

CURRICULUM VITAE

Family name, First name: Pott, Jörg-Uwe e-mail: jpott@mpia.de
 Date of birth: 10. Nov. 1975 Place of birth: Düsseldorf, DE
 Nationality: German family status: married, three children
 Identifier orcid.org/0000-0003-4291-2078 web site: www.mpia.de/~jpott/

- **EDUCATION**

2007 Doctor of natural sciences (Dr. rer. nat.); grade: magna cum laude (with high distinction)
 Faculty of Mathematics and Natural Sciences, University of Cologne, DE
PhD adviser: Prof. Dr. A. Eckart
 2003 Diploma in physics (Dipl.-Phys., Master-equivalent), grade: sehr gut (optimum)
 Faculty of Mathematics and Natural Sciences, University of Cologne, DE
 1995 Abitur (general higher education entrance qualification), grade: 1.3 (top 5%)
 Gymnasium Korschenbroich (high school), Korschenbroich, DE

- **CURRENT POSITION(S)**

2010 – tenure-tracked (tenure since 2015) staff scientist (= associate researcher level)
 2020 -- senior group leader at Galaxies and Cosmology Department, Max-Planck Institut for Astronomy, Heidelberg, DE

- **PREVIOUS POSITIONS**

2007 – 2009 Postdoctoral researcher at the W. M. Keck Observatory (Interferometer) and
 Physics and Astronomy Dept, University of California Los Angeles (UCLA), USA
 2003, 2006 – 2007 Research assistant
 Faculty of Mathematics and Natural Sciences, University of Cologne, DE
 1997 – 2003 Teaching assistant (physics theory and lab) at all levels, University of Cologne, DE

- **FELLOWSHIPS AND AWARDS**

2020 MPIA-MPG annual reward for exceptional performance of the MICADO team
 2008 – Postdoctoral travel grants of NSF, USA, Fizeau-European Interferometry Initiative, DAAD
 2003 – 2006 PhD student fellowship of the European Southern Observatory (ESO), Garching b.M., DE
 1998 – 1999 Sokrates/Erasmus-scholarship of the European Union to study at the Università degli Studi
 Dipartimento di Matematica e Fisica, Università degli Studi Roma Tre, IT

- **SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS**

2010 – 5 Postdocs/ 11 PhD/ 3 Master / 5 Bachelor
 Galaxies and Cosmology Department, Max-Planck Institut for Astronomy, Heidelberg, DE
 Physics / Engineering Dept of Universities of Heidelberg, Cologne, and Stuttgart, DE

- **TEACHING ACTIVITIES**

2018 –2020 Research seminar on astronomical instrumentation, Heidelberg University, DE
 Since 2013 Lead of advanced lab course unit – Observational astronomy, Heidelberg university, DE
 2008 Teaching at VLTI summer school, European Interferometry Initiative, HU

- **ORGANISATION OF SCIENTIFIC MEETINGS**

2019 SOC Interferometry session, European week of astronomy, Lyon, FR
 2015 Co-chair of the VLTI summer school at Univ. Cologne, DE
 2013 SOC of the International colloquium Haute-Provence Observatory, FR

• INSTITUTIONAL RESPONSIBILITIES

2015 – Regular member of the annual PhD and postdoc selection committees, MPIA, DE
 2012 – Scientific project lead of 70cm teaching and commissioning telescope, MPIA, DE
 2010 – Faculty member, Max-Planck Institut for Astronomy (MPIA), DE

• REVIEWING ACTIVITIES

2009 – Referee for top-level astronomy journals: Astronomy & Astrophysics (A&A), Astrophysical Journal (ApJ), Monthly Notices of the Royal Astronomical Society (MNRAS), Publications of the Astronomical Society of the Pacific (PASP)
 2011 Referee for French (ANR) and Mexican (Conacy) research-funding agencies
 2019/20 Hubble space telescope time allocation committee (rejected due to Covid-19 impact)

• MEMBERSHIPS OF SCIENTIFIC SOCIETIES (if applicable)

2013 – 2016 Founding Member and PI of the OPTICON/FP7-2 funded working group on: *The future of Interferometry in Europe* <http://www.european-interferometry.eu/working-groups/the-future-of-interferometry-in-europe>
 2010 –2021 *European Interferometry Initiative* (EII: <http://www.european-interferometry.eu/>); I served as vice-president, and core bureau member; EII is European top-level association of Institutes willing to collaborate optical/infrared astronomy, and coordinates activities included in the European Commission instruments of the 6th, 7th and H2020 R&D program
 2005 – German physical society (DPG), International Astronomical Union (IAU; since 2009)

