

Summary

Dr Jack F. Radcliffe is the Science Community Director at the UK SKA Regional Centre (UKSRC) and a research scientist at the University of Manchester. He leads science support and community engagement efforts at UKSRC, ensuring the scientific impact of the SKA Observatory and its pathfinder data is maximised. Dr Radcliffe is also affiliated with the University of Pretoria, where he was a senior lecturer and holds an NRF Y1 rating.

His research spans both technical and scientific domains, with a strong focus on high-resolution radio observations. A leading expert in wide-field VLBI surveys of faint active galactic nuclei (AGN), his pioneering work has advanced radio interferometric calibration techniques, radio transient and variability studies, and investigations into star formation in galaxies. His expertise in software development encompasses the creation of the multi-source self-calibration technique and the development of the VLBI and e-MERLIN data reduction pipelines.

With over eight years of experience in lecturing and workshop development, Dr Radcliffe has played a pivotal role in astronomy education, designing and leading postgraduate and undergraduate courses, as well as contributing to the Development in Africa with Radio Astronomy (DARA) project. As co-chair of the SKA VLBI Science Working Group, he actively builds international collaborations. At the same time, his reputation as a skilled scientific communicator is reflected in his numerous invited talks, conference presentations, and outreach initiatives worldwide.

Publications

Summary – 24 peer-reviewed publications, all of which are in high-impact journals (impact factor > 5). Radcliffe has a *h*-index of 12 and is the first author in ~30% of these publications. Radcliffe is associated with eight additional conference proceedings. Below each publication is a paper summary. Papers in preparation, where Radcliffe is a key contributing author and will be submitted in the next 12 months, are included to illustrate the current research trajectory. Full library of articles can be found [here](#).

Indices – *h*-index: 12 | *g*-index: 18 | *i10*-index: 13

PUBLISHED, ACCEPTED & SUBMITTED

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|------|--|
| 2025 | <p>Radio emission from a nearby M dwarf binary, K. Wandia, M. A. Garrett, R. J. Beswick, J. F. Radcliffe, V. Gajjar, D. Williams-Baldwin, (+ 4 authors) MNRAS, 543, 3, 1935-1944</p> <p>Investigating the influence of radio-faint AGN activity on the infrared-radio correlation of massive galaxies, G. Peluso, I. Delvecchio, J. Radcliffe, E. Daddi, R. Deane, M. Jarvis, (+ 5 authors) arXiv e-prints, arXiv:2509.17536</p> <p>Synoptic Wide-field EVN-e-MERLIN Public Survey (SWEEPS) – I. First steps towards commensal surveys with VLBI, C. Herbe-George, (+ 3 authors including J. F. Radcliffe) MNRAS, 537, 1, L49
- Paper outlining the first results from a new commensal survey on the European VLBI Network.</p> |
| 2024 | <p>The VLBA CANDELS GOODS-North Survey – II. Wide-field source catalogue comparison with e-MERLIN and EVN, A. Njeri, R. P. Deane, J. F. Radcliffe, (+ 5 authors) MNRAS, 528, 4, 6141
- Novel investigation of detected source properties across three orders of magnitude in angular resolution. Co-supervised DARA PhD student Ann Njeri led the paper.</p> <p>The VLBA CANDELS GOODS-North Survey – I. Survey Strategy, Design, Processing, and Catalogues, R. P. Deane, J. F. Radcliffe (+ 10 authors) MNRAS, 529, 3, 2428
- First paper of the series outlining the ambitious survey with the VLBA to process and image the entire primary beam at milli-arcsecond resolution.</p> <p>Data-intensive radio astronomy, Editors: E. Vardoulaki, M. Dembska, A. Drabent, M. Hoeft Springer, ASSL, 472
- New book outlining methods of dealing with large data volumes from radio astronomy. JFR wrote the section on VLBI and SKA-VLBI.</p> <p>On the source counts of VLBI-detected radio sources and the prospects of all-sky surveys with current and next-generation instruments, S. Rezaei, J. P. McKean, A. T. Deller and J. F. Radcliffe MNRAS submitted
- First paper on the VLBI source counts and their influence on future VLBI surveys.</p> <p>Revisiting a flux recovery systematic error arising from common deconvolution methods used in aperture-synthesis imaging, J. F. Radcliffe, A. P. Thomson, R. J. Beswick, (+ 3 authors) MNRAS, 527, 1, 942
- Significant systematic effect of taking into account for all interferometric surveys using CLEAN-based algorithms.</p> |
| 2023 | <p>An interferometric SETI Observation of Kepler-111 b, K. Wandia, M. A. Garrett, J. F. Radcliffe, (+ 8 authors) MNRAS, 522, 3, 3784
- First survey using VLBI to search for signatures of extraterrestrial civilisations.</p> <p>SPARCS-North Survey: Exploring the resolved μJy extra-galactic radio source population with EVN+e-MERLIN, A. Njeri, R. J. Beswick, J. F. Radcliffe, (+ 8 authors) MNRAS, 519, 2, 1732
- First wide-field VLBI survey using a combined EVN+e-MERLIN array focusing on the SPARCS-N field.</p> |
| 2022 | <p>An ultra-deep multi-band VLA survey of the faint radio sky (COSMOS-XS): the radio luminosity function to redshift ~5, D. van der Lugt, H. S. B. Algera, (+ 7 authors including J. F. Radcliffe) ApJ, 941, 10
- New study at the faint end of the radio luminosity function down to sources with sub-microJy flux densities and high redshifts.</p> |

