



Stellenbosch

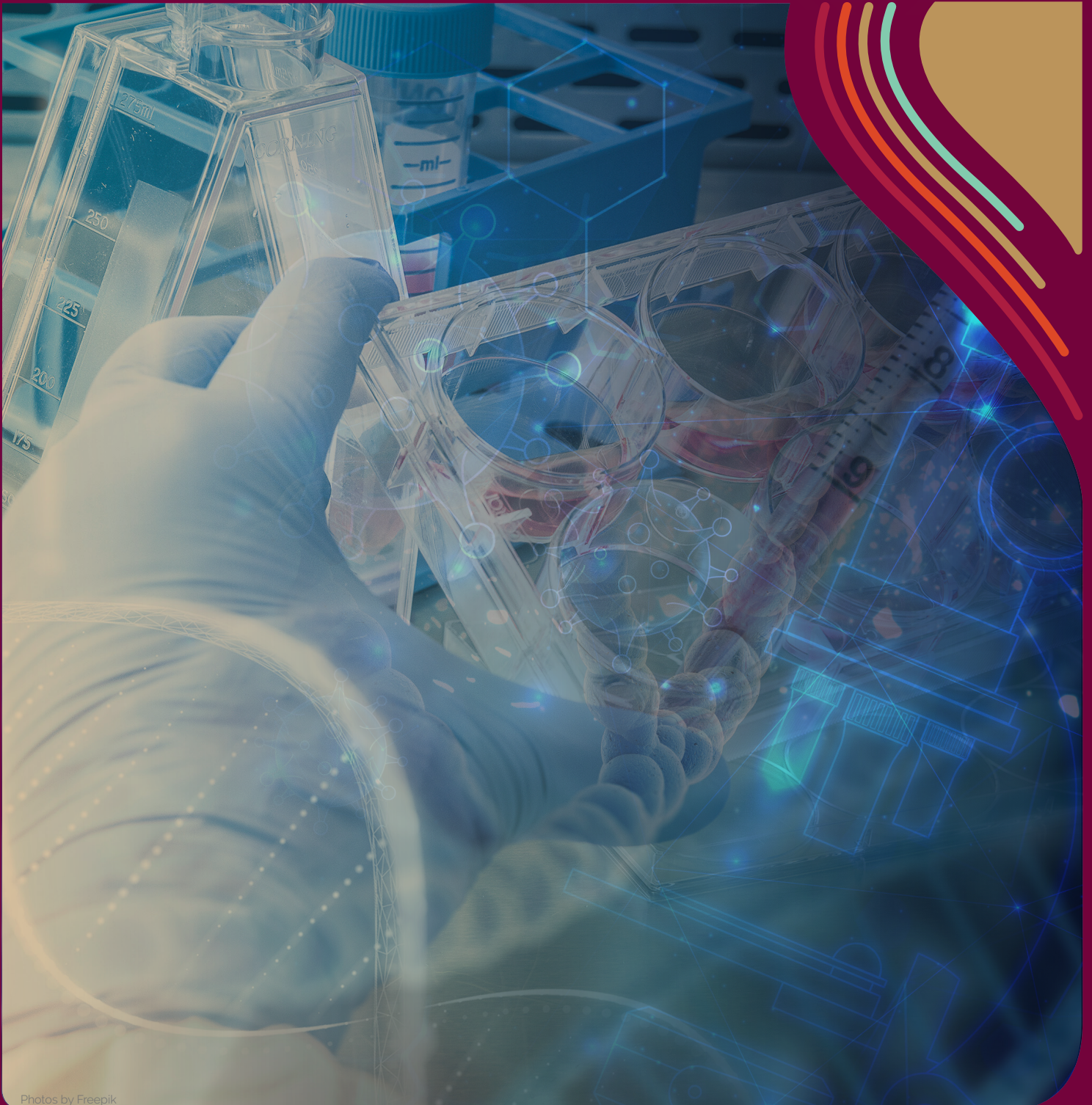
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SENATE REPORT

