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Department:  
Science and Technology  
REPUBLIC OF SOUTH AFRICA



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## **SOUTH AFRICA/NAMIBIA JOINT RESEARCH CHAIR IN ASTRONOMY AND ASTROPHYSICS (EXTENDED CALL)**

### **CALL FOR PROPOSALS**

The Department of Science and Technology (DST)/ the National Research Foundation (NRF) of South Africa and the National Commission on Research, Science and Technology of Namibia have approved funding for the awarding of a joint Research Chair in Astronomy and Astrophysics. (SA-Nam Research Chair)

South Africa and Namibia have a long history of strong relations in many fields of scientific cooperation since Namibia's independence in 1990. Particularly exciting opportunities for world-leading scientific activities in South Africa and Namibia have emerged over the past 20 years. In 2002, the High Energy Stereoscopic System (H.E.S.S.) started operations in Namibia. It is the world's largest ground-based gamma-ray astronomy facility, located south-west of Windhoek, and operated by an international collaboration of about 260 scientists from 12 countries in Europe and Southern Africa. Since 2005, South Africa hosts the largest optical telescope in the southern hemisphere, namely the Southern African Large Telescope (SALT) in Sutherland, in addition to a number of smaller, world-class research telescopes. In 2012, South Africa was chosen as the one of two core sites (the other being Australia) for the construction of the Square Kilometre Array (SKA), the largest radio telescope project to be built by mankind, which will consist of hundreds of radio dishes spread over the entire continent, including sites in Namibia.

As a precursor to demonstrate the capabilities for the development of the SKA, South Africa built the 7-dish Karoo Array Telescope (KAT-7), and is now building the MeerKAT array, which will consist of 64 radio dishes near the core site of the future

SKA, and which will be in operation in 2017. In tandem, an African Very Long Baseline Interferometry (VLBI) Network (AVN) is currently being established (since 2009) in 9 SKA partner countries throughout Africa, namely Botswana, Ghana, Kenya, Madagascar, Mauritius, Mozambique, Namibia, South Africa and Zambia. Both South Africa and Namibia are also among the 28 partner countries (representing about 1200 scientists on 6 continents) in the development of the next-generation ground-based gamma-ray astronomy facility, the Cherenkov Telescope Array (CTA), which will include an array of about 100 Cherenkov telescopes of three different sizes in Chile, for the southern hemisphere site.

In August 2014, Ministerial delegations of South Africa and Namibia met in Windhoek to discuss ways to strengthen collaborations between the two countries in the areas of Astronomy and Space Science. Specifically, as documented by the joint Ministerial Statement of August 12, 2014, the two Ministers re-affirmed their mutual support for cooperation in Astronomy, for the continued, successful science operations of H.E.S.S., and their commitment to the establishment of the SKA and the AVN. At that meeting, the establishment of a joint South African-Namibian Research Chair was discussed as a means to capitalise on Southern Africa's geographic advantage for multi-wavelength astronomy.

The SA-Nam Research Chair will be co-funded by the NRF/DST and the NCRST. Joint funding for this chair is initially limited to five years, and extension is possible and desirable upon positive evaluation for up to two additional five-year periods. The SA-Nam Research Chair will be co-managed by the NRF under the South African Research Chairs Initiative (SARChI), and the NCRST.

### **The South African – Namibian Joint Research Chair**

The focus of the SA-Nam Research Chair will be on multi-wavelength astronomy and astrophysics. The successful candidate is expected to have a strong track record and promise for future significant contributions in a research field that capitalises on southern Africa's geographic advantage and existing research strengths. In particular, he/she should bridge the gap between the radio and gamma-ray astronomy

communities in South Africa and Namibia by emphasizing research areas of common interest. These include, but are not limited to, extragalactic high-energy astrophysics and astrophysical transients (including gamma-ray bursts and tidal disruption events).

In achieving these goals, the SA-Nam Research Chair will:

- Help to strengthen research and innovation capacities in South Africa and Namibia at the highest scientific level in a selected research domain in which Southern Africa has a distinctive geographic advantage;
- Promote international exchange and cooperation of South African and Namibian scientists with each other and with the international partners in other H.E.S.S., CTA, SKA, and AVN, partner countries;
- Attract and retain excellent researchers and scientists;
- Foster excellence in education and research, with specific focus on emerging researchers and scientists;
- Increase the production of master's and doctoral graduates in a selected research area; and
- Create research career pathways for young and mid-career researchers, with a strong research, innovation and human capital development output trajectory.

With 80 per cent of the individual's time devoted to research, support for post-doctoral fellows and students, and the requirement to supervise an average of 10 post-graduate students each year, the Sa-Nam Research Chair can be expected to form the core of a scientific team to exploit astronomy and astrophysics in both countries within a multi-wavelength approach.

