



**South African Square Kilometre Array Project  
Postdoctoral Fellowships**

**The South African SKA Project invites applications from suitably qualified candidates for five postdoctoral fellowships**

**Closing date for applications: 31 August 2016**

The South African SKA Project (SKA SA) postdoctoral fellowship programme supports research that is relevant to the scientific and technical goals of the organization, and for the next round of fellowships SKA SA will consider applications that propose research in the following areas:

1. Radio Pulsar and Fast-Transient science, instrumentation and data analysis (including real-time RFI detection).
2. Real-time Signal Processing instrumentation for Radio Astronomy, specifically using FPGA and GPU platforms.
3. Big Data topics, including the development of hardware (e.g. Micro-servers and data storage solutions).
4. Instrumentation and data analysis for Radio Frequency Interference (RFI) detection, analysis and archival.
5. Science topics that involve the exploitation of MeerKAT capabilities projected as of late 2017 ("Array Release 3"), including those linked to MeerKAT Large Survey Projects.
6. Epoch of Reionization and Intensity Mapping data reduction and analysis.
7. Interferometric Data Processing and Analysis, including calibration and imaging.
8. C-BASS data processing and analysis.
9. Mid-frequency Aperture Array technologies.
10. Wide-band single-pixel receivers.

SKA SA postdoctoral fellowships are awarded for a period of two years in the first instance, and may be extended to a third year if agreed to by the host university, the postdoctoral fellow and SKA SA. The current value of a postdoctoral fellowship is ZAR 330,000 per annum (non-taxable), and this amount is supplemented by travel and equipment grants. (Note: the current value of the postdoctoral fellowship may be adjusted to account for annual inflation increases.)

**Please note:**

1. Applicants should have been active in research since obtaining their Doctoral degree. In the case of a break in research, an applicant must have obtained their Doctoral degree on, or after, 28 February 2013.
2. The fellowships are only tenable at South African universities.
3. Successful applicants must be able to commence with their postdoctoral fellowship in South Africa on, or before, 31 March 2018.
4. There is no relocation grant for postdoctoral fellows.
5. All applications must be endorsed by the host / supervisor at the university where the fellowship will be undertaken. A list of supervisors who have indicated that they are willing to host SKA SA postdoctoral fellows is provided in the table below. Applicants are encouraged to investigate the research specializations of the individual hosts and institutions to inform their choices, and match their own strengths and interests.

