



TRAVERSING THE GALACTIC CENTER
IN SPACE AND TIME

BRNO
CZECH REPUBLIC
MAY 18-22 2026

IAU Symposium 405

Brno Observatory and Planetarium

MUNI

Preliminary Symposium Program

Sunday (May 17th)

18:00-20:30 Registration at the Brno Observatory and Planetarium (Main Hall)

Monday (May 18th)

7:30-8:45 Registration at the Brno Observatory and Planetarium (Main Hall)

Opening talks (Digitarium)

9:00-9:30 **Michal Zajaček** (SOC/LOC chair), **Jiří Dušek** (Brno O&P director) & guests, [Welcome notes](#), [IAUS405: First IAU Symposium in Brno](#) (30)

9:30-10:15 **Andrea Ghez** (Nobel Prize Laureate), (35+10)

10:15-10:45 [Coffee break](#) (Main Hall)

Session 1: *Sgr A** and its interaction with the environment (Digitarium)

10:45-11:15 **Frank Eisenhauer**, [Review: A Decade of Galactic Center Discoveries with GRAVITY](#) (25+5)

11:15-11:45 **Angelo Ricarte**, [Review: Resolving Sgr A* with the Event Horizon Telescope](#) (25+5)

11:45-12:05 **Marianna Foschi**, [Invited: Horizon-scale dynamics of Sgr A* resolved in space and time](#) (17+3)

12:05-12:17 **Daryl Haggard**, [Sgr A* X-ray Flare Census: 25 Years with Chandra](#) (10+2)

12:17-12:29 **Mark Gorski**, [A Glimpse into The Cool Molecular Gas Around Sgr A*](#) (10+2)

- 12:29-14:00 Lunch (Upper Terrace)
- 14:00-14:20 **Sebastiano von Fellenberg**, *Invited: First Mid-infrared Detection and Modeling of a Flare from Sgr A** (17+3)
- 14:20-14:32 **Braden Seefeldt-Gail**, *Dynamics & Energetics of Magnetic Flux Tubes Near Sgr A* and Their Connection to Observed Flares* (10+2)
- 14:32-14:44 **Tintin Nguyen**, *Faraday Rotation from Parsec-Scale Stellar Winds to the Horizon: Rotation Measure Modeling of Sgr A** (10+2)
- 14:44-14:56 **Diego Calderón**, *Interacting stellar winds feeding Sgr A*: from the system of mass-losing stars to the binary IRS 16SW* (10+2)
- 14:56-15:08 **Joseph Michail**, *Mid-IR Spectral Energy Distribution and Submm Polarimetry of a Sgr A* Flare with JWST/MIRI and SMA* (10+2)
- 15:08-15:40 Coffee break (Main Hall)
- 15:40-15:52 **Aylecia Lattimer**, *Challenging Magnetic Reconnection as a Flaring Mechanism in Sgr A* Using Local Plasma Properties* (10+2)
- 15:52-16:04 **Tomoharu Oka**, *A Face-on Accretion Disk Geometry Revealed by Millimeter-wave Periodicity in Sgr A** (10+2)
- 16:04-16:16 **Farhad Yusef-Zadeh**, *JWST, NuSTAR, and VLA Monitoring of Sgr A*: Flare Production due to Magnetic Field Reconnection* (10+2)
- 16:16-16:28 **Ruth Daly**, *How Rapidly is Sgr A* Spinning?* (10+2)
- 16:28-17:00 Coffee break (Main Hall)
- 17:00-17:35 **Vladimír Šlapeta** (Jean Tschumi Prize Laureate), *Invited: Architecture Gems in Brno* (30+5)
- 19:00-21:00 Welcome Cocktail at the Brno New Townhall - Gothic cloister

Tuesday (May 19th)

Session 1: Sgr A* and its interaction with the environment (Digitarium)