	A super-linear ‘radio-AGN main sequence’ links mean radio-AGN power and galaxy stellar mass since $z \sim 3$, I. Delvecchio, E. Daddi (+ 17 authors including J. F. Radcliffe) - Paper showing that the radio AGN power is related to the galaxy’s stellar mass. Software and techniques for VLBI data processing and analysis, M. Janssen, J. F. Radcliffe, & J. Wagner - Latest updates on VLBI data, processing and results. Identifying active galactic nuclei via brightness temperature with sub-arcsecond International LOFAR Telescope observations, L. Morabito, F. Sweijs, J. F. Radcliffe (+ 10 authors) - The first publication showing LOFAR-VLBI observations can be used to identify active galactic nuclei.	A&A, 668, A81 Universe, 8(10), 527 MNRAS, 515, 4, 5758
2021	The radio emission from active galactic nuclei, J. F. Radcliffe, P. D. Barthel, M. A. Garrett, (+ 3 authors) - Ground-breaking observations that finally reveal (after 30 years) that the radio emission in radio-quiet AGN is related to star-formation rather than the central supermassive black hole. Nowhere to hide: Radio-faint AGN in GOODS-N – II. Multi-wavelength AGN selection techniques and host galaxy properties, J. F. Radcliffe, P. D. Barthel, M. A. Garrett, (+ 3 authors) - Second paper in series that reveals that high-resolution radio observations remain key in identifying a true consensus of AGN activity across cosmic time.	A&A, 649, L9 (Press release) A&A, 649, A27
2020	An Ultra-deep Multi-band VLA Survey of the Faint Radio Sky (COSMOS-XS): Source Catalog and Number Counts, D. van der Vlugt, H. S. B. Algera, (+ 7 authors including J. F. Radcliffe) - COSMOS-XS is the deepest radio survey ever conducted with sub-microJy sensitivity. This paper presents the survey and source counts. JFR was key in reducing, imaging and analysing these data. A Multi-wavelength Analysis of the Faint Radio Sky (COSMOS-XS): The Nature of the Ultra-faint Radio Population, H. S. B. Algera, D. van der Vlugt, (+ 8 authors including J. F. Radcliffe) - Second paper from the COSMOS-XS survey investigating the multi-wavelength properties of the faintest radio sources. JFR was key in data analysis. The e-MERLIN Galaxy Evolution Survey (e-MERGE) – Overview and Survey Description, T. W. B. Muxlow, A. P. Thomson, J. F. Radcliffe, (+ 33 authors) - First paper from the e-MERGE e-MERLIN legacy project that investigates galaxy evolution through high-resolution radio observations. JFR was key in reducing, imaging and analysing these data. Searching for Obscured AGN in $z \sim 2$ Submillimetre Galaxies, H. Chen, M. A. Garrett, S. Chi, (+ 13 authors including J. F. Radcliffe) - Investigation into dusty sub-millimetre galaxies using VLBI revealed obscured AGN in $\sim 25\%$ of sources.	ApJ, 907, 1, 5 ApJ, 903, 2, 139 MNRAS, 495, 1, 1188 A&A, 638, A113
2019	An insight into the extragalactic transient and variable microJy radio sky across multiple decades, J. F. Radcliffe, R. J. Beswick, A. P. Thomson, (+ 3 authors) - First paper revealing that the radio variability of the faintest radio sources across decadal timescales is extremely rare ($< 2\%$).	MNRAS, 490, 3, 4024
2018	Nowhere to hide: Radio-faint AGN in the GOODS-N field – I. Initial catalogue and radio properties, J. F. Radcliffe, M. A. Garrett, T. W. B. Muxlow, (+ 6 authors) - Pioneering wide-field observations of the GOODS-N deep field using VLBI that almost triple the number of previously detected radio-AGN in the field. Measuring the size evolution of distant, faint galaxies in the radio regime, L. Lindroos, K. K. Knudsen, F. Stanley, (+ 5 authors including J. F. Radcliffe) - Novel uv stacking techniques revealed that star-formation in distant, faint galaxies is typically concentrated in the centre of the objects.	A&A, 619, A48 MNRAS, 476, 3, 3544
2017	The e-MERGE Survey – I. JVLA 5.5 GHz observations of the GOODS-North Field, D. Guidetti, M. Bondi, I. Prandoni, (+ 8 authors including J. F. Radcliffe) - Deep 5 GHz radio observations revealed, for the first time, that a large proportion of galaxies detected contained active supermassive black holes.	MNRAS, 471, 1, 210
2016	Multi-source self-calibration: Unveiling the microJy population of compact radio sources, J. F. Radcliffe, M. A. Garrett, R. J. Beswick, (+ 4 authors) - Publicly available direction-dependent calibration routine for wide-field VLBI observations that allows any possible field to now be observed with VLBI arrays. The code to perform this is publicly available and used by the community.	A&A, 587, A85 ASCL 1709.007
IN PREPARATION		
	SWEEPS – II. Distributed software correlation and calibration for Very Long Baseline Interferometry, J. F. Radcliffe (+ 8 authors) - Paper outlining the new distributed correlation and calibration workflow to automate VLBI data processing. The next generation of surveys using Very Long Baseline Interferometry, J. F. Radcliffe (+ 8 authors) - Review paper examining the role of VLBI in the next generation on instruments. Calibrating wide-field VLBI data using VPIPE, J. F. Radcliffe (+ 4 authors) - Outlines a new calibration pipeline to process VLBI data using the latest techniques and algorithms. Primary beams of heterogeneous interferometric arrays – I. Issues, challenges and considerations, J. F. Radcliffe, A. Keimpema, Z. Paragi, (+ 12 authors) - This paper deals with the issues associated with heterogeneous elements in an interferometric array illustrated through various theoretical arguments and simulations. These issues have important implications for future arrays, including the SKAO.	

