South African Research Chairs Initiative

Call for proposals

to host a SARChI Chair in Science Communication
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Section 1. Strategic background

1.1 Context

The White Paper on Science and Technology (1996) and the National Research and Development Strategy (2002) put emphasis on the need for South Africa to transform its Science, Engineering and Technology (SET) workforce. Other policies and strategies of government, including the Human Resource Development Strategy (2009) and the Medium Term Strategic Framework (2009) note the shortage of high-level skills as a significant constraint in the development of the economy and society. In this regard, South Africa must produce a greater number of highly skilled individuals; particularly in SET, to achieve the goal of “an equitable, sustainable, and inclusive growth path that brings decent work and sustainable livelihoods, education, health, safe and secure communities, and rural development”.

The South African Research Chairs Initiative (SARChI) was established in 2006 by the Department of Science and Technology (DST) and is managed by the National Research Foundation (NRF) of South Africa. It is a strategic intervention of the South African government designed to attract and retain excellence in research and innovation at South African universities. In particular, the programme is aimed at increasing scientific research capacity through the development of human capacity and stimulating the generation of new knowledge. It is also intended to support the realisation of South Africa’s transformation into a knowledge economy in which the generation of knowledge translates into socio-economic benefits.

SARChI is designed to significantly expand the scientific research base of South Africa in a way that supports implementation of the national Research and Development policies. Since inception, 157 Research Chairs have been awarded in various disciplines and research fields and the programme has been successful in retaining leading South African scientists in the university system and attracting leading foreign researchers and expatriate researchers to South Africa.
1.2 SARChI objectives

The main goal of the initiative is to strengthen and improve research and innovation capacity of public universities for producing high quality postgraduate students, research, and innovation outputs. The objectives of SARChI are to:

- Expand the scientific research and innovation capacity of South Africa;
- Improve South Africa's international research and innovation competitiveness while responding to social and economic challenges of the country;
- Attract and retain excellent researchers and scientists;
- Increase the production of Masters and Doctoral graduates; and
- Create research career pathways for young and mid-career researchers, with a strong research, innovation and human capital development output trajectory.

1.3 Guiding principles for SARChI

The following principles will inform the awarding of the Chair in Science Communication to the successful university:

- SARChI is a strategic instrument aimed at strengthening research and innovation capacity in public universities in South Africa, enhancing the training of a new generation of researchers and the further development of established researchers in all knowledge areas while responding to national priorities and strategies;
- SARChI is a funding instrument for universities, and Research Chairs may be held by a university in partnership with a public research institution such as: another university, a science council, a national research facility or an academic health complex;
- Public universities in South Africa will bid for the Research Chair in an open and competitive process, hence the Chair will not pre-allocated to an institution;
- Each university may submit only ONE application for the Research Chair;
• The Research Chair must be in alignment with the university Programme and Qualification Mix approved by the Department of Higher Education and Training;
• The Research Chair will be expected to dedicate at least 80% of his/her time conducting research, supervising an average of 10 Masters and Doctoral students per annum and mentoring emerging researchers. The remainder of the time may be dedicated to administration and/or undergraduate teaching;
• Research Chairs are tenable at two Tiers. Tier 1 is for established researchers that are recognised internationally as leaders in their field and/or have received substantial international recognition for their research contributions. Tier 2 is for established researchers, generally under the age of 40 (forty) years with a strong research, innovation and human capital development output trajectory, and the potential to achieve substantial international recognition for their research contributions in the next five to ten years.
• Candidates from abroad that are willing to spend at least 50% of their time within South Africa are eligible for consideration, at the Tier 1 level, with the intention of attracting candidates, including African scholars and South Africans in the diaspora, that have distinguished themselves in their research fields. However, international candidates at Tier 2 level are required to reside full-time in South Africa for the duration of the Research Chair award.

1.4 University accountability for SARChI Chairs
The Research Chair in Science Communication may be appointed by the university, at the level of an Associate Professor or full Professor, benchmarked nationally. The Chair will fit into the normal management structures of the host institution. However, accountability for the Chair will reside with the Deputy Vice-Chancellor responsible for research at the South African host university.