of the Deputy Vice-Chancellor:
Research, Innovation and Postgraduate Studies

Prof TE Cloete
March 2022





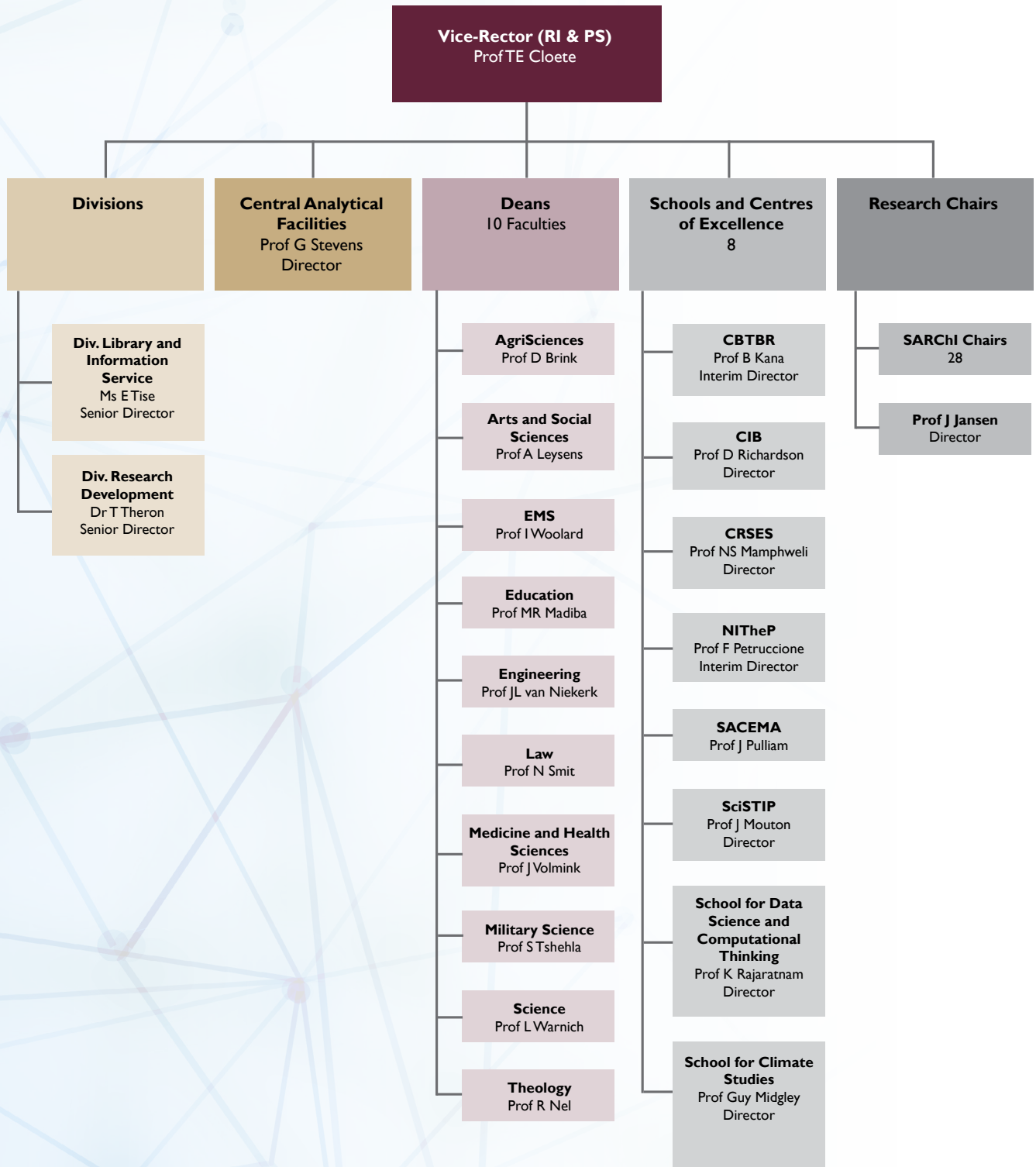
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Organogram

Responsibility Centre of the Deputy Vice-Chancellor:
Research, Innovation and Postgraduate Studies (DVC: RI&PS)





Introduction

The Research, Innovation and Postgraduate Studies portfolio has gone from strength to strength in the past ten years, positioning Stellenbosch University (SU) as the leading research-intensive university in South Africa. I attribute this to an incredible team effort. I therefore wish to acknowledge and credit the deans and vice-deans for research, the senior directors in my responsibility centre as well as SU researchers in general for their initiative and dedication. I also appreciate the support of the Rectorate and Council.