• LONGTERM COLLABORATIONS

- Ric Davies, Reinhard Genzel, and team at Max-Planck Institute for extra-terrestrial physics (MPE) on the development of MICADO, Garching b. M., DE: <http://www.mpe.mpg.de/ir/micado>
- Paolo Ciliegi and team (ELT MAORY PI, INAF Bologna, IT) on the development of MAORY to realize imaging and astrometry with ELT/MICADO at highest precision
- Martin Roth, on Astrophotonics developments at innoFSPEC centre Leibniz Institute for Astrophysics Potsdam (AIP), Potsdam, Germany: <https://innofspec.de/en/>
- Lucas Labadie (Univ. Cologne, DE), Rainer Schödel (IAA-Granada, ES), Bruno Lopez (VLTI MATISSE) on the development of high-resolution imaging with adaptive optics and interferometry

• CAREER BREAKS

Mar–Jul 2015; May - Dec 2019 Paternity leave (50-90% on leave)
 Jan2020 – Apr2021 Paternity leave (20-40% on leave), home schooling, pandemic overhead

INSTRUMENTATION TRACK RECORD

My recent work shows a clear and growing focus on the development of MICADO. As of today, I have been working as an instrument scientist of the ELT first light camera MICADO for a decade. The sheer size and importance of MICADO for the future of optical astronomy is enormous for a ground-based camera project and reaches, with costs of approx. 25M€ for hardware and 55M€ (550 FTE) for consortium personnel, dimensions of space instrumentation. It is my task to oversee the technical developments with respect to calibrateability to guarantee its ambitious scientific goals. MICADO will go into construction in 2022.

My main achievements in the past decade have been central, creative contributions to successful astronomical instrumentation projects with a scientific focus on novel black hole science applications. Having worked and taught for more than 13yr now in the field of high angular resolution instrumentation, I maintain a strong international network of experts at all seniority levels.

• FUNDING

Gratefully I acknowledge, that major parts of my hard- and software development program is supported by significant amounts of 3rd party funding, I successfully acquired and managed 3.6M€ (MPG), 1M€ (BMBF-VbF), 0.5M€ (Horizon2020-EC) of funding.

• INSTRUMENTATION DEVELOPMENTS

- MICADO: near-infrared imager and spectrograph for the 39m ELT: [MICADO weblink](#)

As Instrument scientist, I am responsible for the exploration of the scientific performance, the development of observing and calibration strategies for the three main observing modes: regular and astrometric imaging, long slit spectroscopy. I also lead all MPIA hardware developments for MICADO, including all warm optics and novel hardware for precise astrometric and wavelength calibration. MICADO has **passed major design milestones** (preliminary design review in 2018, special review of our warm optics in 2020), and is currently planned to go in construction in 2022 after a final design review.

- MATISSE: mid-infrared imager and spectrograph for the 4x8m VLTI: [MATISSE weblink](#)

Imaging interferometer of the 2nd generation at the VLTI. I am associated science team member working on interferometric imaging at the sensitivity limit, and exploiting it for imaging the dust tori of nearby AGN, which links to my work on dust reverberation with high time-resolution. In 2021 we **reconstructed the long-awaited first full interferometric images of two nearby AGN** (submitted for publication), showing not only new details on the AGN obscuring dust, but also the origin of AGN wind feedback structures.

I also lead the development of P-REx, the piston reconstruction experiment, and contributed to Grav4Mat (using the Gravity fringe tracker for Matisse) to allow 1-2mag deeper interferometry, which is critical to be able to observe statistical samples (~100) of nearby AGN with Matisse.

- LBT/LINC: Fizeau imager for the binocular 2x8.4m LBT: [LINC weblink](#) and [LBTO weblink](#)

LINC is a MICADO precursor, in that its Fizeau interferometric mode achieves nearly MICADO resolution, and relies on the same advanced multi-conjugate adaptive optics technology. I served as system lead of the fringe tracking and project scientist. I lead the development, implementation, and scientific commissioning of the OVMS+ accelerometer network, which measures and corrects piston and tip-tilt vibrations from the telescope. **This is crucial for faint source, and high-performance adaptive optics.** The OVMS+ work allowed me to build tight relations to the LBTO engineering team, highly appreciated.

- Keck-ASTRA: phase-referencing upgrade to the W.M. Keck Interferometer: [Keck-I weblink](#)

As postdoc, I realized part of the hardware (a focal plane stabilization metrology), and lead the development of the science case, which include 10 μ as astrometry with the 85m baseline of the Keck interferometer.

- KOOL: the Königstuhl Observatory Opto-mechatronics Laboratory: [KOOL weblink](#)

I am founding PI of KOOL, which is a collaborative effort of the Max-Planck Institut for Astronomy (MPIA), the Landessternwarte Königstuhl (LSW), Univ Heidelberg, and the Institut for System Dynamics (ISYS), Univ. Stuttgart. We developed an LBT single-conjugate simulator, and modern control strategies to fight vibrations, which are unavoidable when running large telescopes at the diffraction limit in the open air. KOOL includes the local 70cm commissioning telescope of MPIA. We currently prepare a MICADO-like MCAO upgrade.

