Curriculum Vitae

Personal Information

Name	Michal Zajaček
Date and Place of Birth	*December 31st, 1988* in Malacky, Slovakia
Permanent Address	Laca Novomeského 4, 901 01 Malacky, Slovakia
Mobile	+421 905 692 726 (Slovak)
Email-work	zajacek@mail.muni.cz, zajacek@cft.edu.pl
Email-personal	michal.zajacek31@gmail.com
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Education

September 17, 2014 – October 12, 2017 **University of Cologne/Max Planck Institute for Radioastronomy** *Cologne/Bonn, Germany*
PhD in Experimental Physics, graduated as very good – sehr good with the grade 1.00.

December 15, 2014 **Charles University in Prague** *Prague, Czechia*
Rigorosum examination – RNDr. degree

2012–2014 **Charles University in Prague** *Prague, Czechia*
Master of Science in Astronomy & Astrophysics, graduated with honours

2009–2012 **Charles University in Prague** *Prague, Czechia*
Bachelor of Science in General Physics, graduated with honours

2004–2009 **Evangelical Lyceum in Bratislava** *Bratislava, Slovakia*
Bilingual High School studies, graduated with honours in Mathematics, Physics, Computer Science, English (C1 level), Slovak

1995–2004 **Elementary School** *Malacky, Slovakia*

Work Experience

July 2021 – present **Masaryk University, High Energy Astrophysics group** *Czechia, https://www.physics.muni.cz/en/research/research-groups/high-energy-astrophysics/people* – researcher

- In charge of the Star-Jet Working group focused on studying of effects of active jets in galactic nuclei on the surrounding nuclear star cluster
- AGN feedback on small and large scales
- Astrodynamics – dynamics of stars in the potential of the supermassive black hole
- Black hole physics, accretion, jets

Jan 2019 – June 2021 **Center for Theoretical Physics, Polish Academy of Sciences** *Poland, http://www.cft.edu.pl/* – Postdoctoral researcher

- analysis of continuum and line-emission time series
- usage of different statistical methods to assess the time-delay between the continuum and the line-emission light curves – reverberation mapping of quasars at redshifts > 1
- Galactic center physics – stellar populations, accretion, variability
- Physics of jets – jet precession, variability, radio-γ-ray emission, high-energy neutrinos

Oct 2018 – Jan 2019 **Max Planck Institute for Radioastronomy** *Germany, https://www.mpifr-bonn.mpg.de/* – Junior Postdosctoral researcher

- Development of a code for fitting the jet precession model to Very-Long-Baseline-Interferometry data
- Projects within SFB956: dusty sources close to Sgr A*, star-formation in the Galactic centre

- Radio-optical properties of galaxies – distribution of radio spectral slopes in optical diagnostic diagrams

2012–present **Astronomical Institute of the Academy of Sciences** *Czechia, http://www.astro.cas.cz/* – External research assistant

- Involved in cooperation research projects dealing with the physics of accretion discs and star-disc interactions.

July 2008 – present **AMAVET – Association for Youth, Science, and Technology** *Slovakia, https://www.amavet.sk/* – Project manager for science outreach and dissemination

- Project coordinator of various projects (LABAK, Science Cup, Curious scientisits) intended for elementary and high-school students

Publication statistics – According to ADS (for August 30, 2021)

Number of articles	99
Refereed articles	44
Non-refereed articles	55
Number of citations	684
H-Index	14

Awards & Distinctions

September 17, 2014-October 12, 2017	International Max Planck Research School Scholarship
2014	Master degree with honours – Summa Cum Laude – the Charles University in Prague
2013-2014	Scholarship for excellent studying results - the Charles University in Prague
2013	MILSET Regards and Gratitude award (Abu Dhabi, United Arab Emirates)
2013-2014	Research grant (879113) awarded by the Grant Agency of the Charles University in Prague
2012	Bachelor degree with honours – Summa Cum Laude – the Charles University in Prague
2012	Second prize at the Czech-Slovak Physics Student conference for the bachelor thesis
2008	Third place at the nationwide astronomical competition "What do you know about stars?"