- 9:00-9:20 **Michal Dovčiak**, *Invited: Probing the Flares of Sgr A*: Hot-Spot Models and Orbital Signatures Near the Event Horizon* (17+3)
- 9:20-9:32 **Maciek Wielgus**, *Dissecting the variability of Sagittarius A** (10+2)
- 9:32-9:44 **Bram van den Berg**, *Imaging Sgr A* dynamics with Resolve* (10+2)
- 9:44-9:56 **Diogo C. Ribeiro**, *A constraint on the electric charge of SgrA* from the orbit of S2* (10+2)
- 9:56-10:08 **Dominik Černý**, *Gravitational lensing of Sgr A** (10+2)
- 10:08-10:20 **Eleni Antonopoulou**, *Modeling the Multi-Wavelength Signatures of Sagittarius A** (10+2)
- 10:20-10:50 Coffee break (Main Hall)

Session 2: Central parsec: stars and gaseous-dusty content, stellar dynamics, star formation (Digitarium)

- 10:50-11:20 **Mark Morris**, *Review: Central parsec* (25+5)

- 11:20-11:40 **Alessandra Mastrobuono Battisti**, *Invited: The Formation and Dynamical Evolution of the Galactic Nuclear Star Cluster* (17+3)
- 11:40-11:52 **Matthew Hosek**, *Probing Dynamical Interactions Near Sgr A* Using Proper Motions from the HST-NSC Survey* (10+2)
- 11:52-12:04 **Mark Dodici**, *Stellar binaries orbiting Sgr A* should often shrink to near-contact separations* (10+2)
- 12:04-12:16 **Matteo Sadun Bordoni**, *Probing the mass distribution around Sagittarius A* with stellar orbits* (10+2)
- 12:16-12:28 **Anna Pusack**, *Unveiling a CO-Emitting Source in the Galactic Center: A YSO Candidate* (10+2)
- 12:28-12:40 **Shifra Mandel**, *A comprehensive study of the Galactic center X-ray sources and their distributions* (10+2)
- 12:40-14:00 *Lunch (Upper Terrace)*
- 14:00-14:20 **Ladislav Šubr**, *Invited: In-Situ Star Formation in the Galactic Center - Testing the Hypothesis* (17+3)
- 14:20-14:32 **Tuan Do**, *Revealing the binary star population at the Galactic center from 20 years of data* (10+2)
- 14:32-14:44 **Joanna Berteaud**, *Probing the population of millisecond pulsars in the inner Galaxy* (10+2)
- 14:44-14:56 **Manuel Cavieres**, *Discovery of a hypervelocity star in DESI DR1* (10+2)
- 14:56-15:08 **Florian Peißker**, *Peculiar bow shock sources in the inner parsec* (10+2)
- 15:08-15:20 **Zoë Haggard**, *New Insights into the Dynamics of the Young Stars at the Galactic Center* (10+2)
- 15:20-15:45 *Coffee break (Main Hall)*
- 15:45-15:57 **Eulalia Gallego-Cano**, *New insights on stellar populations around SgrA** (10+2)
- 15:57-16:09 **Anna Ciurlo**, *What we know and don't know about the evasive G objects* (10+2)
- 16:09-16:21 **Myank Singhal**, *Binary Mergers and the Formation of Dusty Objects in the Galactic Center* (10+2)
- 16:21-16:33 **Sean Granados**, *Evolution of G2 a decade after its closest encounter with Sgr A** (10+2)
- 16:33-16:45 **Monika Viskotová**, *Simulating Tidal Effects of Sgr A* on G2 Object* (10+2)
- 16:45-16:57 **Maria Melamed**, *The Mystery of the G Objects* (10+2)
- 16:57-17:30 *Coffee break (Main Hall)*
- 17:30-17:42 **Petr Kurfürst**, *What is the reason for the lack of cool evolved stars near the centre of the Galaxy?* (10+2)
- 17:42-17:54 **Taras Panamarev**, *Dynamical Fingerprints of an IMBH in the Central Parsec of the Milky Way* (10+2)
- 17:54-18:06 **Ziqian Hua**, *Chandra X-ray measurement of heavy element abundances of Wolf-Rayet stars in the Galactic Centre* (10+2)