**Application forms are available at: <https://skagrants.nrf.ac.za/FPF/>**

**Queries may be directed to [lgura@ska.ac.za](mailto:lgura@ska.ac.za)**

### SKA SA Postdoctoral Fellowship Hosts for 2017

Host	University	Email address	Telephone number	Research areas
Prof. David Davidson	Stellenbosch University	davidson@sun.ac.za	(+27) 21 808 4458	<ul style="list-style-type: none"> <li>- Mid-frequency Aperture Array technologies.</li> <li>- Instrumentation and data analysis for Radio Frequency Interference (RFI) detection, analysis and archival.</li> <li>- Interferometric Data Processing and Analysis, including calibration and imaging.</li> </ul>
Professor Dirk IL de Villiers	Stellenbosch University	ddv@sun.ac.za	(+27) 21 808 4011	<ul style="list-style-type: none"> <li>- Wide-band single-pixel receivers.</li> <li>- Mid-frequency Aperture Array technologies.</li> </ul>
Dr. Pieter Gideon Wiid	Stellenbosch University	wiidge@sun.ac.za	(+27) 21 808 3748	<ul style="list-style-type: none"> <li>- Instrumentation and data analysis for Radio Frequency Interference (RFI) detection, analysis and archival.</li> </ul>
Prof. Bruce Bassett	AIMS/ Stellenbosch University	bruce.a.bassett@gmail.com	(+27) 84 901 1011	<ul style="list-style-type: none"> <li>- Big Data topics (Machine Learning).</li> <li>- Interferometric Data Processing and Analysis, including calibration and imaging.</li> <li>- Instrumentation and data analysis for Radio Frequency Interference (RFI) detection, analysis and archival.</li> </ul>
Prof. Daniel W. O'Hagan	University of Cape Town	daniel.ohagan@uct.ac.za	(+27) 21 650 2919	<ul style="list-style-type: none"> <li>- Radio Pulsar and Fast-Transient science, instrumentation and data analysis (including real-time RFI detection).</li> <li>- Instrumentation and data analysis for Radio Frequency Interference (RFI) detection, analysis and archival.</li> </ul>
Prof. Patrick Woudt	University of Cape Town	pwoudt@ast.uct.ac.za	(+27) 21 650 2392	<ul style="list-style-type: none"> <li>- Radio Pulsars and Fast-Transient science, instrumentation and data analysis.</li> <li>- Science topics that involve the exploitation of MeerKAT capabilities as of late 2017 (AR3), including those linked to MeerKAT Large Survey Projects.</li> </ul>
Dr. H. Cynthia Chiang	University of Kwazulu-Natal	chiang@ukzn.ac.za	(+27) 31 260 1006	<ul style="list-style-type: none"> <li>- Radio Pulsar and Fast-Transient science, instrumentation and data analysis (including real-time RFI detection).</li> <li>- Instrumentation and data analysis for Radio Frequency Interference (RFI) detection, analysis and archival.</li> <li>- Epoch of Reionization and Intensity Mapping data reduction and analysis.</li> <li>- Interferometric Data Processing and Analysis, including calibration and imaging.</li> <li>- C-BASS data processing and analysis.</li> <li>- Wide-band single-pixel receivers.</li> </ul>
Prof. Oleg Smirnov	Rhodes University	o.smirnov@ru.ac.za	(+27) 78 216 7951	<ul style="list-style-type: none"> <li>- Epoch of Reionization and Intensity Mapping data reduction and analysis.</li> <li>- Interferometric Data Processing and Analysis, including calibration and imaging.</li> </ul>

				<ul style="list-style-type: none"> <li>- Big Data topics, including the development of hardware (e.g. Micro-servers and data storage solutions).</li> <li>- Real-time Signal Processing instrumentation for Radio Astronomy, specifically using FPGA and GPU platforms.</li> </ul>
Prof. Kavilan Moodley	University of KwaZulu-Natal	kavilan.moodley@gmail.com	(+27) 31 260 2543	<ul style="list-style-type: none"> <li>- Epoch of Reionization and Intensity Mapping Data reduction and analysis.</li> <li>- Interferometric Data Processing and Analysis, Including calibration and imaging.</li> </ul>
Dr. Petrus Paulus Kruger	North-West University	Paulus.Kruger@nwu.ac.za	(+27) 18 299 2506	<ul style="list-style-type: none"> <li>- Real-time signal processing instrumentation form Mid-frequency Aperture Array technology.</li> </ul>
Dr. Gianni Bernardi	Rhodes University	g.bernardi@ru.ac.za	(+27) 46 603 7487	<ul style="list-style-type: none"> <li>- Epoch of Reionization and Intensity Mapping data reduction and analysis, Interferometric Data Processing and Analysis, including calibration and imaging.</li> </ul>
Dr. Reza Malekian	University of Pretoria	Reza.malekian@up.ac.za	(+27) 12 420 4305	<ul style="list-style-type: none"> <li>- Big Data topics, including the development of hardware (e.g. Micro-servers and data storage solutions).</li> </ul>
Dr Sarah Blyth	University of Cape Town	sarblyth@ast.uct.ac.za	(+27) 21 650 5372	<ul style="list-style-type: none"> <li>- Interferometric Data Processing and Analysis, including calibration and imaging.</li> <li>- Big Data topics, including the development of hardware (e.g. Micro-servers and data storage solutions).</li> </ul>
Dr. Gordon MacLeod	Hartebeesthoek Radio Astronomy Observatory	gord@hartrao.ac.za	(+27) 12 301 3202	<ul style="list-style-type: none"> <li>- Real-time signal processing instrumentation for radio astronomy, specifically using FPGA and GPU platforms.</li> </ul>
Dr. Tinus Stander	University of Pretoria	tinus.stander@up.ac.za	(+27) 12 420 6704	<ul style="list-style-type: none"> <li>- Mid-frequency Aperture Array technologies, Wide-band single-pixel receivers.</li> </ul>
Prof. Claude Carignan	University of Cape Town	ccarignan@ast.uct.ac.za	(+27) 21 650 2395	<ul style="list-style-type: none"> <li>- Interferometric Data Processing and Analysis, including calibration and imaging.</li> </ul>
Prof. Jonathan Sievers	University of KwaZulu-Natal	sieversj@ukzn.ac.za	(+27) 31 260 1317	<ul style="list-style-type: none"> <li>- Radio pulsar &amp; fast transient science.</li> <li>- Real-time signal processing.</li> <li>- Big Data topics, including the development of hardware (e.g. Micro-servers and data storage solutions).</li> <li>- Instrumentation and analysis for real-time RFI detection</li> <li>- Epoch of Reionization and Intensity Mapping data reduction and analysis.</li> <li>- Interferometric Data Processing and Analysis, including calibration and imaging.</li> <li>- C-BASS data processing and analysis.</li> <li>- Mid-frequency Aperture Array technologies.</li> </ul>
Prof. Ekow J. Otoo	University of the Witwatersrand	etutu.otoo@wits.ac.za	(+27) 11 717 7192	<ul style="list-style-type: none"> <li>- Big Data topics, including the development of hardware (e.g. Micro-servers and data storage solutions)</li> </ul>
Prof. Aris Karastergiou	Rhodes University/UWC	aris@astro.ox.ac.uk	(+27) 46 603 7535	<ul style="list-style-type: none"> <li>- Pulsars and transients, real time signal processing.</li> </ul>