Memberships

2018–present	Member of the International Astronomical Union
2015–present	Member of SFB956: Conditions for Star Formation in Nearby AGN and QSO Hosts

Skills & Background Knowledge

Technical skills

Fortran 90/95, *Advanced*

Python, *Advanced*

Gnuplot, *Advanced*

LaTeX, *Advanced*

LINUX, *Advanced*

HTML, PHP, *Intermediate*

Personal skills

High level in communication skills

Sociable and proactive

Languages

Slovak, *Native*

English, *Advanced*
German, *Intermediate*
Czech, *Advanced*
Polish, *Intermediate*

Publications

P. Suková, M. Zajaček, V. Witzany, and V. Karas, "Perturbing the accretion flow onto a supermassive black hole by a passing star," *arXiv e-prints*, p. arXiv:2012.02608, Dec. 2020.

M. Zajaček, A. Araudo, V. Karas, B. Czerny, A. Eckart, P. Suková, M. Štolc, and V. Witzany, "Missing bright red giants in the Galactic center: A fingerprint of its once active state?," *arXiv e-prints*, p. arXiv:2011.12868, Nov. 2020.

B. Czerny, M. L. Martínez-Aldama, G. Wojtkowska, M. Zajaček, P. Marziani, D. Dultzin, M. H. Naddaf, S. Panda, R. Prince, R. Przyluski, M. Ralowski, and M. Śniegowska, "Dark energy constraints from quasar observations," *arXiv e-prints*, p. arXiv:2011.12375, Nov. 2020.

M. Zajaček, A. Araudo, V. Karas, B. Czerny, and A. Eckart, "Depletion of Bright Red Giants in the Galactic Center during Its Active Phases," , vol. 903, p. 140, Nov. 2020.

M. L. Martínez-Aldama, M. Zajaček, B. Czerny, and S. Panda, "Scatter Analysis along the Multidimensional Radius-Luminosity Relations for Reverberation-mapped Mg II Sources," , vol. 903, p. 86, Nov. 2020.

S. Elaheh Hosseini, M. Zajaček, A. Eckart, N. B. Sabha, and L. Labadie, "Constraining the accretion flow density profile near Sgr A* using the L'-band emission of the S2 star," *arXiv e-prints*, p. arXiv:2010.00530, Oct. 2020.

F. Peissker, A. Eckart, M. Zajacek, B. Ali, and M. Parsa, "The fastest star around a super massive black hole," *The Astronomer's Telegram*, vol. 13935, p. 1, Aug. 2020.

F. Peißker, A. Eckart, M. Zajaček, B. Ali, and M. Parsa, "S62 and S4711: Indications of a Population of Faint Fast-moving Stars inside the S2 Orbit—S4711 on a 7.6 yr Orbit around Sgr A*," , vol. 899, p. 50, Aug. 2020.

A. Tursunov, M. Zajaček, A. Eckart, M. Kološ, S. Britzen, Z. Stuchlík, B. Czerny, and V. Karas, "Effect of Electromagnetic Interaction on Galactic Center Flare Components," , vol. 897, p. 99, July 2020.

F. Peißker, A. Eckart, N. B. Sabha, M. Zajaček, and H. Bhat, "Near- and Mid-infrared Observations in the Inner Tenth of a Parsec of the Galactic Center Detection of Proper Motion of a Filament Very Close to Sgr A*," , vol. 897, p. 28, July 2020.

F. Peissker, A. Eckart, N. B. Sabha, M. Zajacek, and H. Bhat, "Detection of a new object close to Sgr A*," *The Astronomer's Telegram*, vol. 13794, p. 1, June 2020.

B. Ali, D. Paul, A. Eckart, M. Parsa, M. Zajacek, F. Peißker, M. Subroweit, M. Valencia-S., L. Thomkins, and G. Witzel, "Kinematic Structure of the Galactic Center S-cluster," *arXiv e-prints*, p. arXiv:2006.11399, June 2020.

M. Zajaček, B. Czerny, M. L. Martinez-Aldama, M. Rałowski, A. Olejak, S. Panda, K. Hryniewicz, M. Śniegowska, M.-H. Naddaf, W. Pych, G. Pietrzyński, C. Sobrino Figaredo, M. Haas, J. Średzińska, M. Krupa, A. Kurcz, A. Udalski, M. Gorski, and M. Sarna, "Time-delay Measurement of Mg II Broad-line Response for the Highly Accreting Quasar HE 0413-4031: Implications for the Mg II-based Radius-Luminosity Relation," , vol. 896, p. 146, June 2020.