A further attribute required of the Sa-Nam Research Chair is the meshing of the research proposal with the interests of one of the already established research groups within both countries, especially at the hosting institutions. This will greatly enhance the impact of this intervention.

The SA-Nam Research Chair will be occupied on a 50-50 share basis at two host institutions, one in South Africa and the other in Namibia. Universities must bid for the chair in an open and competitive process as the SA-Nam Research Chair will not be

pre-allocated to any institution. The South African segment of the Sa-Nam Research Chair will be awarded to a public university in South Africa that can host such a chair in its own right, or in partnership with another public research institution in South Africa; such as another university, a science council or a National Research facility. The Namibian segment of the award will be awarded to a public university in Namibia who can host the chair in its own right; or in partnership with another university.

The application must include, (i) *the motivation by both South African and Namibian universities to co-host the chair*; (ii) *the extensive CV of an approved candidate by a university in South Africa and Namibia for appointment to the position*; and (iii) *a research and activity plan drafted by the nominated candidate*.

Each university will be permitted to approve up to a maximum of two candidates, a separate full proposal must be submitted for each candidate. The application must be authored by the nominated candidate in consultation with the university's Deputy Vice Chancellor responsible for research. Both South Africa and Namibia will nominate 3 members to the **selection committee**; such members will be independent, subject experts from both countries or from countries abroad but there must be at least one (1) South African and one (1) Namibian nominee respectively. The selection committee will be co-chaired by a South African and Namibian member. The selection will focus on the motivation by the university to host the Sa-Nam Research Chair, the nomination of a candidate for appointment to the position, and a research and activity plan. The application should thus give details on:

- (i) The readiness and commitment of the institution to provide an enabling environment to ensure the success of the chair;
- (ii) Strengths, capabilities, strategic environment and competencies of the hosting university;
- (iii) The alignment of the proposed SA-Nam Research Chair with the proposed thematic areas and the university research strategy;
- (iv) The potential to enhance the international research and/or innovation competitiveness within the discipline;
- (v) The potential to impact on social and/or economic development of the country;
- (vi) The research focus;

- (vii) A proposed plan on how it will fulfill SARChI objectives, including the strategic considerations mentioned in the university proposal and how it will deliver on the university research strategy;
- (viii) Specific objectives, outputs and outcomes for the five-year period; and
- (ix) How the university will collaborate with its counterpart in the other country.

More information on selection criteria in South Africa is given in the enclosed SARChI Framework and Guide for Applications, dated February 2016. The South African applicants must register and complete their full updated *curriculum Vitae* (CV) on the NRF Online Submission System (<https://nrfs submission.nrf.ac.za/nrfmkii/>) as it constitutes part of the application. In principle<sup>1</sup> the applicant must have been approved to apply for the SA-Nam Research Chair, by the university.

The Namibian applicant must submit his/her application on the NCRST website ([www.ncrst.na](http://www.ncrst.na))

As the award of the SA-Nam Research Chair will be made to the host university, the application must be submitted by the applicant to the university's Designated Authority (DA) for endorsement. The submission must be made by the Deputy Vice-Chancellor responsible for research at the university and supported by the Designated Authority of the partner University in the other country. Each university must submit the following documentation:

- University Research Strategy;
- Programme and Qualification Mix approved by the Department of Higher Education and Training;
- Letter of support from the partner University in the other country;
- Details of current academic and research staff, in the specific discipline; and
- Statistics on research outputs and postgraduate students trained and graduated for the period 2011 to 2015, in the specific discipline.

**Each university may submit a maximum of two applications for this Research Chair.** Applications should be submitted not later than **31 August 2016**, on the NRF

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<sup>1</sup> No commitment should be given to the candidate(s) before the NRF has officially informed the University of the Award by means of an award letter.

Online Submission System (<https://nrfs submission.nrf.ac.za/nrfmkii/>) for South African applications and on the NCRST website as given above by the Pro-Vice Chancellor responsible for Research at the Namibian University. Only submissions that provide all the requested information will be eligible and considered for review.

### Call Timelines

The key activities and timelines, to ensure effective implementation by the NRF/NCRST and the universities, are outlined below.

Activities	Timelines
<b>Application to host the SA-Nam Research Chair by the university, awarding of the chair and approval of the nominated candidate.</b>	
1. Communication to the University Deputy Vice-Chancellor/Director of Research (South Africa) 2. Placement of call in local newspaper (Namibia)	1 <sup>st</sup> July 2016
3. Call opens for applications	1 <sup>st</sup> July 2016
4. Call closes for applications	31 <sup>st</sup> August 2016
5. Selection Committee Decision	15 <sup>th</sup> October 2016
6. Review outcome letter sent to Deputy/Pro Vice-Chancellors	22 <sup>nd</sup> October 2016

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