Employment experience

UKSRC Science Community Director

UNIVERSITY OF MANCHESTER

Jan 2025 – present

United Kingdom

Key Responsibilities & Achievements:

- Leads the science enabling stream for the UK-focused side of the UK SKA Regional Centre. This includes leading teams (~14 FTE) that develop science tools and workflows, supporting and training users and engaging with the UK SKAO community.

UKSRC Research Scientist

UNIVERSITY OF MANCHESTER

Apr 2024 – Dec 2024

United Kingdom

Key Responsibilities & Achievements:

- Role focused on building and developing the SKA regional centre in the United Kingdom to deliver SKAO data products to users.
- Acts as the community engagement lead and represents the UKSRC on the SKAO science committee.
- Lead Team Sapphire (WP3 & 4) that focuses on science support, community co-creation and engagement, industry engagement, training, and outreach.

Senior Lecturer

UNIVERSITY OF PRETORIA (UP)

2024

South Africa

Key Responsibilities & Achievements:

- Research into multiple areas, including star formation, active galactic nuclei, protostars and transient events.
- Built software correlator to begin commensal surveys of the high-resolution radio sky. The project will observe more sources at high resolution than have ever been observed since Very Long Baseline Interferometry was conceived 50 years ago.
- Teaches observational astronomy undergraduate course and mentored multiple postgraduate students to completion

Lecturer

UNIVERSITY OF PRETORIA

2021 – 2024

South Africa

Key Responsibilities & Achievements:

- Research into high-resolution studies of distant galaxies, continuing the work set out during the previous fellowship.
- Re-designed, coordinated and lectured the undergraduate observational astronomy course comprising lectures, workshops, assignments & exams at UP.
- Contributed and led grant proposals to help grow the group's reputation and size.

SARAO Postdoctoral Fellow & Lecturer (part-time)

UNIVERSITY OF PRETORIA

2019 – 2021

South Africa

Key Responsibilities & Achievements:

- Funded by the South African Radio Astronomy Observatory (SARAO) that focused upon galaxy evolution through pioneering high-resolution interferometric observations of the COSMOS field, complemented by exquisite MeerKAT data. ([link to research proposal](#)).
- Founded, designed, and delivered the postgraduate Radio Astronomy course, comprising of lectures, workshops, assignments & exams, at UP.
- Key contributions to the UP astrophysics group. e.g., contributed to the research direction and grant proposals.

Research Associate

UNIVERSITY OF MANCHESTER

Jan – Jun 2019

United Kingdom

Key Responsibilities & Achievements:

- UK Research and Innovation (UKRI) Global Impact Accelerator Accounts (GIAA) funded research associate on 'Enhancing and expanding the impact and sustainability of the Development in Africa with Radio Astronomy (DARA) graduate training programme in sub-Saharan Africa'.
- Developed teaching materials, including lectures, workshops and tutorials for DARA training and collated materials taught by lecturers from multiple international institutions. These have had a large impact as shown by their use in various other radio astronomy courses.

Education

Ph.D. in Astrophysics

2014 – 2019

UNIVERSITY OF MANCHESTER & UNIVERSITY OF GRONINGEN (JOINT DEGREE)

United Kingdom & the Netherlands

- Thesis – ‘*Nowhere to hide: identifying AGN in the faint radio sky*’ ([link to thesis](#)).
- Supervisors: M. A. Garrett, P. D. Barthel, R. J. Beswick & T. W. B. Muxlow.
- The work in this Ph.D. investigated the role of faint Active Galactic Nuclei in galaxy evolution using high-resolution radio observations. Such observations provided one of the widest and deepest high-resolution observational studies of the distant universe. Techniques developed as part of this work, such as MSSC, have been influential in developing VLBI survey capabilities, the decadal planning of VLBI, and implications for future SKA and MeerKAT VLBI surveys.