- **PUBLICATION METRICS** (source: [NASA/ADS](#) via [ORCID](#) status: Aug.14th, 2021)

Refereed (total)	82	Refereed (first author)	13	Citations (total)	2198
Non-refereed (total)	126	Refereed (w/o PhD advisor)	62	h-index	24

- **KEY PUBLICATIONS:** from the last decade; relevant to my current research; with citation count;
 - --- Topic: High angular resolution observations of black hole environments ---
 - 1. Burtscher, L.; Meisenheimer, K.; Tristram, K. R. W.; Jaffe, W.; Hönig, S. F.; Davies, R. I.; Kishimoto, M.; **Pott, J. -U.**; et al., *A diversity of dusty AGN tori. Data release for the VLTI/MIDI AGN Large Program and first results for 23 galaxies*, **2013** [A&A...558A.149](#) [citations: 160]
 - 2. Fausnaugh, M. M.; Denney, K. D.; Barth, A. J.; Bentz, M. C.; ...; Peterson, B. M.; Schnülle, K.; ...; **Pott, J. -U.**; et al., *Space Telescope and Optical Reverberation Mapping Project. III. Optical Continuum Emission and Broadband Time Delays in NGC 5548*, **2016** [ApJ...821...56](#) [149]
 - 3. **Pott, J.-U.**; Malkan, Matt A.; Elitzur, Moshe; Ghez, Andrea M.; Herbst, Tom M.; Schödel, Rainer; Woillez, Julien, *Luminosity-variation Independent Location of the Circum-nuclear, Hot Dust in NGC 4151*, **2010** [ApJ...715..736](#) [43]
 - --- Topic: Science with interferometric instrumentation and methods, I co-developed ---
 - 4. Biller, Beth; Lacour, Sylvestre; Juhász, Attila; Benisty, Myriam; Chauvin, Gael; Olofsson, Johan; **Pott, Jörg-Uwe**; Müller, André; Sicilia-Aguilar, Aurora; et al., *A Likely Close-in Low-mass Stellar Companion to the Transitional Disk Star HD 142527*, 2012 [ApJ...753L..38](#) [132]
 - 5. **Pott, J.-U.**; Perrin, Marshall D.; Furlan, Elise; Ghez, Andrea M.; Herbst, Tom M.; Metchev, Stanimir, *Ruling Out Stellar Companions and Resolving the Innermost Regions of Transitional Disks with the Keck Interferometer*, 2010 [ApJ...710..265](#) [52]
 - 6. **Pott, J. -U.**; Woillez, J.; Ragland, S.; Wizinowich, P. L.; Eisner, J. A.; Monnier, J. D.; Akeson, R. L.; Ghez, A. M.; Graham, J. R.; Hillenbrand, L. A.; et al.; *Probing Local Density Inhomogeneities in the Circumstellar Disk of a Be Star Using the New Spectro-astrometry Mode at the Keck Interferometer*, **2010** [ApJ...721..802](#) [19]
 - --- Topic: Ground-based astrometry of star clusters ---
 - 7. **Pott, J. -U.**; Rodeghiero, G.; Riechert, H.; Massari, D.; Fabricius, M.; Arcidiacono, C.; Davies, R. I., *The MICADO first light imager for ELT: its astrometric performance*, **2018** [SPIE10702E..90](#) [1]
 - 8. Rodeghiero, G.; **Pott, J. -U.**; Arcidiacono, C.; Massari, D.; Glück, M.; et al. *The impact of ELT distortions and instabilities on future astrometric observations*, **2018** [MNRAS.479.1974](#) [6]
 - 9. Häberle, M.; Libralato, M.; Bellini, A., Watkins, L. L.; **Pott, J.-U.**, *Hunting for intermediate-mass black holes in globular clusters: an astrometric study of NGC 6441*, **2021** [MNRAS.503.1490](#) [2]
 - Guest editor of Topical Collection in Experimental Astronomy, reporting on our three-year European OPTICON working group, funded by Horizon 2020 ---
 - 10. **Pott, Jörg-Uwe**; Surdej, Jean, *Future of optical-infrared interferometry in Europe*, **2018** [ExA...46.381](#)

- **OUTSTANDING COMMUNITY WORK**

2010-2021, I was an active member of the *European Interferometry Initiative* (EII: [weblink](#)), which coordinates European top-level activities, and grant applications. In particular, I served as vice-president and I lead joint research activities, centred on interferometric imaging, fringe tracking, and adaptive optics. I was PI of the working group on the *Future of interferometry in Europe*, which coordinated about 100 active scientist. I guest-edited a 130p, peer-reviewed white book report: [weblink](#). Further regular EII activities are reported on the above websites, and include bi-annual training schools, the founding of VLTI user support expertise centres, and yearly community meetings.