B. Ali, D. Paul, A. Eckart, M. Parsa, M. Zajacek, F. Peißker, M. Subroweit, M. Valencia-S., L. Thomkins, and G. Witzel, "Kinematic Structure of the Galactic Center S Cluster," , vol. 896, p. 100, June 2020.

F. Peißker, S. E. Hosseini, M. Zajaček, A. Eckart, R. Saalfeld, M. Valencia-S., M. Parsa, and V. Karas, "Monitoring dusty sources in the vicinity of Sagittarius A*," , vol. 634, p. A35, Feb. 2020.

S. Britzen, C. Fendt, G. Witzel, S. J. Qian, I. N. Pashchenko, O. Kurtanidze, M. Zajacek, G. Martinez, V. Karas, M. Aller, H. Aller, A. Eckart, K. Nilsson, P. Arévalo, J. Cuadra, M. Subroweit, and A. Witzel, "A precessing and nutating jet in OJ287," in *Perseus in Sicily: From Black Hole to Cluster Outskirts* (K. Asada, E. de Gouveia Dal Pino, M. Giroletti, H. Nagai, and R. Nemmen, eds.), vol. 342, pp. 250–251, Jan. 2020.

M. Zajacek and A. Tursunov, "The Electric Charge of Black Holes: Is It Really Always Negligible," *The Observatory*, vol. 139, pp. 231–236, Dec. 2019.

S. Panda, M. L. Martínez-Aldama, and M. Zajaček, "Current and future applications of Reverberation-mapped quasars in Cosmology," *Frontiers in Astronomy and Space Sciences*, vol. 6, p. 75, Dec. 2019.

S. Britzen, C. Fendt, M. Böttcher, M. Zajaček, F. Jaron, I. N. Pashchenko, A. Araudo, V. Karas, and O. Kurtanidze, "A cosmic collider: Was the IceCube neutrino generated in a precessing jet-jet interaction in TXS 0506+056? (Corrigendum)," , vol. 632, p. C3, Dec. 2019.

M. Zajaček, A. Eckart, S. Britzen, and B. Czerny, "Distribution of Radio Spectral Slopes of Galaxies in Optical Diagnostic Diagrams," *arXiv e-prints*, p. arXiv:1911.12901, Nov. 2019.

M. Zajaček, A. Tursunov, A. Eckart, S. Britzen, E. Hackmann, V. Karas, Z. Stuchlík, B. Czerny, and J. A. Zensus, "Constraining the charge of the Galactic centre black hole," in *Journal of Physics Conference Series*, vol. 1258 of *Journal of Physics Conference Series*, p. 012031, Oct. 2019.

A. Eckart, M. Zajacek, M. Valencia-S, M. Parsa, E. Hosseini, C. Straubmeier, M. Horrobin, M. Subroweit, and A. Tursunov, "The central light-year of the Milky Way: How stars and gas live in a relativistic environment of a super-massive black hole," in *Journal of Physics Conference Series*, vol. 1258 of *Journal of Physics Conference Series*, p. 012019, Oct. 2019.

M. L. Martínez-Aldama, B. Czerny, D. Kawka, V. Karas, S. Panda, M. Zajaček, and P. T. Życki, "Can Reverberation-measured Quasars Be Used for Cosmology?," , vol. 883, p. 170, Oct. 2019.

S. Britzen, C. Fendt, M. Böttcher, M. Zajaček, F. Jaron, I. N. Pashchenko, A. Araudo, V. Karas, and O. Kurtanidze, "A cosmic collider: Was the IceCube neutrino generated in a precessing jet-jet interaction in TXS 0506+056?," , vol. 630, p. A103, Oct. 2019.

M. Zajaček, G. Busch, M. Valencia-S., A. Eckart, S. Britzen, L. Fuhrmann, J. Schneeloch, N. Fazeli, K. C. Harrington, and J. A. Zensus, "Radio spectral index distribution of SDSS-FIRST sources across optical diagnostic diagrams," , vol. 630, p. A83, Oct. 2019.

K. C. Harrington, A. Vishwas, A. Weiß, B. Magnelli, L. Grassitelli, M. Zajaček, E. F. Jiménez-Andrade, T. K. D. Leung, F. Bertoldi, E. Romano-Díaz, D. T. Frayer, P. Kamieneski, D. Riechers, G. J. Stacey, M. S. Yun, and Q. D. Wang, "The 'Red Radio Ring': ionized and molecular gas in a starburst/active galactic nucleus at z $\sim$ 2.55," , vol. 488, pp. 1489–1500, Sept. 2019.

