

Sebastiano D. von Fellenberg

Curriculum Vitae

Education

- 2022 – **Postdoc in Astronomy**, Max Planck Institute for Radio Astronomy, Bonn, Germany.
- 2017 – 2021 **Ph.D. in Astronomy**, Max Planck Institute for Extraterrestrial Physics, Garching bei München, Germany, graded 1.0 (magna cum laude).
 - Ph.D. Thesis: “*Probing the physics of the accretion flow of Sgr A**”, with Prof. Dr. Reinhard Genzel, Dr. Frank Eisenhauer and Dr. Stefan Gillessen
- 2016 **Internship**, Laboratoire Univers et Particules de Montpellier, France. Modelling of stellar atmospheres of massive stars with Fabrice Martins
- 2015 – 2017 **M.Sc. in Nuclear, Particle, and Astrophysics**, Technische Universität München, Germany, graded: 1.6.
 - M.Sc. Thesis: “*A new far infrared view into the Galactic Center: A detection of Sgr A* in the far infrared*”, with Dr. Frank Eisenhauer and Dr. Stefan Gillessen, graded: 1.3.
- 2014 **M.Sc. in Biophysics**, Universität Leipzig, Germany.
- 2011 – 2014 **B.Sc. in Physics**, Universität Konstanz, Germany, Graded: 2.0.
 - B.Sc. Thesis: “*Determination of Laser Parameter in Material Processing*”, with Prof. Dr. Thomas Dekorsy and LPKF, Shanghai, China, graded: 1.1.
- 2009 – 2011 **Abitur**, Hochrhein Gymnasium Waldshut, Germany, graded 2.0.
- 2006 – 2009 **Gymnasium**, Deutsche Schule Shanghai, China.
- 2004 – 2006 **Gymnasium**, Hochrhein Gymnasium Waldshut, Germany.

First Author & Corresponding Author Publications

- **von Fellenberg, S. D.** et al., “The Young stars in the Galactic Center”, *ApJL*, Volume 932, June 2022, L6
- GRAVITY Collaboration, “Constraining particle acceleration in Sgr A* with simultaneous GRAVITY, Spitzer, NuSTAR and Chandra observations”, *A&A* Volume 654, October 2021, A22.
- **von Fellenberg, S. D.** et al., “A Detection of Sgr A* in the Far Infrared”, *ASP Conference Series*, Vol. 528, July 2021, p.203
- GRAVITY Collaboration, “The flux distribution of Sgr A*”, *A&A* Volume 638, June 2020, A2.
- **von Fellenberg, S. D.** et al., “A detection of Sgr A* in the far infrared”, *ApJ* Volumen 862, 2018 July, p. 129.

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Co-Author Publications with Major Contributions

- GRAVITY Collaboration, “The mass distribution in the Galactic Centre from interferometric astrometry of multiple stellar orbits”, A&A forthcoming article, 2021
- Dallilar Y., **von Fellenberg, S. D.** et al. “Flaremodel: An open-source Python package for one-zone numerical modelling of synchrotron sources ”, A&A forthcoming article, 2021
- GRAVITY Collaboration, “Detection of the Schwarzschild precession in the orbit of the star S2 near the Galactic centre massive black hole”, A&A Volume 636, April 2020, L5
- GRAVITY Collaboration, “A geometric distance measurement to the Galactic center black hole with 0.3% uncertainty”, A&A Volume 625, May 2019, L10

Talks and Conferences

- Invited talk at the New Horizons in Galactic Center Astronomy and Beyond Oct. 21- 24, 2019, Yokohama, Japan
- Solicited talk at the New Horizons in Galactic Center Astronomy and Beyond Oct. 21- 24, 2019, Yokohama, Japan

Observing Experiences

- **SINFONI: > 30 nights**
- **NACO: 10 nights**

Skills

- **Programming**
Python, CPL
Basics: C, Mathematica, bash
- **Data reduction**
MPE NACO pipeline, spred (SINFONI), GRAVITY DRS, esoreflex
- **Data analysis**
molecfits

Languages

- **German** Mother tongue
- **English** Fluent
- **French** Basic

Full List of publications

- GRAVITY Collaboration: Deep Images of the Galactic Center with GRAVITY, A&A, forthcoming article 2021
- GRAVITY Collaboration: The GRAVITY young stellar object survey. VII. The inner dusty disks of T Tauri stars, A&A, 655 November 2021, A73