Prof. Russ Taylor	University of Cape Town AND University of the Western Cape	russ@ast.uct.ac.za	(+27) 21 650 1840	- Big Data Topics - Interferometric Data Analysis
Prof. Mario G. Santos	University of the Western Cape	mariogrs@gmail.com	(+27) 21 9593461	- Epoch of Reionization and Intensity Mapping data reduction and analysis. - Interferometric Data Processing and Analysis, including calibration and imaging. - Big Data topics, including the development of hardware (e.g. Micro-servers and data storage solutions).
Dr. Ian Heywood	Rhodes University	ian.heywood@csiro.au	(+27) 46 603 7487	- Interferometric Data Processing and Analysis, including calibration and imaging.
Dr. Matt Hilton	University of KwaZulu-Natal	hiltonm@ukzn.ac.za	(+27) 31 260 2233	- Science topics that involve the exploitation of MeerKAT capabilities projected as of late 2017 ("Array Release 3"), including those linked to MeerKAT Large Survey Projects.
Prof. Amit Kumar Mishra	University of Cape Town	amit.mishra@uct.ac.za	(+27) 21 650 2799	- Big Data topics, including the development of hardware (e.g. Micro-servers and data storage solutions). - Instrumentation and data analysis for Radio Frequency Interference (RFI) detection, analysis and archival.
Prof. Matt Jarvis	University of the Western Cape	<a href="mailto:matt.jarvis@physics.ox.ac.uk">matt.jarvis@physics.ox.ac.uk</a>		- Science topics that involve the exploitation of MeerKAT capabilities projected as of late 2017 ("Array Release 3"), including those linked to MeerKAT Large Survey Projects.
Prof. Sergio Colafrancesco	University of the Witwatersrand	sergio.colafrancesco@wits.ac.za	(+27) 11 7176829	- Science topics that involve the exploitation of MeerKAT capabilities projected as of late 2017 ("Array Release 3"), including those linked to MeerKAT Large Survey Projects. - Epoch of Reionization and Intensity Mapping data reduction and analysis. - C-BASS data processing and analysis.
Prof. Romeel Dave	University of the Western Cape	romeeld@gmail.com	(+27) 79 628 1440	- Science topics that involve the exploitation of MeerKAT capabilities projected as of late 2017 ("Array Release 3"), including those linked to MeerKAT Large Survey Projects.

				- Epoch of Reionization and Intensity Mapping data reduction and analysis.
Dr. Yin-Zhe Ma	University of KwaZulu-Natal	ma@ukzn.ac.za	(+27) 31 260 2777	- Epoch of Reionization and Intensity Mapping data reduction and analysis.
Prof. Roy Maartens	University of the Western Cape	roy.maartens@gmail.com	(+27) 82 680 0294	- Science topics that involve the exploitation of MeerKAT capabilities projected as of late 2017 ("Array Release 3"), including those linked to MeerKAT Large Survey Projects.