M. Zajacek, G. Busch, M. Valencia-S., A. Eckart, S. Britzen, L. Fuhrmann, J. Schneeloch, N. Fazeli, K. C. Harrington, and J. A. Zensus, "VizieR Online Data Catalog: 4.85 and 10.45GHz fluxes of SDSS-FIRST sources (Zajacek+, 2019)," *VizieR Online Data Catalog*, pp. J/A+A/630/A83, Aug. 2019.

S. Britzen, C. Fendt, M. Zajaček, F. Jaron, I. Pashchenko, M. F. Aller, and H. D. Aller, "3C 84: Observational Evidence for Precession and a Possible Relation to TeV Emission," *Galaxies*, vol. 7, p. 72, Aug. 2019.

M. Zajaček, B. Czerny, M. L. Martínez-Aldama, and V. Karas, "Reverberation mapping of distant quasars: Time lag determination using different methods," *Astronomische Nachrichten*, vol. 340, pp. 577–585, Aug. 2019.

B. Czerny, A. Olejak, M. Rałowski, S. Kozłowski, M. L. Martinez Aldama, M. Zajacek, W. Pych, K. Hryniewicz, G. Pietrzyński, C. Sobrino Figaredo, M. Haas, J. Średzińska, M. Krupa, A. Kurcz, A. Udalski, M. Gorski, V. Karas, S. Panda, M. Sniegowska, M.-H. Naddaf, M. Bilicki, and M. Sarna, "Time Delay Measurement of Mg II Line in CTS C30.10 with SALT," , vol. 880, p. 46, July 2019.

M. L. Martinez Aldama, S. Panda, B. Czerny, M. Zajacek, and LSST AGN SC Collaboration, "Quasars from LSST as dark energy tracers: first steps," in *Multifrequency Behaviour of High Energy Cosmic Sources - XIII. 3-8 June 2019. Palermo*, p. 10, June 2019.

F. Peißker, M. Zajaček, A. Eckart, N. B. Sabha, B. Shahzamanian, and M. Parsa, "New bow-shock source with bipolar morphology in the vicinity of Sgr A*," , vol. 624, p. A97, Apr. 2019.

V. Karas, O. Kopacek, A. Eckart, and M. Zajacek, "Tiny charge - small mass - big effect: the onset of chaos near accreting black holes," in *AAS/High Energy Astrophysics Division*, vol. 17 of *AAS/High Energy Astrophysics Division*, p. 106.66, Mar. 2019.

M. Zajacek, A. Eckart, and S. Elaheh Hosseini, "Bow shock sources close to the Galactic centre," *arXiv e-prints*, p. arXiv:1903.00466, Mar. 2019.

N. Fazeli, G. Busch, M. Valencia-S., A. Eckart, M. Zajaček, F. Combes, and S. García-Burillo, "Near-infrared observations of star formation and gas flows in the NUGA galaxy NGC 1365," , vol. 622, p. A128, Feb. 2019.

N. Fazeli, G. Busch, M. Valencia-S., A. Eckart, M. Zajacek, F. Combes, and S. Garcia-Burillo, "VizieR Online Data Catalog: SINFONI datacube of NGC 1365 (Fazeli+, 2019)," *VizieR Online Data Catalog*, pp. J/A+A/622/A128, Jan. 2019.

V. Karas, M. Bursa, M. Dovciak, A. Eckart, M. Valencia-S, M. Khanduwala, and M. Zajacek, "Super-Massive Black Hole mass estimation from bright flares," *arXiv e-prints*, p. arXiv:1901.06520, Jan. 2019.

V. Karas, M. Dovciak, J. Svoboda, W. Zhang, G. Matt, A. Eckart, and M. Zajacek, "Polarimetry and strong gravity effects from spots orbiting near a black hole," *arXiv e-prints*, p. arXiv:1901.06515, Jan. 2019.

V. Karas, J. Svoboda, and M. Zajacek, "Selected Chapters on Active Galactic Nuclei as Relativistic Systems," *arXiv e-prints*, p. arXiv:1901.06507, Jan. 2019.