Stellenbosch University (SU) adopted its Strategic Framework 2019–2024 and Vision 2040 in 2018.

Vision 2040 states that, “Stellenbosch University will be Africa’s leading research-intensive university, globally recognised as excellent, inclusive and innovative, where we advance knowledge in service of society.”

SU is a place of discovery and excellence, where staff and students are thought leaders in advancing knowledge in the service of all stakeholders. Its mission is “to attract outstanding students, employ talented staff and provide a world-class environment; a place connected to the world, while enriching and transforming local, continental, and global communities” (Strategic Framework 2019–2024).

Research for impact, therefore, is one of the six major institutional strategic themes in SU’s Strategic Framework 2019–2024. Research for impact at SU implies optimising the scientific, economic, social, scholarly and cultural impact of our research. Our focus is on interdisciplinary research that benefits society on a national, continental and global scale. At the same time, we are committed to basic and disciplinary research excellence, as this forms the basis for applied and translational research.

Research at SU is driven by the notion of excellence aligned with relevance, informed by a diversity of people and ideas. The institution wishes to achieve this by pursuing excellence, remaining at the forefront of its chosen focus areas, gaining standing on the strength of its research outputs and being enterprising, innovative and self-renewing. This requires a careful balance between continuity and consistency on one hand and, on the other, transformation and rejuvenation of SU’s academic researcher cohort. Ultimately, our research efforts are aimed not only at academic success, but also at making a significant impact in the world.

The responsibility centre for Research, Innovation and Postgraduate Studies (RC: RI&PS) pursue these objectives actively. Through the activities of its various divisions, the RC: RI&PS strengthened the University’s status as a research leader and bolstered the institution’s intellectual capital in 2021, as the

following sections will show. The report is organised along the six themes of the Strategic Framework and the institutional goals for each of them.

1. A thriving Stellenbosch University

The institutional goals for this theme are:

- Cultivate an SU characterised by inclusivity, deep and intentional transformation, and diversity.
- Create opportunities for the advancement of multilingualism in academic, administrative, professional and social contexts, whilst recognising the intellectual wealth inherent in linguistic diversity.
- Change the size, shape and mix of our student population and of our academic programmes to mirror the strategic direction of our vision.
- Create a financially sustainable organisation.
- Raise the standard of the University’s facilities and infrastructure to that of a world-class research-intensive university, while embracing visual redress.
- Bring about profound and sustainable change and regeneration in all facets and functions of SU to be agile, adaptive and responsive.
- Aspire to be a leading, research-intensive university ranked amongst the top world universities by 2024.
- Create an entrepreneurial culture that advances innovation institutionally.

1.1 National Research Foundation (NRF) grants for established researchers

SU received 29 new grants in this broad category during 2021. This represents a success rate of 28,4% – 2,1% down from 2020. Another 19,2% of applications were rated as fundable but could not be funded because of insufficient funds. This probably the result of the 20% cut in funding that the NRF had to absorb after government funds had been reallocated in response to the Covid-19 pandemic.

1.2 NRF early-career programme – Thuthuka

SU had 40 Thuthuka grant holders in total in 2021, 11 of which were new grants.

1.3 Third-stream income

The following section offers an overview of research contracts in 2021 compared to previous years.

SECTION A: Important notes for correct interpretation on the data reported

- a) **Value (contract amounts) of signed contracts for a specific year vs the actual income for a specific year**

Signed contracts refer to contracts received, registered, processed, negotiated and signed in 2021 (the specific year under review). However, contracts can extend over several years, and for the sake of reporting the **full contract value** is reported for contracts signed in the year under review (in this case, 2021).

Therefore, the **actual income** for 2021 will include contracts signed in 2021 as well as those signed in previous years but receiving income in 2021 (e.g. year 1 of contracts signed in 2021, year 2 of contracts signed in 2020, and year 3 of contracts signed in 2019).