M.Sci. Honours & ARCS in Physics

2010 – 2014

IMPERIAL COLLEGE LONDON

United Kingdom

- First Class Honours (74.6%) & Associate of the Royal College of Science (ARCS).
- Masters Thesis – ‘*Proof of concept for a new optical method of performing oscillatory rheology*’.

A-levels & GCSEs

2003 – 2010

SIR JOHN TALBOT’S TECHNOLOGY COLLEGE

United Kingdom

- 4 A-levels and 12 GCSEs, all of which achieved a grade of A or A*.

Grants, honours & awards

2025–27	Building the foundation for geodetic excellence in Africa through the Africa-UK Physics Partnership , A UKRI-funded project, a new initiative to lay the groundwork for improving geodetic infrastructure and capacity on the African continent. JFR is the project lead.	270 k GBP / 6.2 M ZAR
2024–27	Development in Africa with Radio Astronomy (DARA) phase 3 , The next phase of the HCD programme is to build astronomy expertise in sub-Saharan Africa. JFR is a co-I and leads the data reduction training work package.	6.1 M GBP / 145.8 M ZAR
2024	NRF incentive grant , from the National Research Foundation to support the research of rated scientists in South Africa.	100 k ZAR
2023–26	RADIOBLOCKS - New science in radio astronomy , a large European Commission grant (shared between 33 institutions) to apply cutting-edge technology to enhance the entire data chain, from receiver to final output.	10 M EUR / 178 M ZAR
2023–24	Research development programme grant , to support developments in VLBI conducted at the University of Pretoria.	100 k ZAR
2022–27	NRF Rating (Y1) , peer-reviewed rating from South Africa’s National Research Foundation (NRF) that rates individuals on the quality and impact of their research outputs over the past eight years. Radcliffe was awarded the top-tier (Y1) of the young researcher category.	
2022–23	Pretoria travel mobility grant , to facilitate travel between UP, the University of Manchester, and the Square Kilometre Array Organisation.	50 k ZAR
	SARAO undergraduate scholarship , to support three undergraduate students throughout their degree.	1.5 M ZAR
	Research seed funding , to support research and teaching activities at the University of Pretoria.	85 k ZAR
Est. 2019–	Dr Jack Radcliffe award for Physics , an award given each year to the student with the best attainment in the Physics GCSE at Sir John Talbot’s Technology College.	
2019–	Honorary research fellow , a prestigious accolade given by the University of Manchester to promote further collaboration between the researcher and the University.	
2019–22	SARAO postdoctoral fellowship , awarded by the South Africa Radio Astronomy Observatory to perform independent research.	~ 1.45 M ZAR / 74k GBP
	RadioNet TNA , awarded to give an invited talk at the 2019 SKA-VLBI workshop.	~ 1k EUR / 830 GBP
2016–19	Ubbo Emmius scholarship , awarded by the University of Groningen for students to pursue a PhD.	~ 43k EUR / 36k GBP
2014–16	STFC PhD scholarship , awarded by the Science and Technologies Facilities Council to conduct a PhD at the University of Manchester.	~ 26k GBP
2010–14	Imperial College London undergraduate bursary , awarded by Imperial College London to support undergraduate study.	~ 20k GBP

Teaching experience

Summary – Lectured astronomy for over 8 years and taught and assessed students for over 5 years. Founded, developed, gave and assessed the radio astronomy postgraduate course at the University of Pretoria and redesigned the Observational Astronomy undergraduate course. Currently supervising eight students (as both primary and co-supervisor), with eight student projects completed.

2022–24	Founder & Lecturer , for the short interferometry postgraduate course Interferometry 101, given to students in the Gauteng region. - Course designed to teach students about radio interferometry in alignment with South Africa's astronomy focuses. - Founded and taught this course.	University of Pretoria
2021–24	Lecturer , for the Observational Astronomy 3rd year undergraduate course (PHY 300). - Course designed to teach students about observational astrophysics, focusing on the optical and radio regime in alignment with South Africa's astronomy direction. - Re-designed and taught this course. The course comprises 40 lectures and eight workshops and is assessed through assignments and exams.	University of Pretoria
2019–21	Founder & lecturer , for the Radio Astronomy postgraduate Honours course. Course designed to teach Honours students single-dish and interferometric radio astronomy. This provides an ideal introduction to postgraduate research. - Founded, designed, developed, and gave the postgraduate lecture course. The course comprises 12 x 2hr lectures and workshops and is assessed through assignments and exams.	University of Pretoria
2016–21	Lecturer & course coordinator , for the Development in Africa with Radio Astronomy (DARA) project (link). - Designed and developed the Unit 4 (data reduction) lectures and workshops on interferometric data reduction and analysis. - Taught interferometric data reduction in Zambia and Botswana over the last 4 years and scheduled to lecture for Unit 2 at HartRAO in South Africa this year. - Built the DARA repository website and curated all materials. - Built VLBI tutorials, now the official VLBI CASA data reduction guide for the National Radio Astronomy Observatory (USA).	
2017	Teaching assistant , Observational astronomy undergraduate course - Helped students take data using the 1 m optical telescope at the University of Groningen for their observational astronomy practical assessments.	University of Groningen
2014–16	Demonstrator , First year undergraduate laboratory - Taught and assessed undergraduate students in the first year Physics laboratory.	University of Manchester

ACADEMIC SUPERVISION

* denotes students who have submitted or will submit within the next 28 days.