1.5 Profile of candidates
The intention of SARChI is to attract and retain established researchers of high caliber, within the universities, recruiting individuals from within South Africa and globally with
particular emphasis on the diaspora. The NRF will require the approved candidate for the SARChI Chair to enter into a five-year performance agreement in the form of a ‘Conditions of Grant’ and will evaluate the performance of the Chair against the research plan, stated objectives and targets. The track record of the nominated candidate is therefore very important to the selection process and success of the Research Chair.

The shortlisted universities, following the Phase 1 review process, will each be responsible for nominating a candidate for the Chair position. Nominated candidates may be existing staff members or new recruits to the universities. For a university, where a Chair is taken up by an existing academic staff member the university must immediately initiate a process to fill the vacated position with a suitably qualified candidate\(^1\). The replacement candidate must be employed on a full-time basis for the duration of the tenure of the Research Chair. Where such replacement candidates are not young, black or female, the university must develop a succession plan designed to develop a range of possible candidates with competitive capacity within two cycles of a Research Chair award.

All candidates nominated for a Research Chair must be established researchers that hold a doctoral degree or an equivalent research qualification and must submit a proposed research programme that is innovative, original and of high quality. Following the peer review of the full proposal and the curriculum vitae of the nominated candidate, Research Chairs may be approved at the Tier 1 or Tier 2 level based on their past research and innovation outputs, track record in supervising and mentoring postgraduate students and postdoctoral fellows and national and international recognition for their research contributions. The criteria that must be met by nominated candidates for approval at the Tier 1 or Tier 2 level are detailed in Table 1.

\(^1\) In short this Initiative must add to the number of university research and academic staff.
### Table 1. Criteria for SARChI Tier 1 and Tier 2 Chairs

<table>
<thead>
<tr>
<th>Tier 1 Research Chairs</th>
<th>Tier 2 Research Chairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Should be appointed at the level of a full Professor benchmarked nationally;</td>
<td>• Should be appointed at the level of an Associate Professor or full Professor</td>
</tr>
<tr>
<td>• Should be an outstanding and innovative researcher whose accomplishments have made</td>
<td>benchmarked nationally;</td>
</tr>
<tr>
<td>a major impact in their field;</td>
<td>• Should be an established researcher, generally under the age of 40 (forty) years,</td>
</tr>
<tr>
<td>• Should be recognised internationally as an undisputed leader in their field and/or</td>
<td>generally under the age of 40 (forty) years, with a strong research, innovation and</td>
</tr>
<tr>
<td>have received substantial international recognition for their research contributions;</td>
<td>human capital development output trajectory;</td>
</tr>
<tr>
<td>• Should have a superior record in attracting and supervising postgraduate students</td>
<td>• Should have the potential to achieve substantial international recognition for their</td>
</tr>
<tr>
<td>and postdoctoral fellows, taking into account the practices of the field; and</td>
<td>research contributions in the next five to ten years;</td>
</tr>
<tr>
<td>• Should reside full time in South Africa for the duration of the Research Chair award.</td>
<td>• Should have demonstrated the ability to attract and successfully supervise postgraduate students and postdoctoral fellows; and</td>
</tr>
<tr>
<td>Candidates from abroad, including African scholars and South Africans in the diaspora, that are willing to spend at least spend 50% of their time within South Africa are eligible for consideration.</td>
<td>• Should reside full-time in South Africa for the duration of the Research Chair award. Candidates from abroad, including African scholars and South Africans in the diaspora, who are generally under the age of 40 (forty) years, are eligible for consideration.</td>
</tr>
</tbody>
</table>
Section 2. Proposal submission and assessment process

This section of the Guide for proposal provides details of the research focus area of the proposed Research Chair. It also describes the process for proposal submission and assessment and provides details on the call timelines.

2.1 Research Focus for the Chair in Science Communication

In a democratic society where science should be answerable to the public – without being directed purely by public impulses - there is a need to find new and innovative ways of more effective public communication about the benefits and risks associated with science and technology; research on the teaching and practice of science communication hence becomes vital.

Through science communication, scientists, policymakers, and others can open up a productive conversation in the public sphere that can begin to improve citizens’ understanding and appreciation of the value of science, technology and innovation in daily life, as well as bridging the gap between science and society by empowering society’s engagement with science-based policy issues.

