.4\text{--}5.8$ "
- Béthermin M., Fudamoto Y., Ginolfi M., Loiacono F., Khusanova Y., et al., 2020, A&A, 643, A2. doi:10.1051/0004-6361/202037649 "The ALPINE-ALMA [CII] survey: Data processing, catalogs, and statistical source properties"
- Le Fèvre O., Béthermin M., Faisst A., [.....], Khusanova, Y., et al., 2020, A&A, 643, A1. doi:10.1051/0004-6361/201936965 "The ALPINE-ALMA [CII] survey. Survey strategy, observations, and sample properties of 118 star-forming galaxies at $4 < z < 6$ "
- Faisst A. L., Schaerer D., Lemaux B. C., [.....], Khusanova, Y. et al., 2020, ApJS, 247, 61. doi:10.3847/1538-4365/ab7ccd "The ALPINE-ALMA [C II] Survey: Multiwavelength Ancillary Data and Basic Physical Measurements"
- Thomas R., Pentericci L., Le Fevre O., [.....], Khusanova, Y. et al., 2020, A&A, 634, A110. doi:10.1051/0004-6361/201935925 "The intergalactic medium transmission towards $z \approx 4$ galaxies with VANDELS and the impact of dust attenuation"
- Jones G. C., Béthermin M., Fudamoto Y., [.....], Khusanova, Y. et al., 2020, MNRAS, 491, L18. doi:10.1093/mnras/515/4/4154 "The ALPINE-ALMA [C II] survey: a triple merger at $z \sim 4.56$ "
- Ginolfi M., Jones G. C., Béthermin M., [.....], Khusanova, Y. et al., 2020, A&A, 633, A90. doi:10.1051/0004-6361/201936872 "The ALPINE-ALMA [C II] survey: Star-formation-driven outflows and circumgalactic enrichment in the early Universe"
- Kononov D. A., Khusanova Y. I., Sytov A. Y., 2018, Doppler tomography of the young binary system V4046 Sgr, A.A. Boyarchuk Memorial Conference, 227-232
- McLure R. J., Pentericci, L., Cimatti, A., [.....], Khusanova, Y., et al., 2018, The VANDELS ESO public spectroscopic survey, MNRAS, 479, 25

- Pentericci L., McLure, R. J., Garilli, B., [.....], Khusanova, Y., et al., 2018, The VANDELS ESO public spectroscopic survey: Observations and first data release, A&A, 616, A174