PH.D.

2024–	Mercy Mooketsi-Kobe , Project: 'Testing AGN evolution and feedback with wide-field VLBI' Co-supervisor w/ J. P. McKean	University of Pretoria
2023–	Celestin Herbé-George , Project: 'Testing AGN evolution and feedback with wide-field VLBI' Co-supervisor w/ J. P. McKean, R. Morganti	University of Pretoria / Groningen
2022–	Kelvin Wandia , Project: 'Deep, wide-field VLBI of faint cosmic radio sources' Co-supervisor w/ M. A. Garrett, J. P. McKean	University of Manchester
2018–22	Dr Ann Njeri , Project: 'High resolution observations of faint radio sources' Co-supervisor w/ R. P. Deane, R. Beswick	University of Manchester

MASTERS

2024–	Katelyn Jordaan , Project: 'Investigating the growth of dust grains in proto-planetary disks' Primary supervisor	University of Pretoria
2023–25	Sibongumusa Wiseman , Project: 'Investigating star-formation and supernovae in Messier 82' Primary supervisor w/ D. Williams, R. Beswick	University of Pretoria
2023–25	Llewellyn Coetzer , Project: 'Widening the field-of-view of Very Long Baseline Interferometric surveys through advanced calibration techniques' Primary supervisor	University of Pretoria
2022–	Anneke van der Dussen , Project: 'Searching for binary supermassive black holes in wide-field VLBI data' Primary supervisor w/ R.P. Deane	University of Pretoria
2021–24	Theophilus Matsepane , Project: 'Charting the unseen Universe: a study of faint radio emission using VLBI' Primary supervisor	University of Pretoria
2021–22	Kelvin Wandia , Project: 'SETI using wide-field VLBI' Co-supervisor w/ M. Garrett, A. Siemion	University of Manchester

HONOURS

2023–24	Katelyn Jordaan , Project: ‘Investigating proto-planetary disks with new wide-band VLBI receivers’ Primary supervisor	University of Pretoria
2022–23	Titan Harth , Project: ‘Finding the faintest supermassive black holes through advanced calibration’ Primary supervisor	University of Pretoria
2022–23	Jayde Bhana , Project: ‘A first look at sub-kiloparsec relativistic jets in distant, high redshift galaxies’ Primary supervisor	University of Pretoria
2022–23	Llewellyn Coetzer , Project: ‘Determining the true sensitivity of radio telescopes through beam-mapping’ Primary supervisor	University of Pretoria
2021–22	Anneke van der Dussen , Project: ‘A binary supermassive black hole in GOODS-N’ Primary supervisor	University of Pretoria
2021	Zane Lentz , Project: ‘Analysis of a serendipitous supernovae candidate identified in the GOODS-N field’ Primary supervisor	University of Cape Town

Colloquia, conferences & workshops

Summary – 38 national and international colloquia, conferences, and seminar talks, of which 14 were invited. Lecturer for five workshops and part of the science organising committee for three more workshops/conferences.

COLLOQUIA

2024	IAA-CSIC , ‘The next generation of milliarcsecond surveys with SKA-VLBI’.	Granada, Spain
	University of Leeds , ‘Opening up the radio sky with VLBI’.	Leeds, UK
	European VLBI Network seminars , ‘Surveying the entire sky with VLBI’.	Virtual
2023	Istituto Nazionale Di Astrofisica (INAF) , ‘Black holes, and where to find them’.	Milan, Italy
2020	Netherlands Institute for Radio Astronomy (ASTRON) , ‘Identifying AGN in the faint radio sky’.	Dwingeloo, the Netherlands
2019	Hartebeeshoek Radio Astronomy Observatory (HartRAO) , ‘Finding AGN in the faint radio sky: A high-resolution perspective’.	Gauteng, South Africa
	Kapteyn Thesis Colloquium, University of Groningen , ‘The faint radio population in GOODS-N’.	Groningen, the Netherlands
	Jodrell Bank Centre for Astrophysics, University of Manchester , ‘Finding AGN in the faint radio sky: A high-resolution perspective’.	Manchester, UK
	University of Cape Town , ‘Finding AGN in the faint radio sky: A high-resolution perspective’.	Cape Town, South Africa

CONFERENCES

(O) - oral presentation, (P) - poster presentation, (C) - session chair, (LOC) - local organiser, (SOC) - scientific organiser, (A) - attended