M. Zajaček, A. Tursunov, A. Eckart, and S. Britzen, "On the charge of the Galactic centre black hole," , vol. 480, pp. 4408–4423, Nov. 2018.

M. Zajacek, *Interaction between interstellar medium and black hole environment*. PhD thesis, University of Cologne/Max Planck Institute for Radioastronomy, Oct. 2018.

M. Zajacek, A. Eckart, and S. E. Hosseini, "Bow shock sources close to the Galactic centre," in *Accretion Processes in Cosmic Sources - II*, p. 49, Sept. 2018.

A. Eckart, A. A. Tursunov, M. Zajacek, M. Parsa, E. Hosseini, M. Subroweit, F. Peissker, C. Straubmeier, M. Horrobin, and V. Karas, "Mass, Distance, Spin, Charge, and Orientation of the super massive black hole SgrA*," in *Accretion Processes in Cosmic Sources - II*, p. 48, Sept. 2018.

S. Britzen, C. Fendt, G. Witzel, S. J. Qian, I. N. Pashchenko, O. Kurtanidze, M. Zajacek, G. Martinez, V. Karas, M. Aller, H. Aller, A. Eckart, K. Nilsson, P. Arévalo, J. Cuadra, M. Subroweit, and A. Witzel, "OJ287: deciphering the 'Rosetta stone of blazars," , vol. 478, pp. 3199–3219, Aug. 2018.

A. Eckart, M. Parsa, E. Mossoux, B. Shahzamanian, M. Zajacek, E. Hosseini, M. Subroweit, F. Peissker, N. Sabha, M. Valencia-S., C. Straubmeier, V. Karas, S. Britzen, and A. Zensus, "Light and shadow in the Galactic Center - On the detection of the relativistic periastron shift of star S2 in the Galactic Center," *arXiv e-prints*, p. arXiv:1806.01096, June 2018.

A. Eckart, M. Zajacek, M. Parsa, E. H. N. Fazeli, G. Busch, B. Shahzamanian, M. Subroweit, F. Peissker, N. Sabha, M. Valencia-S., M. Horrobin, C. Straubmeier, S. Rost, J. S. A. Borkar, V. Karas, S. Britzen, A. Zensus, and F. Kamali, "The Multifrequency Behavior of Sagittarius A*," *arXiv e-prints*, p. arXiv:1806.00284, June 2018.

M. Zajaček and A. A. Tursunov, "A stellar fly-by close to the Galactic center: Can we detect stars on highly relativistic orbits?," *Astronomische Nachrichten*, vol. 339, pp. 324–330, June 2018.

M. Zajacek, "Interaction between interstellar medium and black-hole environment," *The Observatory*, vol. 138, pp. 87–88, Apr. 2018.

M. Zajaček and A. Tursunov, "A stellar fly-by close to the Galactic centre: Can we detect stars on highly-relativistic orbits?," *arXiv e-prints*, p. arXiv:1804.11014, Apr. 2018.

B. Shahzamanian, A. Eckart, M. Zajacek, M. Valencia-S., and N. Sabha, "Polarization: A Method to Reveal the True Nature of the Dusty S-Cluster Object (DSO/G2)," *Galaxies*, vol. 6, p. 13, Jan. 2018.

M. Zajacek, "From accretion to star formation in galactic nuclei," *The Observatory*, vol. 137, pp. 267–272, Dec. 2017.

S. Britzen, C. Fendt, G. Witzel, S. J. Qian, I. N. Pashchenko, O. Kurtanidze, M. Zajacek, G. Martinez, V. Karas, M. Aller, H. Aller, A. Eckart, K. Nilsson, P. Arévalo, J. Cuadra, and A. Witzel, "OJ287 taken to pieces: the origin of a precessing and rotating jet," in *Journal of Physics Conference Series*, vol. 942 of *Journal of Physics Conference Series*, p. 012005, Dec. 2017.

M. Zajaček, V. Karas, E. Hosseini, A. Eckart, B. Shahzamanian, M. Valencia-S., F. Peissker, G. Busch, S. Britzen, and J. A. Zensus, "Polarization properties of bow shock sources close to the Galactic centre," in *RAGtime 17-19: Workshops on Black Holes and Neutron Stars*, pp. 237–252, Dec. 2017.