- b) **Contract amounts reported of signed contracts only**

We report only on *amounts already committed* in terms of signed contracts (i.e. excluding contracts still pending or in process). We use the *applicable*

average annual exchange rates for historic years, not the exchange rate as on the date of reporting.

- c) **Reporting of data as captured by COB on 31 January 2022**

As the negotiation and signing of contracts are ongoing, the data reflected in this report are as per COB on **31 January 2022**. Thus, this offers a *snapshot* on that date; the data will change as the outstanding contracts for 2021 and earlier are finalised.

SECTION B: Number of signed contracts 2018-2021

We processed **1 446** research contracts in 2021, compared to 956 in 2018 – a 66% increase in four years. Figure 1 shows the number of signed contracts for the period with grouped currencies, *without* distinguishing between incoming and outgoing contracts.

Figure 2 indicates the value of signed research contracts for the period 2018 to 2021 (as on 31 January 2022) without distinguishing between *incoming and outgoing* contracts. The figure illustrates the financial value of the contracts that the Research Contracts Office has to assess and negotiate.

Figure 3 shows *incoming* signed contracts only, which are not to be confused with actual income on the financial system.

Strikingly, 73% of SU's research contract funding comes from international main funders (Figure 4). This is an indication of the international footprint of our research, but also stresses that our research income is very vulnerable to exchange rate variances.