18:06-18:18 **Alex Gormaz-Matamala**, [Revisiting the Evolutionary Status of Massive Stars at the central parsec of the Milky Way](#) (10+2)

18:18-18:30 **Masayoshi Nobukawa**, [Resolving the Velocity Structure of the Galactic Center X-ray Emission with XRISM](#) (10+2)

18:30-19:30 [Poster session with refreshment \(Main Hall\)](#)

19:30-20:30 [Public talk on the Galactic center \(Brno Observatory and Planetarium – Digitalium\)](#)

Wednesday (May 20th)

[Session 2: Central parsec: stars and gaseous-dusty content, stellar dynamics, star formation \(Digitalium\)](#)

9:00-9:12 **Felix Mang**, [Discovery of a star sensitive to the spin of SgrA*](#) (10+2)

9:12-9:24 **María Álvarez Santiago**, [Revisiting IRS 13N with JWST: Hot Stars Irradiating Dust Rather Than a Stellar Nursery](#) (10+2)

9:24-9:36 **Matúš Labaj**, [Hunting the Invisible: MHD Predictions for Hidden Black Holes in the Galactic Center](#) (10+2)

9:36-9:48 **Emma Bordier**, [First successful mid-infrared interferometric observations of IRS 13 E1 and E2 with VLTI/MATISSE](#) (10+2)

9:48-10:00 **Nadeen B. Sabha**, [Low-mass Star Formation in the Inner Parsec of our Galaxy? A JWST MIRI MRS Investigation](#) (10+2)

10:00-10:30 [Coffee break \(Main Hall\)](#)

[Session 3: Galactic Center in the multi-messenger era \(cosmic rays, gravitational waves, neutrinos, dark matter\) \(Digitalium\)](#)

10:30-11:00 **Shuo Zhang**, [Review: Traces of the Galactic Center PeVatron](#) (25+5)

11:00-11:20 **Ruizhi Yang**, [Invited: Invited talk on the LHAASO collaboration results: Gamma rays and Cosmic rays in the Galactic center](#) (17+3)

11:20-11:32 **Helena Ren**, [3D cosmic-ray mapping in the CMZ with clustered gas clouds](#) (10+2)

11:32-11:44 **Régis Terrier**, [VHE gamma-ray emission of the inner 200 pc after 15 years of H.E.S.S. observations](#) (10+2)

11:44-11:56 **Sruthiranjani Ravikularaman**, [Constraints on cosmic-ray-driven ionisation in the Galactic Centre](#) (10+2)

11:56-12:08 **Charlie Sharpe**, [Evaporation of Dark Matter Spikes around SMBHs by EMRIs](#) (10+2)

12:08-12:20 **Petra Suková**, [Are Electromagnetic Signatures of Small-Mass-Ratio Inspirals Observable?](#) (10+2)

12:20-12:32 **Konstantina Anastasopoulou**, [Disentangling the Galactic centre X-ray reflection signal using XMM-Newton data](#) (10+2)

12:32-14:00 [Lunch \(Upper Terrace\)](#)

14:00-14:20 **Sarah Recchia**, [Invited: Galactic Center and beyond: what can we learn from ionization measurements and M31](#) (17+3)

- 14:20-14:40 **Emmanuel Moulin**, *Invited: Very-high-energy gamma emission at the base of the Fermi Bubbles detected by H.E.S.S.* (17+3)
- 14:40-14:52 **Samik Mitra**, *Gravitational wave emission from turbulent accretion disks around black holes* (10+2)
- 14:52-15:04 **Jakub Jurysek**, *SST-1M Cherenkov telescopes - recent results and prospects for observation of the Galactic center* (10+2)
- 15:04-15:16 **Vladimir Karas**, *Particle acceleration by frame dragging near a magnetized black hole* (10+2)
- 15:16-15:28 **Zephyr Penoyre**, *Disruptions and diving orbits in axisymmetric galactic nuclei* (10+2)
- 16:30-18:30 *Sightseeing tour in Brno*
- 19:30-20:30 *Music Concert at the Brno Observatory & Planetarium*

Thursday (May 21st)