L. Štofanová, M. Zajaček, D. Kunneriath, A. Eckart, and V. Karas, "Modelling the bow-shock evolution along the DSO/G2 orbit in the Galactic centre," in *RAGtime 17-19: Workshops on Black Holes and Neutron Stars*, pp. 153–161, Dec. 2017.

A. Eckart, M. Valencia-S., B. Shahzamanian, M. Zajacek, L. Moser, G. Busch, M. Parsa, M. Subroweit, F. Peissker, N. Sabha, S. E. Hosseini, M. Horrobin, C. Straubmeier, N. Fazeli, A. Borkar, D. Kunneriath, V. Karas, C. Rauch, S. Britzen, A. Zensus, M. Garcia-Marin, and Y. E. Rashed, "Experimental Indicators of Accretion Processes in Active Galactic Nuclei," *arXiv e-prints*, p. arXiv:1712.06915, Dec. 2017.

L. Stofanova, M. Zajaček, and V. Karas, "Bow shocks as tracers of the environment and stellar outflows near the supermassive black hole.," in *The X-ray Universe 2017* (J.-U. Ness and S. Migliari, eds.), p. 329, Oct. 2017.

V. Karas, O. Kopacek, D. Kunneriath, M. Zajacek, S. Britzen, and A. Eckart, "Binary black hole embedded in an external magnetic field as site of particle acceleration," in *The X-ray Universe 2017* (J.-U. Ness and S. Migliari, eds.), p. 289, Oct. 2017.

A. Eckart, M. Valencia-S., B. Shahzamanian, M. Zajacek, L. Moser, M. Parsa, M. Subroweit, F. Peissker, N. Sabha, M. Horrobin, C. Straubmeier, A. Borkar, D. Kunneriath, V. Karas, C. Rauch, S. Britzen, A. Zensus, and M. García-Marín, "Nuclear Activity and the Conditions of Star-formation at the Galactic Center," *arXiv e-prints*, p. arXiv:1709.08963, Sept. 2017.

M. Parsa, A. Eckart, B. Shahzamanian, V. Karas, M. Zajaček, J. A. Zensus, and C. Straubmeier, "Investigating the Relativistic Motion of the Stars Near the Supermassive Black Hole in the Galactic Center," , vol. 845, p. 22, Aug. 2017.

V. Karas, O. Kopáček, D. Kunneriath, M. Zajaček, A. Araudo, A. Eckart, and J. Kovář, "Plunging neutron stars as origin of organised magnetic field in galactic nuclei," *Contributions of the Astronomical Observatory Skalnate Pleso*, vol. 47, pp. 124–132, July 2017.

M. Zajacek, A. Eckart, and B. Shahzamanian, "Polarimetry Narrows Down the Possibilities for the Dusty S-Cluster Object (DSO/G2) in the Galactic Centre," *The Observatory*, vol. 137, pp. 112–115, June 2017.

M. Zajaček, S. Britzen, A. Eckart, B. Shahzamanian, G. Busch, V. Karas, M. Parsa, F. Peissker, M. Dovčiak, M. Subroweit, F. Dinnbier, and J. A. Zensus, "Nature of the Galactic centre NIR-excess sources. I. What can we learn from the continuum observations of the DSO/G2 source?," , vol. 602, p. A121, June 2017.

A. Eckart, A. Hüttemann, C. Kiefer, S. Britzen, M. Zajaček, C. Lämmerzahl, M. Stöckler, M. Valencia-S, V. Karas, and M. García-Marín, "The Milky Way's Supermassive Black Hole: How Good a Case Is It?," *Foundations of Physics*, vol. 47, pp. 553–624, May 2017.

B. Shahzamanian, M. Zajaček, M. Valencia-S., F. Peissker, A. Eckart, N. Sabha, and M. Parsa, "Detection of polarized continuum emission of the Dusty S-cluster Object (DSO/G2)," in *The Multi-Messenger Astrophysics of the Galactic Centre* (R. M. Crocker, S. N. Longmore, and G. V. Bicknell, eds.), vol. 322, pp. 233–234, Jan. 2017.

M. Zajaček, M. Valencia-S., B. Shahzamanian, F. Peissker, A. Eckart, and M. Parsa, "Nature of the Dusty S-cluster Object (DSO/G2): Pre-main-sequence star with non-spherical dusty envelope," in *The Multi-Messenger Astrophysics of the Galactic Centre* (R. M. Crocker, S. N. Longmore, and G. V. Bicknell, eds.), vol. 322, pp. 231–232, Jan. 2017.