The primary focus of the Research Chair in Science Communication will therefore be on capacity building and research regarding:

(a) two-way engagements between the scientific and the non-scientific community in a manner that achieves the critical exchange of ideas between the two communities;
(b) driving research in the areas of science communication and public understanding of science to develop an understanding of the diverse multilingual and multicultural complexity of the South African society in its relationship with science; and
(c) developing capacity for investigating both the intended and unintended impacts of intensified science communication.
2.2 Proposal submission and assessment

The proposal submission and assessment process consists of two phases namely, Phase 1 and Phase 2.

Phase 1: Application by university

The objective of Phase 1 is to establish (i) the readiness and commitment of the university to host the proposed Research Chair; (ii) the alignment of the proposed research with the university research strategy; (iii) the potential of the proposed Research Chair to enhance the international research and/or innovation competitiveness within the discipline of Science Communication; and (iv) the potential of the research to impact on social and/or economic development of the country. Following the Phase 1 evaluation process universities that meet these requirements will be shortlisted for a closed call to submit a Phase 2 proposal.

This Phase begins with the submission of proposals by universities during the Call for proposals period. As awards of SARChI Research Chairs are to be made to the host university the Research Chairs must thus be applied for by the university and not the nominated candidate for the Chair. The submission must be made by the Deputy Vice-Chancellor responsible for research at the university. Each university must submit the following documentation to be considered as a host university for Research Chairs:

- University Research Strategy;
- Relevant section of the Programme and Qualification Mix (PQM) approved by the Department of Higher Education and Training showing the relevant approval section and evidence of relevant qualification/programme to the Chair;
- Details of current academic and research staff, in the Science Communication discipline; and
- Statistics on research outputs and postgraduate students trained and graduated for the period 2008 to 2012, in disciplines that can be associated with science communication.
Each university may submit only one application for this Research Chair. Applications should be submitted not later than 31 October 2013, on the NRF Online Submission System (https://nrfsubmission.nrf.ac.za/nrfmkii/), by the DVC responsible for Research and validated by the relevant Designated Authority (DA).

Applications must address the selection criteria listed in Section 2.3. While it is preferable for the university to have an identified candidate for the Research Chair at this stage, it is however, not a requirement to provide details of the potential nominee in the Phase 1 proposal.

Assessment of the Phase 1 proposal will be undertaken by a panel that will make recommendations for approval of shortlisted universities by the NRF. This assessment will not focus on the detailed scientific programme, but rather on the:

- alignment of the proposed Chair with the proposed thematic areas and university research strategy;
- strengths, capabilities, strategic environment and competencies of the university; and
- commitment of the institution to provide an enabling environment to ensure the success of the Research Chair.

Phase 2: Selection and nomination of candidates

Following a competitive review process, only shortlisted Phase 1 proposals will proceed to the Phase 2 application phase, which is for the awarding of the Research Chair. Phase 2 requires the submission of a full proposal that includes (i) the nomination of a candidate for appointment to the Chair position; and (ii) a research and activity plan drafted by the nominated candidate. Applications should be submitted, no later than 28 February 2014, on the NRF Online Submission System (https://nrfsubmission.nrf.ac.za/nrfmkii/).

Only submissions that provide all the requested information will be eligible and considered for Phase 2 review. Following a competitive Phase 2 review process, led by experts in Science Communication, the Research Chair will be awarded to the successful university for appointment of the nominated candidate.
The full proposal must be authored by the nominated candidate in consultation with the university Deputy Vice-Chancellor responsible for research. It should give details on (i) the research focus of the Research Chair; (ii) a proposed plan on how the Research Chair will fulfill SARChI objectives, including the strategic considerations mentioned in the university proposal; (iii) how it will deliver on the university research strategy; and (iv) specific objectives, outputs and outcomes for the five-year period. More information on selection criteria is given in Section 2.3. The full application must also include the biography of the candidate, who will have, in principle\(^2\) accepted the nomination for the Research Chair by the university. The approved candidate must use the NRF Online Submission System (https://nrfsubmission.nrf.ac.za/nrfmkii/) to register and/or update her/his curriculum vitae.

Assessment of proposals will be undertaken by experts in Science Communication, who will make recommendations to be considered by a panel that will then make funding recommendations for approval by the NRF.