Session 4: Central Molecular Zone (star-formation history, kinematics and dynamics, astrochemistry, magnetic fields) (Digitalium)

- 9:00-9:30 **Steven Longmore**, *Review: Recent advances in understanding the 3D structure, star and planet formation, and feedback in the Central Molecular Zone* (25+5)
- 9:30-9:50 **Laura Colzi**, *Invited: Unveiling the origin of the molecular gas in the Galactic center through isotopic ratios* (17+3)
- 9:50-10:02 **Jennifer Wallace**, *Exploring Star Formation in the Central Molecular Zone with ACES* (10+2)
- 10:02-10:14 **Xu Zhang**, *First Results from JACKS: A VLA Ammonia View of Gas Heating and Star-Forming Cores in the CMZ* (10+2)
- 10:14-10:26 **Zixuan Feng**, *Gas Inflow Simulations of the Milky Way - From Central Molecular Zone to Circumnuclear Disk* (10+2)
- 10:26-10:50 *Coffee break (Main Hall)*
- 10:50-11:10 **Isabella Rammala**, *Invited: The radio view of the Galactic Center with the MeerKAT telescope*
- 11:10-11:22 **Xing Lyu**, *The CONCERT Campaign Revealing a Crazy Noisy Bizarre Central Molecular Zone* (10+2)
- 11:22-11:34 **Suinan Zhang**, *A Multiscale View of Three Massive Molecular Clouds in the Central Molecular Zone* (10+2)
- 11:34-11:46 **Robin Tress**, *Feedback coupling in the CMZ – differences to the Solar Neighbourhood* (10+2)
- 11:46-11:58 **David San Andrés**, *The Galactic Centre G+0.633-0.0604 Molecular Cloud: A New Gold Mine for Astrochemistry* (10+2)
- 11:58-12:10 **Janik Karoly**, *The Central Molecular Zone in Polarized Submillimetre Dust Emission: Results from BISTRO* (10+2)
- 12:10-12:22 **Kensuke Kakiuchi**, *Magnetic Field Distribution and the Origin of Vertical Structure in the Galactic Center Region* (10+2)
- 12:22-12:34 **Adam Ginsburg**, *Ice, dust, and metallicity in the Galactic Center* (10+2)

- 12:34-14:00 Lunch (Upper Terrace)
- 13:00-14:00 Czech National Astronomical Committee Meeting (Small Planetarium)
- 14:00-14:12 Alexandre Legault, JWST's View of Massive Stars in the Arches Cluster (10+2)
- 14:12-14:24 Natalie Butterfield, Investigating the Initial Conditions of Dense Gas that is Feeding the CMZ (10+2)
- 14:24-14:36 Q. Daniel Wang, A Multi-Wavelength Study of Nonthermal Radio Filaments - Galactic Center's Magnetic Mysteries (10+2)
- 14:36-14:48 Cara Battersby, A comprehensive 3-D CMZ model and its implications for nuclear activity and star formation (10+2)
- 14:48-15:00 John Bally, The CMZ Asymmetries: Feeding or Feedback? (10+2)
- 15:00-15:12 Gabriele Ponti, Hot plasma at the Galactic center (10+2)
- 15:12-15:30 Coffee break (Main Hall)
- Session 5: Nuclear Stellar Cluster and Nuclear Stellar Disc (Digitarium)
- 15:30-16:00 Mattia Carlo Sormani, Review: The Nuclear Stellar Disc & Cluster (25+5)
- 16:00-16:20 Nils Ryde, Invited: Chemical abundances and chemical evolution in the Nuclear Stellar Cluster and Nuclear Stellar Disk (17+3)
- 16:20-16:32 Brian Thorsbro, Surprising results from spectroscopic analysis of stars close to the supermassive black hole (10+2)
- 16:32-16:44 Mathias Schultheis, Chemical analysis of the Milky Way's Nuclear Star Cluster: Evidence of a metallicity gradient (10+2)
- 16:44-16:56 R. Michael Rich, Compositions and Ages of stars in the Galactic Nuclear Star Cluster: contradictions and challenges (10+2)
- 16:56-17:08 Shoko Sakai, Statistical Search for a Cusp in the Galactic Center Nuclear Star Cluster (10+2)
- 17:08-17:20 Katja Fahrion, The Complexity of Nuclear Star Cluster Formation (10+2)
- 19:00-24:00 Conference dinner at the Moravian gallery – the Museum of Applied Arts

