

# Sthabile Kolwa

## Curriculum Vitae

### Employment

- 2021-present** Lecturer  
*University of Johannesburg*
- 2020** Postdoctoral Research Fellow  
*The University of Cape Town /  
The Inter-University Institute for Data-Intensive Astronomy (IDIA)*
- 2014-2019** Postgraduate student  
*The Ludwig Maximilian University of Munich (Ph.D.; 2016-2019)  
University of the Western Cape (M.Sc.; 2014-2015)*
- 2013** Astronomy Tutor  
*The University of Cape Town*

### Education

- 2016**  
**2019** **Dr. rer. nat. (Ph.D. equivalent) in Physics**, *The Ludwig Maximilian University of Munich (LMU), Munich, Germany*  
Thesis: *The kinematic nature of baryons in the multi-phase circumgalactic media of high-redshift radio galaxies*
- 2014**  
**2015** **M.Sc. in Physics**, *University of the Western Cape (UWC), Cape Town, South Africa*  
Thesis: *The effects of environment on radio-loud AGN activity in Stripe 82*
- 2010**  
**2013** **B.Sc. in Physics and Astronomy**, *The University of Cape Town (UCT), Cape Town, South Africa*  
Thesis: *The Effects of Ionospheric Scintillation on the Dilution of GPS Positioning*

### First-Authored Papers

- Kolwa, S.** ; De Breuck, C. ; Vernet, J. ; Wylezalek, D. ; ... Andreani, P. (2023), MNRAS, 525, 4
- Kolwa, S.** ; Vernet, J. ; De Breuck, C. ; Villar-Martín, M. ; ... Man, A (2019), A&A, 625, 102
- Kolwa, S.** ; Jarvis, M. J. ; McAlpine, K. ; Heywood, I. (2019), MNRAS, 482, 5156

### Co-authored Papers

- Petley, J.W. et al. (2024), MNRAS, 529, 1995
- Whittam, I. et al. (2023), MNRAS, 527, 3231

Wang, W. et al. (2023), *A&A*, 680, A70  
Hale, C. L. et al. (2023), *MNRAS*, 520, 2668  
De Breuck, C. et al. (2022), *A&A*, 658, L2  
Wang, W. et al (2021), *A&A*, 654, 88  
Falkendal, T. et al. (2019), *A&A*, 621, 27  
Vernet et. al. (2017), *A&A*, 602, 6  
Jarvis, M. et al. (2016), *PoS(MeerKAT2016)*006

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## Selected Talks

### Invited Talks

- 2024 *AGN Populations Across Continents and Populations*, Durham, UK (July)
- 2023 *High Energy Astrophysics in South Africa (HEASA) Conference* (virtual) (Sept)  
*Magnetism and Accretion Conference* (virtual) (Jan)

### Seminars & Colloquia

- 2024 *Kavli Institute for Particle Astrophysics and Cosmology (KIPAC) Colloquium*, Stanford University, USA (Mar)  
*Nottingham Astronomy Colloquium*, Nottingham University, UK (Jan)
- 2023 *UWC Astronomy Seminar* (virtual) (Nov)  
*Durham Astronomy Colloquium*, Durham University, UK (Nov)  
*South African Astronomical Observatory (SAAO) Colloquium* (virtual) (Oct)  
*Galaxies Discussion*, Kavli Institute for Cosmology, Cambridge (KICC), UK (Oct)
- 2022 *Max Planck Institute for Radio Astronomy (MPIfR) Colloquium*, Bonn, Germany (Nov)
- 2021 *University College London (UCL) Astronomy Seminar* (virtual) (Oct)  
*Southampton Astronomy Seminar* (virtual) (July)
- 2019 *OPINAS (Optical and Interpretive Astronomy) Seminar*, Max Planck Institute for Extraterrestrial Physics (MPE), Garching, Germany (Nov)  
*ETH Astrophysics Seminar*, Zurich, Switzerland (Nov)

### Contributed Talks at Conferences & Meetings

- 2024 *Durham-Edinburgh eXtragalactic (DEX-XX) workshop*, Durham, UK (Jan)
- 2023 *African Astronomical Society (AfAS) 2023 Meeting*, Johannesburg, South Africa (Mar)  
*BRICS Astronomy Working Group Conference* (virtual) (Oct)
- 2019 *Modeling Meerkats Workshop*, Hazyview, Mpumalanga, South Africa (July)  
*Australia-ESO Conference*, Sydney, Australia (Feb)
- 2018 *Walking the Line Meeting*, Goldwater Centre, Arizona State University, USA (Mar)
- 2017 *What Matters Around Galaxies?* Conference, Durham University, UK (Jul)  
*Dawn of Galaxies Conference*, Obergurgl, Austria (Jan)
- 2016 *SKA Conference*, Cape Town, South Africa (Dec)

