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The assembly history of the milky way nuclear star cluster

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Publications

Refereed Publications

1. **Feldmeier-Krause A.**, Neumayer N., Schödel R., Seth A., Hilker M., de Zeeuw P. T., Kuntschner H., Walcher, C. J., Lützgendorf N., Kissler-Patig M.: KMOS view of the Galactic Centre I. Young stars are centrally concentrated, *A&A* Volume 584 (2015)
2. Schödel, R., **Feldmeier, A.**, Neumayer, N., Meyer, L., Yelda, S.: The nuclear cluster of the Milky Way: our primary testbed for the interaction of a dense star cluster with a massive black hole. *Classical and Quantum Gravity*, Volume 31 (2014)
3. **Feldmeier A.**, Neumayer, N., Seth, A., Schödel, R., de Zeeuw, P.T., Lützgendorf, N., Kissler-Patig, M., Nishiyama, S., Walcher, C.J.: Large scale kinematics and dynamical modelling of the Milky Way nuclear star cluster, *A&A* Volume 570 (2014)
4. Schödel, R., **Feldmeier, A.**, Kunneriath, D., Stolovy, S., Neumayer, N., Amaro-Seoane, P., Nishiyama, S.: Surface Brightness Profile of the Milky Way's Nuclear Star Cluster, *A&A* Volume 566 (2014)
5. Lützgendorf, N., Kissler-Patig, M., Neumayer, N., Baumgardt, H., Noyola, E., de Zeeuw, P. T., Gebhardt, K., Jalali, B., **Feldmeier, A.**: The $M_{\bullet} - \sigma$ relation for intermediate-mass black holes in globular clusters. *A&A*, Volume 555 (2013)
6. **Feldmeier, A.**, Lützgendorf, N., Neumayer, N., Kissler-Patig, M., Gebhardt, K., Baumgardt, H., Noyola, E., de Zeeuw, P. T., Jalali, B.: Indication for an intermediate-mass black hole in the globular cluster NGC 5286 from kinematics. *A&A*, Volume 554 (2013)
7. Lützgendorf, N., Kissler-Patig, M., Gebhardt, K., Baumgardt, H., Noyola, E., de Zeeuw, T., Neumayer, N., Jalali, B., **Feldmeier, A.**: Limits on intermediate-mass black holes in six Galactic globular clusters with integral-field spectroscopy. *A&A* Volume 552 (2012)

Submitted to refereed journals

1. **Feldmeier-Krause A.**, Kerzendorf W., Neumayer N., Schödel R., Nogueras-Lara F., Do T., de Zeeuw P. T., Kuntschner H.: KMOS view of the Galactic Centre II. Metallicity distribution of Late-type stars (submitted to *MNRAS*, 2016)
2. **Feldmeier-Krause A.**, Zhu L., Neumayer N., van de Ven G., de Zeeuw P. T., Schödel R.: Triaxial orbit-based modelling of the Milky Way nuclear star cluster (submitted to *MNRAS*, 2016)

Conference Proceedings

1. **Feldmeier, A.**, Neumayer, N., Schödel, R., Seth, A., de Zeeuw, P. T., Walcher, C. J., Lützgendorf, N., Kissler-Patig, M., Hilker, M., Kuntschner, H.: The Assembly History of the Milky Way Nuclear Star Cluster. Proc. of the International Astronomical Union, Volume 316 (2015)
2. Lützgendorf, N., Kissler-Patig, M., Gebhardt, K., Baumgardt, H., Kruijssen, D., Noyola, E., Neumayer, N., de Zeeuw, T., **Feldmeier, A.**: Intermediate mass black holes in globular clusters: observations and simulations. Proceedings of the International Astronomical Union, Volume 312 (2015)
3. **Feldmeier, A.**, Neumayer, N., Seth, A., de Zeeuw, P. T., Schödel, R., Lützgendorf, N., Kissler-Patig, M., Nishiyama, S., Walcher, C. J.: The Milky Way Nuclear Star Cluster beyond 1 pc. Proc. of the International Astronomical Union, Volume 303 (2014)
4. Kunneriath, D., Schödel, R., Stolovy, S., **Feldmeier, A.**: Structure of the nuclear stellar cluster of the Milky Way. Proc. of the International Astronomical Union, Volume 303 (2014)