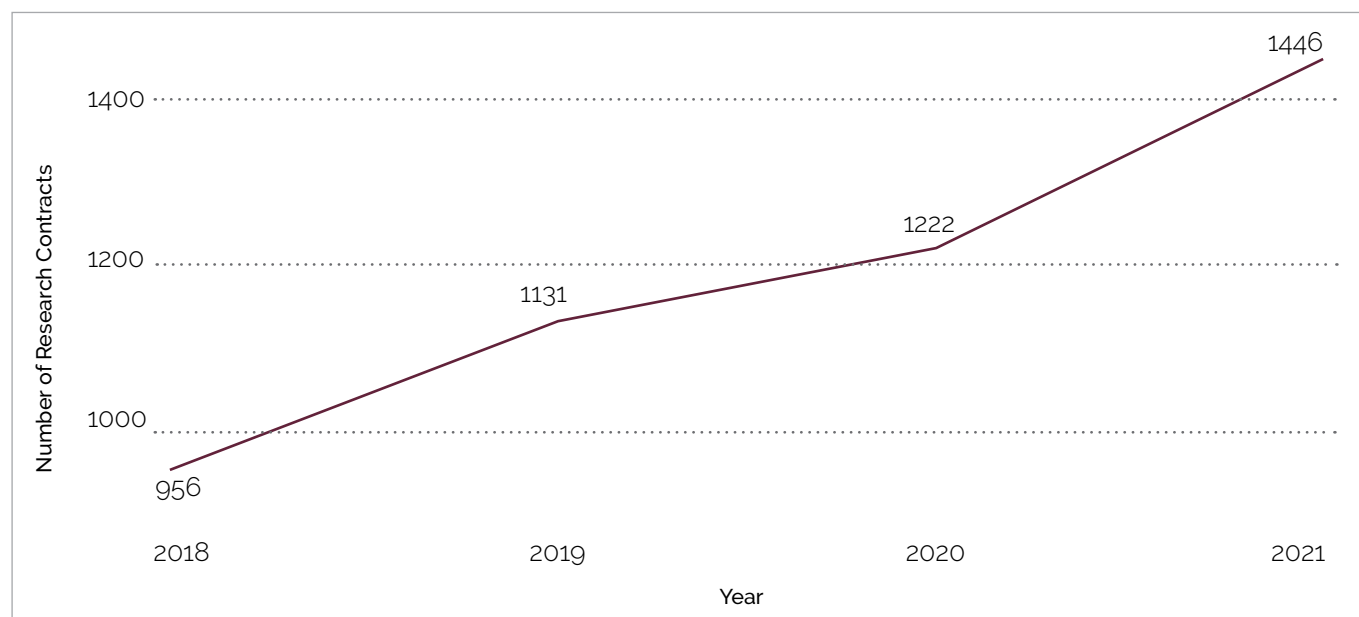


Figure 1: Number of contracts processed in 2018 to 2021

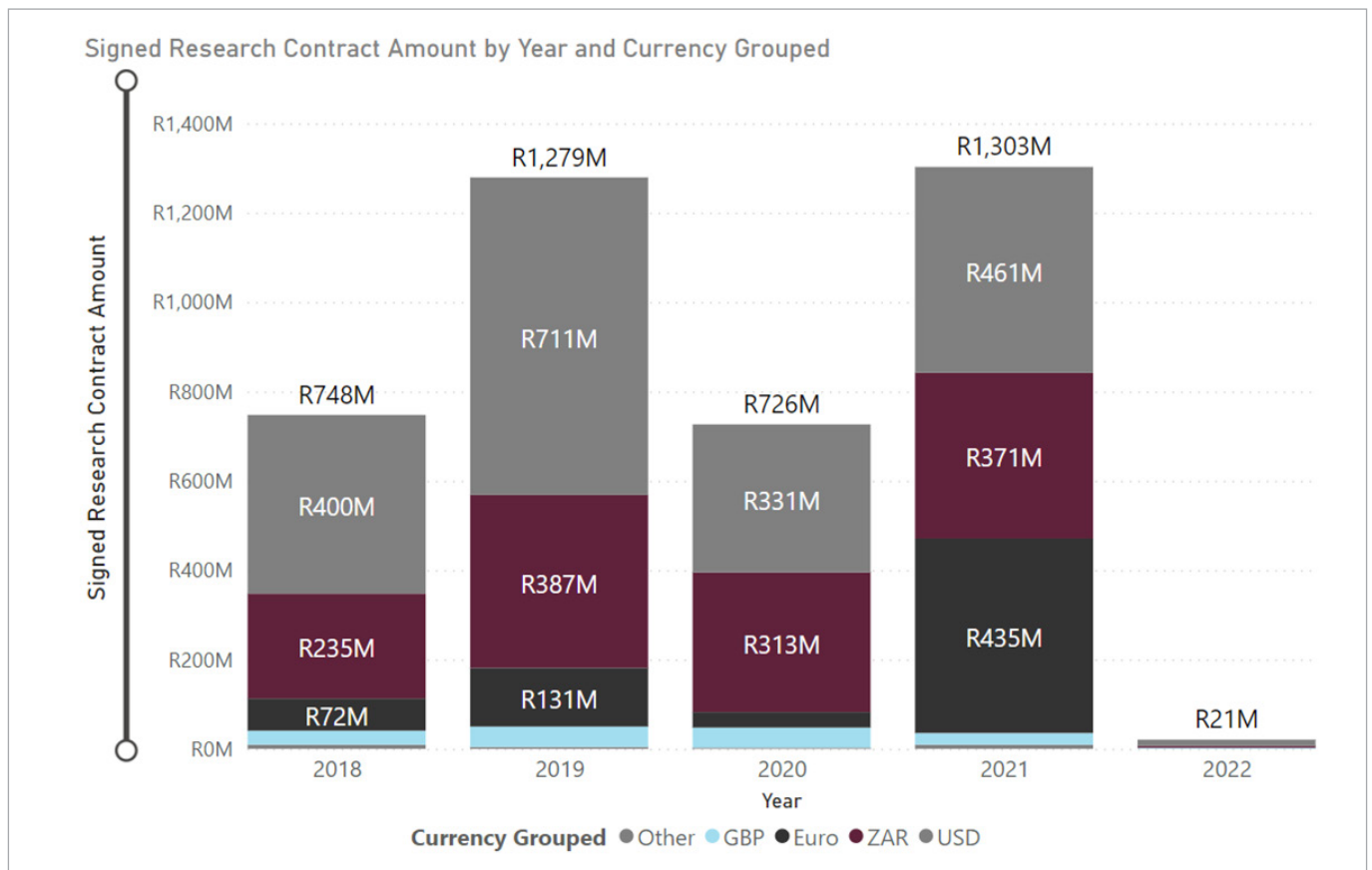


Figure 2: Value of signed contracts (incoming and outgoing) for 2018 to 2021 with grouped currencies