2025	Science and technology with the Wettstein Millimeter Telescope , “VLBI with the Square Kilometre Array Observatory”(invited, O).	Zugspitze, Germany
	SKAO Science Meeting 2025 , (SOC).	Görlitz, Germany
2024	2nd National Sweden SKA Science Day , ‘The next generation of VLBI surveys with the SKAO’, (invited, O).	Gothenberg, Sweden
	16th European VLBI Network Symposium and Users’ Meeting , ‘Latest developments in wide-field VLBI’, (O).	Bonn, Germany
	National Astronomy Meeting 2024 , ‘The UK SKAO Regional centre - empowering your science today’, (O).	Hull, UK
	AGN across continents and cosmic time , ‘An unofficial SKAO update’ & ‘A dust-independent view of radio AGN through all-sky VLBI surveys’, (O).	Durham, UK
	SPARCS XII , ‘Opening up the radio sky with VLBI’, (invited, O).	Virtual
2023	Data Science & Artificial Intelligence in Mathematics & Science , (LOC).	Pretoria, SA
	Bologna VLBI: Life begins at 40! , ‘VLBI surveys - past, present and future’ (invited, O).	Bologna, Italy
	Inter-university Institute for Data Intensive Astronomy retreat 2023 , ‘VLBI at the University of Pretoria’ (O, LOC).	Pretoria, SA
2022	SKA Pathfinders Radio Continuum Surveys XI , ‘The next generation of high-resolution surveys with SKA-VLBI’ (O, LOC, C).	Gauteng, SA
	Inter-university Institute for Data Intensive Astronomy retreat 2022 , ‘Wide-field VLBI at the University of Pretoria’ (O).	Cape Town, SA

	Annual Conference of the African Astronomical Society 2022 , ‘Teaching interferometry to the next generation of African astronomers’ (O).	Virtual
	VLBI in the SKA-era , ‘Wide-field VLBI surveys in the SKA-era’ (O).	Virtual
2021	SARAO postgraduate scholarship conference 2021 , (C).	Virtual
	SKA Pathfinders Radio Continuum Surveys X , ‘The challenges associated with the beams of interferometers - a warning to the SKA-era’ (O).	Virtual
	High Energy Astrophysics in Southern Africa 2021 , ‘Active galactic nuclei in the faint radio sky’ (O).	Virtual
	National Astronomy Meeting 2021 , ‘Square pegs in round holes. - Accurate photometry for the SKA-era’ (invited, O).	Virtual
	European VLBI Network Symposium 2021 , (A)	Virtual
2020	SARAO postgraduate scholarship conference 2020 , ‘Preparing for MIGHTEE-VLBI wide-field surveys’ (P, link).	Virtual
2019	SARAO postgraduate scholarship conference 2019 , ‘Identifying AGN in the faint radio sky’ (O).	Durban, South Africa
	SKA-VLBI key science projects and operations workshop , ‘Wide-field VLBI in the SKA era’ (invited, O, fully funded).	Manchester, UK
2018	European Week of Astronomy and Space Science 2018 , ‘Nowhere to Hide: Wide-field VLBI with the EVN’ (P, link).	Liverpool, UK
2016	SKA2016: Continuum Science Working Group Meeting , ‘Lessons learned: An EVN & e-MERLIN perspective’ (invited, O).	Goa, India
	SKA2016: Science for the SKA Generation , ‘There’s Nowhere to Run, Nowhere to Hide’ (O).	Goa, India
	SKA Pathfinders Radio Continuum Surveys 2016 , ‘Isolating AGN Using Wide-field VLBI & e-MERLIN Observations’ (invited, O).	Goa, India
	e-MERLIN and Jodrell Bank Observatory: A radio astronomy facility for the SKA era , ‘Isolating AGN using wide-field VLBI and e-MERLIN’ (invited, O).	Manchester, UK
	European Week of Astronomy and Space Science 2016 , ‘There’s Nowhere to Run, Nowhere to Hide... Hunting for AGN Using Wide-field VLBI’ (invited, O).	Athens, Greece
	National Astronomy Meeting (NAM) 2016 , ‘The e-MERGE Legacy Survey - an e-MERLIN+JVLA Ultra-Deep Survey’(O).	Nottingham, UK
2015	UK SKA Science Meeting , ‘Towards the nJy Regime at the Highest of Resolutions’ (O).	Manchester, UK
	Bonn-Dwingeloo Neighbourhood Meeting, ASTRON , ‘Wide-field VLBI with the EVN’ (O).	Dwingeloo, the Netherlands
	The many facets of extragalactic radio surveys , ‘Nowhere to Hide - Wide-field VLBI of GOODS-N’ (O).	Bologna, Italy
	NAM 2015 , ‘Wide-field VLBI - Finding Radio Weak AGN’ (O).	Llandudno, Wales
	Back at the Edge of the Universe , (A).	Sintra, Portugal

