The questionnaire

This survey is part of a study which main purpose is to contribute to a better-informed discussion of how to improve current institutional policies in African countries to support research-career development of their researchers. It will investigate the factors influencing research performance and career development.

The study is led by Prof. Johann Mouton (Centre for Research on Evaluation, Science and Technology, Stellenbosch University, South Africa) and Prof. Catherine Beaudry (École Polytechnique de Montréal, Canada). The full list of contributing scientists can be found in the information letter provided with the invitation to this survey. If you have any questions or concerns about the research, please feel free to contact the project manager, Dr Charl Swart (charlswart@sun.ac.za).

You were selected for the study because you presently have (or have had in the past) an academic- or research-oriented career.

Participation to this study is voluntary and there are no known or anticipated risks. The research involves an online survey, which will take approximately 30 minutes to complete. The questions deal with your work environment and career prospects as well as other personal information (e.g. prior education, demographic information). You may decline to answer any question and you may withdraw from the study at any time without negative consequences. All data collected will be treated as confidential and your and your organisation's anonymity will be protected in any reports or publications produced from the survey. Only the participating researchers mentioned above will have access to the data.

This project has been reviewed by, and received ethics clearance through, the Research Ethics Committees of Stellenbosch University and Polytechnique Montreal.

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléné Fouché [mfouche@sun.ac.za; (+27) 0-21 808 4622] at the Division for Research Development.

By clicking to the next page, you agree to participate in this study in accordance with the conditions set out in this document.
**Educational background**

In this section, we would like to obtain information about your highest qualification.

EDU.1 What is your highest qualification?
[ ] Three-year Bachelors
[ ] Honours or four-year Bachelors
[ ] Masters
[ ] Doctoral or equivalent
[ ] Other (Specify)

EDU.2 In which field did you obtain your highest qualification?
Field (multiple choice allowed): [ <check-list> ] list appears according to the discipline selected – Scopus categories

EDU.3 In what country(ies) did you obtain your doctoral degree (or equivalent)? (Only if EDU 1 = Cat 4)
Country: [ <dropdown list> ]

EDU.4 When was your doctoral degree (or equivalent) granted? (Only if EDU 1 = Cat 4)
Year [ ] (yyyy)

EDU.5 What year did you start working on your doctoral degree (or equivalent)? (Only if EDU 1 = Cat 4)
Year [ ] (yyyy)

**Employment**

This section seeks to gain insight into your employment status and how your employment relates to your highest qualification. General questions about whether you are holding down multiple jobs and if you are being sufficiently remunerated are also asked.

EMP.1 What is your current employment status? If you hold more than one job, please answer for your main job.
[ ] Full-time permanent /tenured (Explanation: A full-time employee has ongoing employment and works, on average, around 38 hours each week. Permanent employees are employed on an ongoing basis until the employer or employee ends the employment relationship)
[ ] Full-time contract (non-permanent) (Explanation: A full-time employee has ongoing employment and works, on average, around 38 hours each week. A contract appointment means that the employee is employed for a specific period of time or task, for example a 6 or 12 month period, and employment ends on the date specified in the contract)
[ ] Part-time permanent (Explanation: A part-time employee works, on average, less than 38 hours per week, usually works regular hours each week and is entitled to the
same benefits as a full-time employee, but on a pro rata basis. Permanent employees are employed on an ongoing basis until the employer or employee ends the employment relationship.

[ ] Part-time contract (non-permanent) [Explanation: A part-time employee works, on average, less than 38 hours per week, usually works regular hours each week and is entitled to the same benefits as a full-time employee, but on a pro rata basis. A contract appointment means that the employee is employed for a specific period of time or task, for example a 6 or 12 month period, and employment ends on the date specified in the contract]

[... ] Casual [Explanation: A casual employee has no guaranteed hours of work, usually works irregular hours, doesn’t get paid sick or annual leave and can end employment without notice]

[ ] Self-employed
[ ] Unemployed or inactive

EMP.2 Is your current, main job a post-doctoral appointment? (Only if EDU 1 = Cat 4)
[ ] Yes
[ ] No

EMP.3 Please specify the sector of employment of your main job:
[ ] Higher / tertiary education [Explanation: university (public or private), college of technology and other institution providing tertiary education, or other institution directly under control of higher education institution]
[ ] Research institution (public / private)
[ ] Business enterprise
[ ] Private non-governmental / non-profit organisation
[ ] Other Please specify: [...]