A. Eckart, M. Valencia-S., B. Shahzamanian, M. Zajacek, L. Moser, G. Busch, M. Parsa, M. Subroweit, F. Peissker, N. Sabha, S. E. Hosseini, M. Horrobin, C. Straubmeier, N. Fazeli, A. Borkar, D. Kunneriath, V. Karas, C. Rauch, S. Britzen, A. Zensus, M. Garcia-Marin, and Y. E. Rashed, "Experimental Indicators of Accretion Processes in Active Galactic Nuclei," in *Accretion Processes in Cosmic Sources*, p. 33, Oct. 2016.

B. Shahzamanian, A. Eckart, M. Zajaček, M. Valencia-S., N. Sabha, L. Moser, M. Parsa, F. Peissker, and C. Straubmeier, "Polarized near-infrared light of the Dusty S-cluster Object (DSO/G2) at the Galactic center," , vol. 593, p. A131, Oct. 2016.

M. Zajacek, V. Karas, and A. Eckart, "Neutron star population in the Galactic center region as a potential source of polarized X-ray emission," in *American Astronomical Society Meeting Abstracts #228*, vol. 228 of *American Astronomical Society Meeting Abstracts*, p. 219.19, June 2016.

M. Zajacek, A. Eckart, M. Valencia-S., F. Peissker, and V. Karas, "Character and properties of near-infrared excess sources in the Galactic centre," in *American Astronomical Society Meeting Abstracts #228*, vol. 228 of *American Astronomical Society Meeting Abstracts*, p. 209.06, June 2016.

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Talks at astronomical events (2019-2020)

December 7, 2020 (Invited)	Colloquium "Supermassive black hole at the center of the Milky Way: From the first infrared observations to the Nobel Prize in Physics", Masaryk University in Brno, Czechia
October 28, 2020 (Invited)	Colloquium "Supermassive black hole at the center of the Milky Way: From the first infrared observations to the Nobel Prize in Physics", CFT PAS, Warsaw, Poland
October 19, 2020 (Contributed)	Talk "Missing bright red giants in the Galactic center: A fingerprint of its once active state?", RAGtime 22, Opava, Czechia
September 23, 2020 (Invited)	Talk "Speeding up around the Galactic center", The Australia Telescope National Facility Colloquium
September 22, 2020 (Contributed)	Talk "Disappearance of bright red giants in the Galactic center during its active phases", The Exploration of the Universe, Cologne, Germany
July 3, 2020 (Contributed)	Talk "Trends in the distribution of the radio spectral index in optical diagnostic diagrams of galaxies", EAS Annual Meeting (SS4), Leiden, The Netherlands
March 4, 2020 (Invited)	Colloquium "The James Webb Space Telescope - A New View at the Horizons of Space" (in Czech, JWST Master Class Workshop, Prague, Czechia
December 3, 2019 (Contributed)	Talk "Motion of hot spots in the magnetosphere of the Galactic centre supermassive black hole (Sgr A*)", International Workshop on Astronomical X-ray Optics, Prague, Czechia
November 6, 2019 (Contributed)	Talk "Distribution of radio spectral slopes of galaxies in optical diagnostic diagrams", Schloss Wahn meeting, Cologne, Germany
September 19, 2019 (Contributed)	Talk "Shadow in X-ray emission around charged black holes ", RAGtime 21, Opava, Czechia
September 12, 2019 (Contributed)	Talk "Distribution of radio spectral slopes of galaxies in optical diagnostic diagrams", Polish Astronomical Society Meeting, Olsztyn, Poland
July 4, 2019 (Contributed)	Talk "Signatures of supermassive black hole binaries on subparsec scales: from radio variability to gravitational waves", From the Dolomites to the event horizon: Sledging down the Black Hole potential well, Sesto, Italy

June 26, 2019 (Contributed)	Talk "Confirmation of MgII-based BLR radius-luminosity scaling for higher redshifts and implications for cosmology", European Week of Astronomy & Space Science, Lyon, France
May 23, 2019 (Contributed)	Talk "Reverberation-mapping of distant quasars: time-lag determination using different methods", IBWS 2019, Karlovy Vary, Czechia