SEMINARS

2022	COIL-COP, University of Pretoria , ‘Teaching the next generation of African radio astronomers through the DARA programme’ (invited).	Pretoria, South Africa
2021	PSANA seminar, University of Pretoria , ‘You are not alone. An astronomer’s guide to good mental health during your postgraduate degree’ (invited).	Pretoria, South Africa
2020	Kapteyn Wednesday Lunch Talk, University of Groningen , ‘Development in Africa with Radio Astronomy’ (invited).	Groningen, the Netherlands
2018	National Radio Astronomy Observatory (NRAO) Lunch Talk , ‘The faint radio population in GOODS-N’ (invited).	Socorro, USA
2017	Kapteyn Monday Lunch Seminar , ‘The AVN, EVN and the next generation of radio astronomers’.	Groningen, the Netherlands
2016	JBCA Internal Seminar, University of Manchester , ‘Nowhere to Hide - Wide-field VLBI of GOODS-N’.	Manchester, UK

WORKSHOPS

2024	Australian VLBI workshop , ‘An overview of VLBI with the SKAO’ (O).	Online/Perth, Australia
	SKA-VLBI workshop in Korea , ‘Science with SKA-VLBI’ (invited, O).	Online/Incheon, S. Korea
	European Radio Interferometry School 2024 , ‘Introduction to calibration’ (O, SOC).	Granada, Spain
2023	CASA-VLBI workshop 2023 , ‘Wide-field data processing’ (O, SOC).	Dwingeloo, the Netherlands
2022	European Radio Interferometry School 2022 , (O, SOC).	Dwingeloo, the Netherlands
2020	CASA VLBI workshop 2020 , ‘Wide-field imaging’ (O, SOC).	Virtual
2019	European Radio Interferometry School 2019 , ‘Self-calibration’ & ‘Wide-field VLBI’ (O).	Gothenberg, Sweden
2015	European Radio Interferometry School 2015 , (A).	Munich, Germany

Competitively awarded observing proposals

Summary – Radcliffe has obtained time on multiple major radio astronomy instruments worldwide, totalling 100s hours. Radcliffe currently/is involved in the three largest projects on the European VLBI Network.

PRINCIPAL INVESTIGATOR

- 2023 **The EMU-VLBI pilot survey - uncovering milliarcsecond radio structures in the Southern sky**, Instrument: *LBA*. Time awarded: 48 hr
- 2022 **A new window on radio AGN with e-MERLIN, EVN and LOFAR**, Instrument: *e-MERLIN*. Time awarded: 400 hr
- 2020 **The final frontier in wide-field surveys – mapping the primary beam of the EVN**, Instrument: *EVN*. Time awarded: 12 hr
- 2017 **The nature of the microJy variable source population in GOODS-N**, Instrument: *VLA*. Time awarded: 10 hr
- DDT: Precise astrometry of the phase calibrator source J1234+6158**, Instrument: *e-MERLIN*. Time awarded: 24 hr
- EVN-COSMOS: Taming AGN & star-formation across cosmic time**, Instrument: *EVN*. Time awarded: 72 hr
- 2016 **DDT: Source identification around VLBI-detected gravitational lenses**, Instrument: *e-MERLIN*. Time awarded: 12 hr

SIGNIFICANT CONTRIBUTING INVESTIGATOR

- 2022 **Testing AGN evolution and feedback by combining the ILT and e-MERLIN/EVN**, PI: McKean. Instrument: *EVN*. Time awarded: 200 hr
- Monitoring the old, discovering the new; mas-scale radio emission in M82**, PI: Williams. Instrument: *EVN*. Time awarded: 48 hr
- 2020 **Unravelling the role of faint radio AGN across the infrared-radio correlation**, PI: Delvecchio. Instrument: *VLBA*. Time awarded: 90 hr
- 2019 **Resolving the core/jet Structure of the giant radio galaxy ESO422-G028**, PI: Riseley. Instrument: *EVN & LBA*. Time awarded: 16 hr
- Exploring the resolved microJy radio source population with EVN+eMERLIN**, PI: Njeri. Instrument: *EVN*. Time awarded: 24 hr
- 2018 **What drives outflows and negative feedback? - High-resolution imaging of molecular gas in the SMBH-binary merger NGC6240**, PI: Beswick. Instrument: *e-MERLIN*. Time awarded: 24 hr
- The sizes and spectral indices of ~800 radio-detected galaxies in GOODS-N**, PI: Thomson. Instrument: *VLA*. Time awarded: 42.5 hr
- An ultra-deep multi-frequency survey of galaxy evolution**, PI: Algera. Instrument: *VLA*. Time awarded: 180 hr
- Filler time VLBA survey of the UDS field: a VLBI pilot for MeerKAT-MIGHTEE**, PI: Deane. Instrument: *VLBA*. Time awarded: 47.5 hr
- Morphological identification of sources in the Northern SPARCS field**, PI: Wrigley. Instrument: *e-MERLIN*. Time awarded: 144 hr
- Spatially-resolved star formation in two bright ($S > 100 \mu\text{Jy}$) radio-detected sub-mm galaxies in ELAIS-N2**, PI: Thomson. Instrument: *e-MERLIN*. Time awarded: 64 hr
- 2017 **Pilot study: Morphological identification of sources in the Northern SPARCS field**, PI: Wrigley. Instrument: *e-MERLIN*. Time awarded: 28 hr
- Deep field classification of galaxies within the Lockman Hole**, PI: Wrigley. Instrument: *e-MERLIN*. Time awarded: 72 hr
- Low Frequency Insights into the Radio Continuum - Star Formation Rate Relation**, PI: Hindson. Instrument: *LOFAR*. Time awarded: 16 hr
- 2016 **41.95+57.5 An Enigmatic Compact Radio Source in M82 Revisited**, PI: Muxlow, Instrument: *e-MERLIN*, Time awarded: 12 hr