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- GRAVITY Collaboration: The mass of Pictoris c from Pictoris b orbital motion, A&A, 654 October 2021, L2
- GRAVITY Collaboration: The GRAVITY young stellar object survey. VI. Mapping the variable inner disk of HD 163296 at sub-au scales, A&A, 654 October 2021, A97
- GRAVITY Collaboration: A geometric distance to the supermassive black Hole of NGC 3783, A&A, October 2021, 654, A85
- GRAVITY Collaboration: GRAVITY K-band spectroscopy of HD 206893 B. Brown dwarf or exoplanet, A&A 652, August 2021, A57
- GRAVITY Collaboration: MOLsphere and pulsations of the Galactic Center's red supergiant GCIRS 7 from VLTI/GRAVITY, A&A 651 July 2021, A37
- GRAVITY Collaboration: Relative depolarization of the black hole photon ring in GRMHD models of Sgr A* and M87* , MNRAS, May 2021, pp.4563-4575
- GRAVITY Collaboration: The central parsec of NGC 3783: a rotating broad emission line region, asymmetric hot dust structure, and compact coronal line region, A&A 648, April 2021, A117
- GRAVITY Collaboration: The GRAVITY young stellar object survey V. The orbit of the T Tauri binary star WW Cha, A&A 648, April 2021, A37
- GRAVITY Collaboration: The central parsec of NGC 3783: a rotating broad emission line region, asymmetric hot dust structure, and compact coronal line region, A&A 648, April 2021, A117
- GRAVITY Collaboration: Improved GRAVITY astrometric accuracy from modeling of optical aberrations, A&A 647, March 2021, A59
- GRAVITY Collaboration: Constraining the Nature of the PDS 70 Protoplanets with VLTI/GRAVITY, AJ 161, March 2021, pp. 22
- GRAVITY Collaboration: Detection of faint stars near Sagittarius A* with GRAVITY, A&A 645, January 2021, A127
- GRAVITY Collaboration: The GRAVITY young stellar object survey IV. The CO overtone emission in 51 Oph at sub-au scales, A&A 645, January 2021, A50
- GRAVITY Collaboration: The ExoGRAVITY project: using single mode interferometry to characterize exoplanets Proceedings Volume 11446, Optical and Infrared Interferometry and Imaging VII; 114460O 2020
- GRAVITY Collaboration: The spatially resolved broad line region of IRAS 09149-6206, A&A, Volume 643, November 2020, A154
- GRAVITY Collaboration: Dynamically important magnetic fields near the event horizon of Sgr A*, A&A 643, November 2020, A56
- GRAVITY Collaboration: Direct confirmation of the radial-velocity planet β Pic c, A&A 642, October 2020, L2
- GRAVITY Collaboration: The GRAVITY young stellar object survey. III. The dusty disk of RY Lup, A&A 642, October 2020 , A162
- GRAVITY Collaboration: A measure of the size of the magnetospheric accretion region in TW Hydrae, Nature 584, 2020, 574-550

- Dexter J. et al.: A parameter survey of Sgr A* radiative models from GRMHD simulations with self-consistent electron heating, MNRAS 494, May 2020, 4168–4186
- GRAVITY Collaboration: Modeling the orbital motion of Sgr A*'s near-infrared flares, A&A 635, March 2020, A143
- GRAVITY Collaboration: Spatially Resolving the Inner Gaseous Disc of the Herbig Star 51 Oph through its CO Ro-vibration Emission, The Messenger 178, December 2019, 40–42
- GRAVITY Collaboration: Probing the Discs of Herbig Ae/Be Stars at Terrestrial Orbits, The Messenger 178, December 2019, 38-40
- GRAVITY Collaboration: Multiple Star Systems in the Orion Nebula, The Messenger 178, December 2019, p.36–38
- GRAVITY Collaboration: Images at the Highest Angular Resolution with GRAVITY: The Case of η Carinae, The Messenger 178, December 2019, 31-33
- GRAVITY Collaboration: Spatially Resolved Accretion-Ejection in Compact Binaries with GRAVITY, The Messenger 178, December 2019, 29-31
- GRAVITY Collaboration: GRAVITY and the Galactic Centre, The Messenger, 178, 26-29
- GRAVITY Collaboration: An Image of the Dust Sublimation Region in the Nucleus of NGC 1068, The Messenger 178, December 2019, 24-26
- GRAVITY Collaboration: Spatially Resolving the Quasar Broad Emission Line Region, The Messenger 178, December 2019, 20-24
- GRAVITY Collaboration: Scalar field effects on the orbit of S2 star, MNRAS 489, August 2019, 4606-4621
- GRAVITY Collaboration: A geometric distance measurement to the Galactic center black hole with 0.3% uncertainty, A&A 625, May 2019, L10
- GRAVITY Collaboration: Test of the Einstein Equivalence Principle near the Galactic Center Supermassive Black Hole PhRevL 122, March 2019, 101-102
- GRAVITY Collaboration: First direct detection of an exoplanet by optical interferometry. Astrometry and K-band spectroscopy of HR 8799 e, A&A 623, March 2019, L11
- Habibi et al.: Spectroscopic Detection of a Cusp of Late-type Stars around the Central Black Hole in the Milky Way, ApJL 872, February 2019, L15
- Gillessen et al.: Detection of a Drag Force in G2's Orbit: Measuring the Density of the Accretion Flow onto Sgr A* at 1000 Schwarzschild Radii, ApJ 817, January 2019, 126
- GRAVITY Collaboration: Detection of orbital motions near the last stable circular orbit of the massive black hole SgrA*, A&A 618 618, October 2018, L10
- GRAVITY Collaboration: Detection of the gravitational redshift in the orbit of the star S2 near the Galactic centre massive black hole, A&A, July 2018, L15
- Waisberg I. et al.: What stellar orbit is needed to measure the spin of the Galactic centre black hole from astrometric data?, MNRAS 476, February 2018, 3600-3610

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- Steinberg E. et al.: Probing the gas density in our Galactic Centre: moving mesh simulations of G2, ApJ 473, September 2017, 1841-1849
- Habibi et al.: Twelve Years of Spectroscopic Monitoring in the Galactic Center: The Closest Look at S-stars near the Black Hole, ApJ 847, September 2017, 120
- Plewa P. et al: The Post-pericenter Evolution of the Galactic Center Source G2, ApJ 840, May 2017, 50
- Gillessen S. et al: An Update on Monitoring Stellar Orbits in the Galactic Center, ApJ 837, March 2017, 19