### 2.3 Selection Criteria

#### Phase 1: Application by university

The selection of shortlisted university proposals during Phase 1 will be based on the readiness and suitability of the university to host the proposed Research Chair and the strategic alignment of the proposed Chair. The proposal must therefore address the following:

- The alignment of the proposed Research Chair with the university’s research strategy and PQM;
- The alignment of the proposed research with the research focus of the Chair;
- The university’s research strength and competencies in global environmental health;
- Alignment of the proposed Research Chair’s focus with that of existing research activities or capacity;
- University commitment for creating an enabling environment with regard to:

\(^2\) No commitment should be given before the NRF has officially informed the university of the award by means of an award letter.
Office and/or laboratory space.
- Infrastructure (equipment, IT facilities, etc.);
- Academic support (information, resource facilities and related research groups);
- Management and leadership; and
- Financial support (direct and indirect);

- The reporting lines and location of the Research Chair within the university structure.

**Phase 2: Selection and nomination of candidates**

The selection of candidates will be based on the merits of each candidate’s full proposal. This will include the strength of the candidate’s profile, including her/his qualifications and experience, publishing (in Science Communication) and postgraduate student training track records. Phase 2 will also include an assessment of the candidate’s research and activity plan in respect of its ability to deliver on SARChI objectives, as well as a proposed budget (see Section 3.3. Funding Levels).

The full proposal must also give specific details on:

- The proposed teaching\(^3\) to research time ratio;
- Research objectives for the five year period;
- Expected knowledge\(^4\) outputs in the first five year period;
- Expected human capital\(^5\) outputs in the first five year period;
- The proposed budget;
- Existing and planned collaborations in the first five year period; and
- Expected development trajectory of the incumbent

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3 Teaching of postgraduate students only. Note: Chair holders may not spend more than 20% of their time on undergraduate teaching and/or management responsibilities not related to activities of the Chair.

4 Peer reviewed journal articles, peer-reviewed conference proceedings, scholarly books and book chapters, patents, invited keynote presentations, conference presentations etc.

5 Numbers of Masters and Doctoral graduates and completed postdoctoral fellowships.
2.4 Call timelines

The key activities and timelines, to ensure effective implementation by the NRF and the universities, are outlined in Table 2 below.

Table 2. Research Chair Call activities and timelines

<table>
<thead>
<tr>
<th>Activities</th>
<th>Timelines</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase 1: Shortlisting of universities</strong></td>
<td></td>
</tr>
<tr>
<td>1. NRF Briefing Meeting for University Deputy</td>
<td>16 September 2013</td>
</tr>
<tr>
<td>Vice-Chancellors</td>
<td></td>
</tr>
<tr>
<td>2. Call opens for Phase 1 applications</td>
<td>12 September 2013</td>
</tr>
<tr>
<td>3. Call closes for Phase 1 applications</td>
<td>31 October 2013</td>
</tr>
<tr>
<td>4. Review outcome letter sent to Deputy Vice-</td>
<td>11 December 2013</td>
</tr>
<tr>
<td>Chancellors</td>
<td></td>
</tr>
<tr>
<td>4. Feedback letter sent to Deputy Vice-Chancellors</td>
<td>18 December 2013</td>
</tr>
<tr>
<td><strong>Phase 2: Awarding of the Research Chair and approval of nominated candidate and full proposal</strong></td>
<td></td>
</tr>
<tr>
<td>5. Call opens for Phase 2 applications by shortlisted universities</td>
<td>11 December 2013</td>
</tr>
<tr>
<td>6. Call closes for Phase 2 applications</td>
<td>28 February 2014</td>
</tr>
<tr>
<td>7. Review outcome letter sent to Deputy Vice-Chancellors</td>
<td>28 April 2014</td>
</tr>
<tr>
<td>8. Feedback letter sent to Deputy Vice-Chancellors</td>
<td>05 May 2014</td>
</tr>
</tbody>
</table>

Section 3. Management of the Research Chairs

This section of the Guide for Applications describes what follows after the Research Chair has been awarded to the university.