Curriculum Vitae

I was born on December 31st, 1985 in Landau a. d. Isar, Germany. I grew up in Mamming, a small village near Dingolfing, and started my education at the primary school in Bubach. I attended the Herzog Tassilo Realschule Dingolfing, Germany, and finished with a secondary school certificate in 2002. I started an apprenticeship as assistant tax consultant in Dingolfing, which I finished in 2005. In the three years of my apprenticeship, I read the entire astronomy and astrophysics section of the public library in Dingolfing, and it became clear to me that I wanted to be an astrophysicist. For that reason, I returned to school and attended the Upper Vocational School in Landshut, Germany for two years. I graduated in 2007 with the Abitur, which allowed me to progress to a university. Due to my excellent grades, I was permitted to the examination of highly gifted ("Begabtenprüfung") of the Max Weber Program, a subsection of the "German National Academic Foundation". I was awarded with a scholarship for the time of my university undergraduate studies.

In 2007, I enrolled in the Bachelor of Physics program of the Ludwig-Maximilians-University Munich, Germany. I chose elective courses in the field of astronomy, and wrote a theoretical bachelor thesis on "X-ray Halos of Elliptical Galaxies, Galaxy Groups, and Clusters" under the guidance of Dr. Thorsten Naab. After graduating as Bachelor of Science, I enrolled in the Master of Physics program of the Ludwig-Maximilians-University in Munich. I had much freedom to choose elective courses in astronomy and astrophysics. Among those was a practical course on observing at the Wendelstein observatory in the Bavarian Alps. I went observing in a clear spring night in 2011. That night, I felt all the excitement of observing, and anticipation to work on the data. I decided to become an observational astronomer.

For my master thesis, I worked at the *European Southern Observatory* (ESO) in Garching, Germany on data from the *Very Large Telescope* and archive data from the *Hubble Space Telescope*. I studied the question "Is there an Intermediate-Mass Black Hole in the Globular Cluster NGC 5286?" under the supervision of Dr. Markus Kissler-Patig. After obtaining my M.Sc. degree in Physics in 2012, I started to work as Ph.D. student at ESO under the guidance of Prof. Dr. Tim de Zeeuw and Dr. Nadine Neumayer. I am affiliated with the International Max Planck Research school on Astrophysics (IMPRS), and as part of this program I attended several Advanced Courses in Astronomy. In the four years of my Ph.D. studentship, I participated at national and international conferences, meetings, and workshops. I presented my work in Santa Fe (USA), University of Utah (USA), Granada (Spain), Garching (Germany), Freising (Germany), Leiden (Netherlands), Aspen (USA), Honolulu (USA), and Alájar (Spain). I carried out observations at the *Very Large Telescope* and the *Gemini South Telescope* in Chile. Further, I co-organised the ESO workshop "RASPUTIN" (Resolved And Unresolved Stellar PopUlaTIOns) and the monthly "Wine & Cheese" seminar at ESO. At my wedding in July 2015, I changed my name from Anja Feldmeier to Anja Krause, however, I publish under the name Anja Feldmeier-Krause. In October 2016, I will move to Chicago, USA to start working with Prof. Dr. Wendy Freedman at the University of Chicago.

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It was a pleasure to work closely with Laura, Emin, and Siyi in organising the Wine & Cheese seminar, and with Laura, Stella, Elena, and Samantha in preparing the RASPUTIN conference. I am indebted to Claudius, Hannah, Laura, and Torsten for careful reading of the manuscript. Special thanks to Ruud Visser for the translation of my Nederlandse Samenvatting, and to Andra Stroe for sharing her L^AT_EX thesis template with me. Devaky, for her reassurance before my first conference talk. Carlo and Anna, thank you for hosting me in Leiden and helping me to distribute my thesis. I would like to thank my friends for their support and encouragement.

Schließlich möchte ich mich noch bei meiner Familie bedanken: Bei meinem Ehemann Claudius der mit mir lacht, diskutiert, geocacht, mich tröstet und immer an mich glaubt. “So close, no matter how far; Couldn’t be much more from the heart; Forever trust in who we are; And nothing else matters.” Wo du hingehst, da will ich auch hingehen; wo du bleibst, da bleibe ich auch. Wir werden bald wieder zusammen sein. Bei meinen Eltern, die mir all die Jahre geholfen haben und mich ermutigt haben, meine Träume zu verfolgen. Bei meinen Schwestern und ihren Familien, meinen Schwiegereltern. Vielen Dank für eure Unterstützung.