Friday (May 22nd)

Session 5: Nuclear Stellar Cluster and Nuclear Stellar Disc (Digitarium)

- 9:00-9:20 Alvaro Martinez-Arranz, Invited: The GALACTICNUCLEUS Proper Motions Catalog - Revealing Star Clusters in the NSD (17+3)
- 9:20-9:32 Francisco Nogueras-Lara, VVVX-GalCen: A Groundbreaking Spectroscopic Survey of the Galactic Centre (10+2)
- 9:32-9:44 Eugene Vasiliev, Dynamical modelling of the Milky Way Nuclear Star Cluster (10+2)
- 9:44-9:56 Julia Lamprecht, From LOSVDs to Orbits: Nuclear Star Cluster Dynamics (10+2)
- 9:56-10:08 Stefano Torniamenti, Black Holes on the move: from star clusters to galactic nuclei (10+2)
- 10:08-10:20 Richard Wünsch, Winds of Nuclear star clusters feeding supermassive black holes (10+2)

- 10:20-10:32 **Karl Fiteni**, A Nuclear Bar in the Milky Way? Kinematic hints from the Galactic Centre (10+2)
- 10:32-11:00 Coffee break (Main Hall)
- Session 6: Tracing the Galactic Center past activity and comparison with other nuclei (Digitalium)
- 11:00-11:30 **Anja Feldmeier-Krause**, Review: The Milky Way Center - a galactic center like any other(?) (25+5)
- 11:30-11:50 **Frederic Marin**, Invited: Light echoes from past Sgr A* activity revealed by X-ray polarimetry (17+3)
- 11:50-12:02 **Fulai Guo**, Blowing the eROSITA and Fermi Bubbles in the Milky Way with Galactic Feedback (10+2)
- 12:02-12:14 **Rei Enokiya**, Discovery of Peculiar Molecular Cloud Complexes: Survival from a Past Jet-Driven Disruption Event? (10+2)
- 12:14-12:26 **Maïca Clavel**, X-ray echoes: a link between Sgr A*'s past activity and the CMZ's 3D structure (10+2)
- 12:26-12:38 **Qingzheng Yu**, Hidden HI Clouds in the Milky Way's Nuclear Wind (10+2)
- 12:38-14:00 Lunch (Upper Terrace)
- 14:00-14:20 **Hiromasa Suzuki**, Invited: XRISM X-ray spectroscopy of the supernova remnant Sgr A East and implication for the past activity of Sgr A* (17+3)
- 14:20-14:40 **Sergio Martín**, Invited: Chemistry here and there - Comparison between the CMZ of the Milky Way and NGC 253 (17+3)
- 14:40-14:52 **Kaitlyn Sheriff**, JWST Observations of Cluster Feedback in NGC 253: Implications for the GC (10+2)
- 14:52-15:04 **Barnabas Barna**, Mass flows in the Galactic Center by supernovae of the circumnuclear disk (10+2)
- 15:04-15:26 **Debangana Maji**, HI Absorption and Association of the 7' Halo with the Galactic Center (10+2)
- 15:26-15:38 **Iker Millan Irigoyen**, The uniqueness of the Milky Way Nuclear Star Cluster (10+2)
- 15:38-15:50 **Valentina Rosa**, General relativistic effects at the heart of accreting black hole light curve asymmetry (10+2)
- 15:50-16:02 **Anje Yoshimoto**, Decomposition of the Galactic Center X-ray Emission by High-Resolution spectroscopy with XRISM (10+2)
- 16:02-16:30 Coffee break (Main Hall)
- 16:30-17:00 **LOC & SOC**, IAUS405 Summary, closing remarks, and the next GC workshop