3.1 Duration of the Research Chair

Tier 1 Research Chairs will be tenable for five years, renewable for two further five-year periods giving a total life lifespan of 15 years. Tier 2 Research Chairs will be tenable for five years, renewable for a further five-year period giving a total life span of 10 years. Eligibility for renewal will be entirely performance-linked and Tier 2 Chairs may be upgraded to a Tier 1 Chair after the first or second five-year funding period based on the
recommendations of the five-year term review. Successful upgrading to a Tier 1 level will result in an additional five years to a 10 year tenure of Tier 2 Chairs.

### 3.2 Management of Research Chairs

The management of SARChI grants is illustrated in **Figure 1** and described below.

On accepting the award and signing the *Conditions of Grant*, the newly appointed incumbent of the Research Chair will be required to deliver on the research activity plan that formed part of the accepted full proposal. At the end of each financial year the incumbent will be required to submit to the NRF an annual progress report addressing milestones and expected outcomes presented in the research activity plan.

During year five of the five-year funding cycle, the Research Chair will be subjected to an in depth evaluation undertaken by peers following the framework set out in the SARChI Monitoring and Evaluation Framework.

![Figure 1. Management of Research Chairs over the tenure of the Research Chair](image)

**Figure 1.** Management of Research Chairs over the tenure of the Research Chair
3.3 Funding Levels

SARChI proposes to make an award of up to R2,5 million and R1,5 million per annum per Tier 1 and Tier 2 Research Chairs, respectively. This award will cover salaries, postdoctoral fellowships and postgraduate student bursaries, research operating costs and research equipment and infrastructure. The guidelines for apportioning of the grant across these categories and the values of fellowships and scholarships are shown in Table 3.

Table 3: Guidelines for SARChI grant annual budget breakdown for Tier 1 and Tier 2 Research Chairs

<table>
<thead>
<tr>
<th>Budget category</th>
<th>Sub-item</th>
<th>Cost pa</th>
<th>Minimum number of people</th>
<th>Maximum number of people</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries</td>
<td>Chair</td>
<td>550 000 to 700 000</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Admin support</td>
<td>30 000</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Research assistants</td>
<td>30 000</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Fellowships</td>
<td>Postdoctoral fellows</td>
<td>140 000</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Bursaries</td>
<td>Doctoral (full time)</td>
<td>80 000</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Masters (full time)</td>
<td>50 000</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Honours</td>
<td>25 000</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Research equipment or infrastructure</td>
<td>Up to R400 000</td>
<td>400 000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Running</td>
<td>Up to 30% of budget</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University Overhead</td>
<td>Up to 10% of budget</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is important to note that this budget template provides a guide that stipulates the minimum and maximum amounts per budget category and has the flexibility for the Chair to allocate the SARChI grant based on the research activity plan. The proposed budget will be approved at the commencement of each five-year funding cycle. The incumbent

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6 Salaries of the incumbent and limited administrative support
will be given an opportunity, at the end of each calendar year, to make budget adjustments for the subsequent year, in consultation with the Directors of SARChI and Grants Management and Systems Administration (GMSA).

A Research Chair will not be eligible for additional NRF parliamentary core grant funding, except in respect of large equipment grants and Rated Researchers Incentive Funding. Incumbents must apply for grants for large equipment through the NRF Infrastructure Funding Instrument.

Research Chairs are expected to dedicate at least 80% of their time conducting research and supervising an average of 10 Masters and Doctoral students per annum. The Chairs are therefore strongly encouraged to attract additional funding for research and human capital development from other national and international funders and donors to supplement the SARChI grant.

3.4 Payment of Grants

The grant for year 1 of 5 for the awarded Research Chair will be fully disbursed to the university upon receiving the signed copy of the NRF ‘Conditions of Grant’ by the incumbent. Grants will thereafter be disbursed to the universities on an annual basis, for the approved funding period, subject to the appointed Chair meeting the ‘Conditions of Grant’.

3.5 Evaluation and Impact of Research Chairs

A baseline study of Research Chairs and their institutional and intellectual environments will be conducted by the NRF with each round of new awards. These studies, together with the universities’ Strategic Research Plans and the Research Chair’s Research and Activity Plan, will serve as the baseline to evaluate impact on the discipline and at the institutional level.
Section 4. References


Section 5. NRF contact persons

Dr Romilla Maharaj, Acting Executive Director: Research Chairs and Centres of Excellence (phone: 012-481 4019; e-mail: Romilla@nrf.ac.za)

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