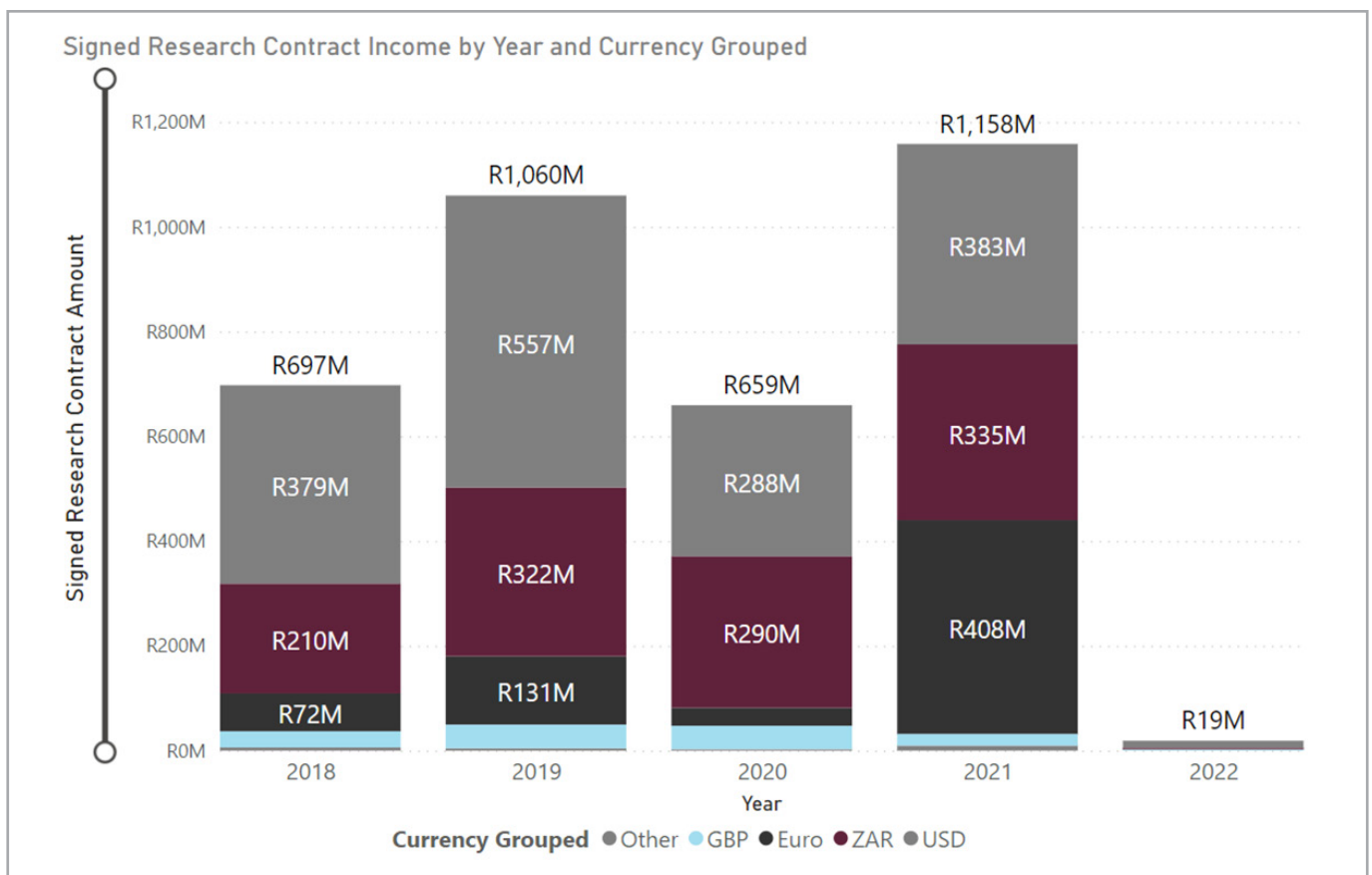


Figure 3: Signed incoming contracts for 2018 to 2021 with grouped currencies

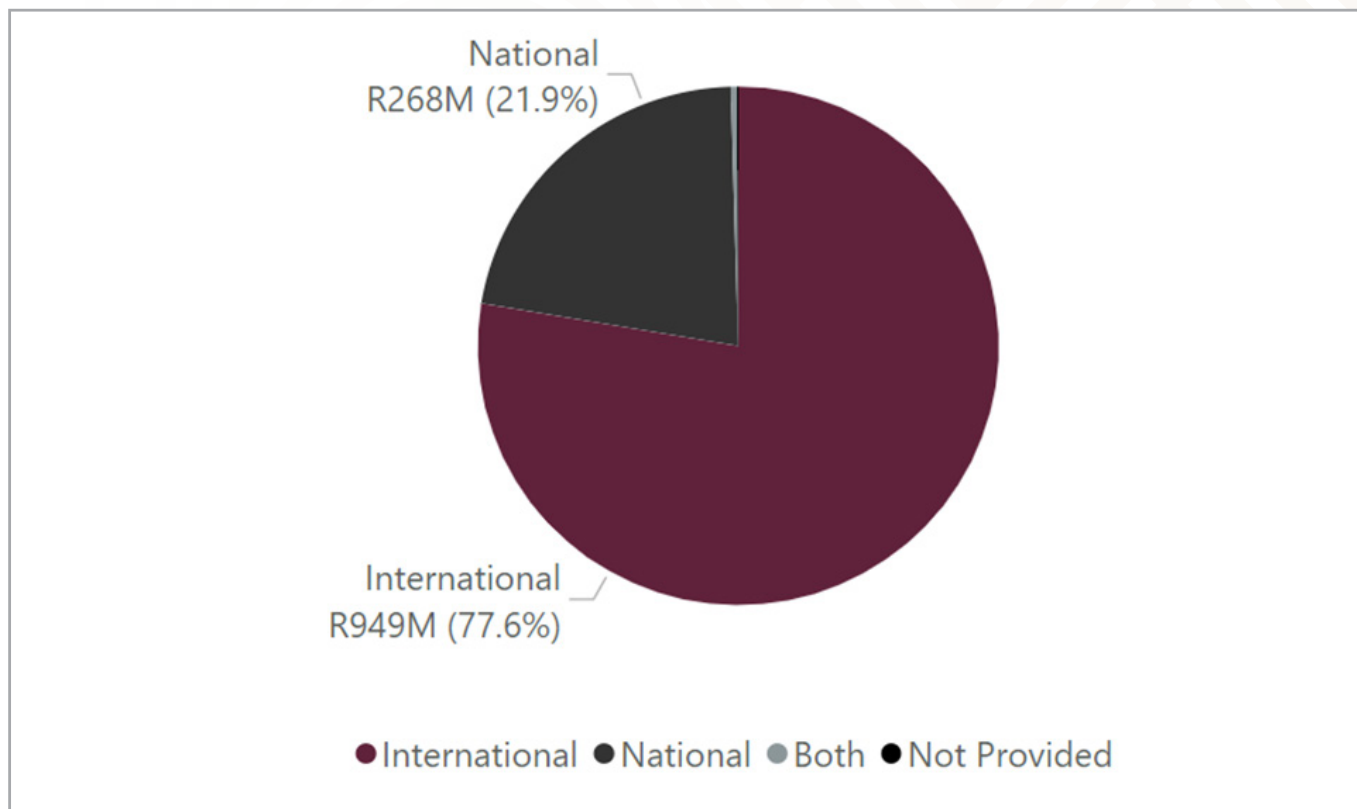


Figure 4: Signed research contract income for 2021 from national vs international main funders

SECTION C: Actual research contract and National Research Foundation income for 2013 to 2021

Table 1 presents a complete overview of the **actual research income** (from research contracts and the NRF). Please refer to note 3.1(a) on actual income.