EMP.4 To what extent is your main job related to your PhD or doctoral degree? (Only if EDU 1 = Cat 4)
[ ] It is not at all related
[ ] It is only slightly related
[ ] It is fairly related
[ ] It is highly related

EMP.5 Is the annual gross income from your main job sufficient to cover your living expenses?
[ ] No, it is not sufficient
[ ] Yes, but it is hardly sufficient
[ ] Yes, it is sufficient
[ ] Yes, it is more than sufficient

EMP.6 Do you have additional sources of income?
[ ] Yes \( \rightarrow \) 9
[ ] No \( \rightarrow \) PRO.1
EMP.7 Please specify your additional sources of income. (Please mark all that apply. We are aware that this is a personal matter, but it is very important for understanding the career choices of African scientists; be assured that your answer will be treated with utmost confidentiality)
[ ] Other teaching activity
[ ] Consultancy
[ ] Scholarship
[ ] Support from partner / spouse
[ ] Support from parents / family
[ ] Personal savings
[ ] Rental income from property
[ ] Other Please specify: [ < open form> ]

**Research Output**

In this section, we aim to establish what research output you have produced, as well as when you published your first paper.

RO.1 Please indicate how many of the following forms of research output you have produced over the last three years:
[ ] Articles (including co-authored) in international refereed or peer reviewed academic journals
[ ] Articles (including co-authored) in national or local (your own country) peer reviewed academic journals
[ ] Books (i.e. monographs and edited volumes)
[ ] Book chapters (including co-authored)
[ ] Conference papers published in proceedings
[ ] Written input to official policy documents
[ ] Technical manuals
[ ] Articles in popular journals/magazines, essays, newspaper articles or other public outreach media
[ ] Reports on contract/consultation research
[ ] Presentations at NATIONAL or local conferences to predominantly academic audiences
[ ] Presentations at INTERNATIONAL conferences to predominantly academic audiences
[ ] Patents (applied for and/or granted)
[ ] Computer programmes (including co-writing)
[ ] Creative / artistic works of art performed or exhibited (e.g. films)
[ ] Others Please specify: [ < open form> ]

RO.2 When did you publish your first research article in a national/ local refereed or peer-reviewed journal?
Year [ ] (yyyy)
RO.3 When did you publish your first research article in an international refereed or peer-reviewed journal?
Year [ ] (yyyy)

**Funding**

We would to establish the sources, of any, of your research funding over the past three years with the following questions below.

FUN.1 Have you received any research funding over the past three years?
[ ] Yes
[ ] No

FUN.2 What proportion of this funding was from national and international sources? (Only if FUN 1 =Y)
[ ] % National
[ ] % International

FUN.3 Please specify which NATIONAL agencies have funded your research over the past three years: (Only if FUN 1 =Y AND FUN2=Cat1):
[Examples: government, national research foundations, science councils, research agencies or commissions; business firms or industry; private non-for-profit foundations/agencies/charities]

[ Specify ] [ ] < open form> ]
[ Specify ] [ ] < open form> ]
[ Specify ] [ ] < open form> ]
[ Specify ] [ ] < open form> ]

FUN.4 Please specify which INTERNATIONAL agencies have funded your research over the past three years: (Only if FUN 1 =Y AND FUN2=Cat2):
[Examples: European Union, USA National Institutes of Health, Germany’s DFG, European Commission, DAAD, Bosch Stiftung, World Health Organization; ministries, science academies other government agencies; business firms or industry; private non-for-profit foundations/agencies/charities]

[ Specify ] [ ] < open form> ]
[ Specify ] [ ] < open form> ]
[ Specify ] [ ] < open form> ]
[ Specify ] [ ] < open form> ]

**Working Conditions**

Working conditions play an important role in career motivation and development. In the following section, we would therefore like to find out more about how you feel about your workload.

WOR.1 How would you describe your current workload for each of the following tasks?

<table>
<thead>
<tr>
<th>Task</th>
<th>Very Light</th>
<th>Light</th>
<th>Average</th>
<th>Heavy</th>
<th>Very Heavy</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate teaching</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Research</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Training/supervising postgraduate students</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Administration</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Service (e.g. counselling of students or patients, voluntary services within organisation)</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Remunerated consultation and/or research</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Fundraising</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Other, please specify</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

**International Mobility**

In this section we are seeking greater clarity on the mobility and mobility prospects of African researchers, scientists and scholars.

MOB.1 Are you a citizen and/or resident of an African country?
[ ] Yes
[ ] No

MOB.2 In which country do you currently work / reside?
[ <dropdown list> ]

MOB.3 (Only if EDU 1 = Cat 4) Did you complete all aspects of your doctoral (or equivalent) education in what you would consider to be your home country?
[ ] Yes
[ ] No

MOB.4 (Only if EDU 1 = Cat 4) From which of the following sources did you receive funding or other monetary support to facilitate your doctoral (or equivalent) studies outside your home country? (Please mark all that apply.)
[ ] Hosting country (government or national agency)
[ ] Hosting institution
[ ] International organisation
[ ] Private sector
[ ] Home country/institution
[ ] Other, please specify [< open form >]
[ ] Not applicable

MOB.5 (Only if EDU 1 = Cat 4) Do you think you would have been able to complete a doctoral degree (or equivalent) without studying outside your home country?
[ ] Yes
[ ] Unsure
[ ] No

MOB.6 During the past five years, have you lived or worked in a country other than what you would consider your home country?
[ ] Yes
[ ] No

MOB.7 Do you intend to leave the country where you currently work or study within the next 12 months?
[ ] Yes, permanently
[ ] Yes, temporarily
[ ] No

MOB.8 How much do you agree with the following statement? International mobility is compulsory if I want to have a successful academic or research-oriented career
[ ] Strongly disagree
[ ] Disagree
[ ] Neither agree nor disagree
[ ] Agree
[ ] Strongly agree
**Collaboration**

With the following question, we would like to ascertain to what extent you have been working with a variety of other researchers.