Professional responsibilities & collaborations

Summary – Radcliffe is an active, senior member of multiple major research collaborations and has founded multiple projects. His leading international research profile means he is regularly invited to join and play a senior role in multiple collaborations.

- 2026– **Chair**, of the European VLBI Network programme committee
- 2024– **Science engagement and delivery lead**, on the directorate of the UK SKA Regional Centre
- 2024– **UKSRC representative**, on the UK SKAO science committee

2024–	Member , on the African Millimetre Telescope science committee	
2023–	Co-chair , of the SKAO VLBI science working group	
2023–	Member , for the European VLBI Network programme committee - Group which decides on the science programme for the EVN.	
2022–	Co-investigator , Evolutionary map of the Universe project with the Australian SKA precursor	
2022–	Co-investigator , LOFAR VLBI collaboration	
2022–	Founder & Chair , SKA-VLBI simulations task force - Multi-national working group investigating SKA-VLBI operational capabilities to influence SKA observing modes and infrastructure	
2020–	Scientific referee , for the e-MERLIN Time Allocation Committee (TAC)	
2019–	Referee , for leading high-impact, peer-reviewed journals (MNRAS, A&A & Nature)	
2019–	Co-investigator , of the MeerKAT (SKA pathfinder) deep field survey (MIGHTEE, PI: Jarvis [Oxford] & Taylor [Cape Town])	
2018–	Core member , SKA-VLBI Science Working Group	
2016–	Co-investigator , of the SKA Extragalactic Continuum Science Working Group investigating galaxy evolution through deep radio continuum imaging (PI Sargent [Sussex])	
2016–	Co-investigator , of SPARCS (SKA Pathfinders Radio Continuum Surveys) (PI Norris [ANU])	
2014–	Core member , of the e-MERGE Survey – the e-MERLIN Galaxy Evolution Survey - Allocated 918 hrs of e-MERLIN time as the largest e-MERLIN legacy projects. e-MERGE consortium comprises of >100 international investigators, and the project is producing the deepest radio images of the sky with e-MERLIN probing star-formation and AGN activity back to redshift 5 and beyond	
2023–24	Member , South African Astronomy Community Task Team (ACTT) - National committee that organises operational aspects of Astronomy in South Africa and deals with strategic issues.	
2022–24	Partner contact , for the National Astronomy and Space Science programme	
2022–24	Member , University of Pretoria high-performance computing steering committee	
2022–23	Member , South African Astronomy Community Interim Task Team (ACTT) - Temporary national committee that organises operational aspects of Astronomy in South Africa and deals with strategic issues.	
2019–21	Organiser , of the University of Pretoria group meetings & colloquia	
2016–18	Co-organiser , Wednesday lunch talk series	University of Groningen
2015–16	Co-organiser , Jodrell Autumn Computing Seminar series (JACS) - Designed, organised and delivered seminars for new arrivals to the astronomy group in Manchester. The JACS seminars exist to this day	University of Manchester
2015–16	Chair , Postgraduate Committee at Jodrell Bank Centre for Astrophysics - Represented postgraduates of the astronomy group at the University of Manchester, helping influence policy changes	University of Manchester

Skills

Astronomical Software	AIPS (expert), Parseltongue (expert), CASA (expert), ds9 (intermediate), IRAF (basic) & GALFIT (basic)
Programming Languages	Python (expert), HTML/CSS (expert), LaTeX (expert), Bash/Cshell (expert), C++ (intermediate), Fortran (intermediate) & Java (basic)
Operating Systems	Linux/UNIX (expert), macOS (expert), Windows (intermediate)
Software	Microsoft Office, git, docker, singularity, slack
Statistical Modelling	Multivariate modelling (through Bayesian Monte-Carlo Markov Chain samplers & standard 1st. square)
Machine Learning	CNNs, encoders and k -means clustering analysis through TensorFlow and scikit-learn

Outreach

Summary: Radcliffe has conducted a range of outreach activities ranging from public lectures & Q&As to public demonstrations.

- Outreach activities for Sci-Enza (Pretoria)
- Astronomy talks for Sir John Talbot's Technology college.
- Delivered workshops on UCAS University applications to secondary schools.
- Invited talks & activities for Rodeheath Primary School & Elworth Hall for the *Out of this World* project.
- Outreach for ALMA at the Manchester Festival of Light.
- Science Busking as a volunteer for UoM Physics Outreach.
- Participated at the ScienceX outreach event in Manchester.

References

References available upon request