### Journal Club Talks

- 2024 *Space Telescope Science Institute (STScI)/Johns Hopkins University Journal Club Talk (Apr)*
- 2023 *Edinburgh Coffee Talk, The Royal Observatory Edinburgh, Scotland (Oct)*  
*Heidelberg Galaxy Coffee, Max Planck Institute for Astronomy in Heidelberg, Germany (virtual)*
- 2022 *Brno High Energy Astrophysics Journal Club, Brno, Czech Republic (Nov)*

## Teaching & Student Supervision

- Teaching**
- Second-year *Engineering Physics* module covering electromagnetism and electro-dynamics (2021-)
  - Fourth-year module on *Radiative Processes in Astrophysics* (2021-)
  - Third-year *Extragalactic Astronomy* (at UCT) module (2020)
- Students**
- Thando Mthogoane (Ph.D.; 2022-)

## Observing Experience

- 2017** ESO Period 100 observing on the Atacama Pathfinder Experiment Telescope (APEX), San Pedro de Atacama, Chile
- 2012** Optical observing on the Radcliffe 1.9-m Telescope at the South African Astronomical Observatory (SAAO), Sutherland, South Africa

## Professional Activities

- Vice-chair for the *IAU General Assembly 2024 Symposium 394: All-inclusive AGN* (2023-)
- South African SALT Time Allocation Committee (SASTAC) member (2023-)
- Academic mentor in the *Supernova Foundation* (2022-)
- Executive Committee official in the African Astronomical Society (AfAS) (2022-)
- Chair of the AfAS Early-career Science Sub-committee (2022-)
- Organiser of the *ESO Wine & Cheese Seminar* series (2017-2018)
- Session volunteer at the *ESO Observing Programmes Committee* meetings for periods 109, 100 and 101 (2017-2018)

## Community Service

- Invited speaker for the *Edinburgh School of Physics and Astronomy EDI Seminar Series* (2024)
- Astronomy outreach coordinator at the Durham University *Celebrate Science Day* (2023)
- Invited speaker at the *Warwick Ethnic Minorities in Physics Network (WEMPN) Seminar* (2023)
- Invited speaker for a public talk at the Winter *SARAO Open Day* (2023)
- Invited speaker at the EAS 2023 for a special session on gender-inclusivity in Astronomy (2023)
- Invited speaker for a public talk at an *Astronomical Society of South Africa (ASSA) monthly meeting* (2022)

- Contributing speaker at the EAS 2022 for a special session on building diversity in Astronomy (2022)
- Project organiser for the *Astronomy in Colour (AiC)* collective (2021-)
- Invited speaker for a public talk at an *SAAO Open Night* (2020)
- Fundraiser for the *Astro Molo Mhlaba* project (2019-)
- Provided mentorship and advice to students attending *AstroCamp*, Portugal (2018)
- Astronomy outreach coordinator at Elsie Rivier High School, Cape Town, S.A. (2015-2016)
- Tutor of high-school students for the SHAWCO, UCT programme (2011-2016)

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## Selected Media & Press

- Story featured in the *Nature* magazine supplement, *Where I Work*; link to the article (2023)
- Speaker at an International Astronomy Union (IAU) *Women in Astronomy Working Group* Seminar; link to the video (2022)
- Scientific comments featured in *WIRED* magazine; link to the article (2021)
- Interviewed for an *SAIP* documentary; link to video (2021)
- Session Chair in the *AiC Speaker Series: Trailblazers*; link to the video channel (2020)
- Popular science article published *Mail & Guardian* (South Africa) titled *Power answer in black-holes?*; Click for a link to the article (2015)

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## Achievements & Accolades

- 2024 Awarded in the category of education by the Mail & Guardian for the 2024 *200 Young South Africans* List
- 2023 Awarded a National Research Foundation (NRF) grant under the BAAP (Black Academic Advancement Program)
- 2016 - 2019 Awarded ESO Ph.D. Studentship Funding
- 2011 - 2015 Awarded NRF-SKA (Square Kilometer Array) B.Sc. and M.Sc. Scholarships

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## References

### Prof Dr. Russ Taylor

Emeritus Professor  
Astronomy Department, UWC  
Cape Town, South Africa  
✉ russ@idia.ac.za

### Prof Dr. Soebur Razzaque

Extraordinary Professor  
Physics Department, UJ  
Johannesburg, South Africa  
✉ srazzaque@uj.ac.za

### Dr. Carlos de Breuck

Staff Astronomer  
The European Southern Observatory  
Garching bei München, Germany  
✉ cdebreuc@eso.org

### Prof. Leah Morabito

Professor  
Astrophysics Durham Astronomy Research  
Cluster, Durham University  
Durham, UK  
✉ leah.k.morabito@durham.ac.uk