COL.1 How often during your career so far have you collaborated in joint research projects with the following groups of researchers?

<table>
<thead>
<tr>
<th>Groups of Researchers</th>
<th>Never</th>
<th>Sometimes</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>Researchers from your own institution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Researchers from other institutions in your country</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Researchers from other African countries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Researchers from countries outside Africa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Researchers from other disciplines/research fields</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Researchers from the opposite sex</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Researchers from business/firms/private companies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Researchers from government or government-based organisations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Researchers from NGOs and organisations representing civil society</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Support and Mentoring**

We would like to ascertain if you received support and mentoring during your career with the following question.

Have you received any form of mentoring or structured support during your career so far? [Only if EDU 4 = 2011 or later, and RO 2/3 = 2011]

<table>
<thead>
<tr>
<th>Types of Support</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Most of the time</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advice on career decisions</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Introduction to important networks</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Attaining a position / job via direct intervention of a mentor</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Accessing research funding via direct intervention of a mentor</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Family / care-related support</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Training in methodology</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Training in fundraising</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Training in (scientific) writing</td>
<td>[ ]</td>
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<td>[ ]</td>
<td>[ ]</td>
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<tr>
<td>Training in presenting results</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>
Career development and prospects

[Only if EDU 4 = 2011 or later, and RO 2/3 = 2011]

The following section would give us insight into your career development and career prospects.

CAR.1 How would you describe your career prospects?
[ ] Very poor
[ ] Poor
[ ] Satisfactory
[ ] Good
[ ] Very Good

CAR.2 Have you seriously considered changing to a different position within the same institution, country, or to another employment sector?
[ ] Yes
[ ] No

CAR.3 To what kind of position(s) did you consider to change to? (Please mark all that apply.) (Only if CAR 2 = Y)
[ ] Management position in higher education / research organisation
[ ] Academic/ research position within the same country
[ ] Academic/ research position in other country
[ ] Research position in private sector
[ ] Non-research position in private sector
[ ] Non-research position in government sector
[ ] Self-employment
[ ] Other Please specify: [ < open form > ]

CAR.4 Have you ever taken a career break for more than three months?
[ ] Yes
[ ] No

CAR.5 What was / were the reason(s) for the career break? (Please mark all that apply.) (Only if CAR 5 = Y)
[ ] Parental leave
[ ] Care for other dependents (e.g. parents)
[ ] Unemployment
[ ] Health reasons
[ ] Other

CAR.6 What was the duration of the career break?
[ ] Months (Only if CAR 5 = Y)
Demographic background

In this section we would like to find more about you and your home life.

DEM.1 Are you:
[ ] Male
[ ] Female

DEM.2 What is your year of birth?
YEAR [ ] (yyyy)

DEM.3 What is your current marital status?
[ ] Married or living in a marriage-like relationship
[ ] Separated or divorced
[ ] Widowed
[ ] Single (and not separated, divorced or widowed)

DEM.4 How many children or other dependents do you have?
Please enter a number in the relevant boxes.
[ ] Number of children/dependents aged 0 to 5
[ ] Number of children/dependents aged 6 to 18
[ ] Number of adult dependents aged 19 or older (e.g. elderly)

DEM.5 Are you involved in taking care of your children and/or other dependents?
[ ] Yes, I am involved in taking care of my children
[ ] Yes, I am involved in taking care of my parents and/or other dependents
[ ] Yes, both
[ ] No

DEM.6 Do you care for your parents or other dependents that are not your children for more than ten hours per week?
[ ] No
[ ] Yes

DEM.7 How is the care-work for all dependents distributed in your family or relationship?
[ ]% me  [ ]% partner  [ ]% others (e.g. extended family, paid service)

DEM.8 How is general housework distributed in your family or relationship?
[ ]% me  [ ]% partner  [ ]% others (e.g. paid service)
Follow-up

Would you be willing to be contacted by our team in case we need more clarity on some of your answers? If so, please provide your email address:
E-mail: ________________________@________________________

After analysing the data from the survey, we would like to conduct a few follow-up interviews. These interviews will be selected based on individual responses to the questionnaire, conducted in English via Skype, and will take about one hour. Would you be available for such an interview?
[ ] No
[ ] Yes

If you would be available for an interview, please provide your email address:
E-mail: ________________________@________________________