Table 1: Actual income from research contracts and the NRF, 2013–2021

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Research contracts (excluding NRF)							R806,03m	R828,77m	R1,041bn
							<i>Of which:</i>	<i>Of which:</i>	<i>Of which:</i>
							<i>Inter-</i>	<i>Internation</i>	<i>International:</i>
							<i>national:</i>	<i>al:</i>	
							<i>R429,4m</i>	<i>R454,8m</i>	<i>R591,5m</i>
							<i>And</i>	<i>And</i>	<i>And</i>
							<i>National:</i>	<i>National:</i>	<i>National:</i>
							<i>R376, 63m</i>	<i>R344,52m</i>	<i>R449,2m</i>
NRF	R160,3m	R198,3m	R224,1m	R367m	R364,2m	R235,2m	R209,92m	R164,324m	R183,2m
Total	R703,4m	R878,9m	R1,18bn	R2,158bn	R1,250bn	R1,018bn	R1,016bn	R963,62m	R1,224bn

2. A transformative student experience

The institutional goals for this theme are:

- Provide a unique, personalised student experience that serves as a catalyst for transformational change amidst opportunities for engagement and development through a first-class academic offering, which prepares graduates to lead and excel in a diverse world.
- Develop our students' graduate attributes so that they can be 21st-century citizens and achieve their full potential.
- Strengthen strategic enrolment management to enhance access and inclusivity.
- Enhance our student success rate through educational innovation.
- Deliver comprehensive, premium-quality support services to our student community.
- Enhance and expand engagement opportunities for our substantial alumni community.
- Create relevant opportunities for work-integrated learning towards a successful career and positive societal impact.

2.1 Master's and doctoral student enrolments and degrees awarded

A substantial and successful postgraduate student body is an important building block of any research-intensive university. According to the official June statistics, SU enrolled 5 034 master's and 1 649 doctoral students in 2021.

SU is mindful of the need to strengthen student diversity at all levels. The number of South African generic black (BCIA - black, coloured, Indian and Asian) students enrolled at postgraduate level represents 45% of the postgraduate student body. International students have remained a fairly stable proportion of the overall postgraduate student cohort despite restricted international mobility over the past two years.

Table 2: Master's and doctoral enrolments at SU

	2012 June	2017 June	2018 June	2019 June	2020 June	2021 June
Master's students	4 982	4 831	4 811	4 821	4 774	5 034
Doctoral students	1 236	1 614	1 645	1 637	1 607	1 649
Total	6 218	6 445	6 456	6 458	6 381	6 683

Table 3: Master's and doctoral degrees awarded by SU

	2012	2017	2018	2019	2020	2021
Master's degrees	1 441	1 624	1 517	1 474	1 316	668*
Doctoral degrees	240	305	308	362	302	146*

* 2021 totals represent December 2021 graduations. March totals unavailable at the time of compiling this report.

Table 4: Postgraduate student diversity among SA citizens at SU

	2012	2017	2018	2019	2020	2021
SA generic black students	40%	49%	50%	46%	47%	48%

Table 5: International students as a percentage of total postgraduate enrolments

2016	2017	2018	2019	2020	2021
19,3%	18,4%	18,3%	21,6%	16,6%	19,1%

2.2 Council on Higher Education (CHE) national review of doctoral degrees: update

The CHE undertook a national review of doctoral qualifications in South Africa in 2019. As part of the process SU submitted an institutional self-evaluation report (SER), which had been prepared by the Postgraduate Office in the Division for Research Development (DRD), to the CHE in March 2020. Following a virtual institutional site visit to SU by the CHE Review Panel in October 2020, the University's Final Review Panel Institutional Report (hereafter **SU Panel Report**) was released in July 2021.

The SU Panel Report concluded that SU's delivery of its doctoral programmes was deemed to be in accordance with the Qualification Standard for Doctoral Degrees. The institution was, however, expected to attend to the recommendations in the SU Panel Report and was required to submit an **Improvement Plan** to the CHE by **30 October 2021**.

The **SU Draft Improvement Plan** was prepared by Ms Dorothy Stevens under the guidance of Dr Therina Theron, in consultation with Prof Eugene Cloete and with input from members of the original Self-evaluation Report Working Group. The Draft Improvement Plan was subsequently presented to the deans, the vice-deans: Research, and the Registrar on 18 October 2021. The **approved Improvement Plan** was **submitted to the CHE** on 30 October 2021.

2.3 Postgraduate student support

The Postgraduate Office (PGO) is a nexus of support and liaison for SU postgraduate students and staff, as the PGO works with faculties and other SU support services towards streamlining and enhancing the postgraduate experience for both students and their supervisors. In particular, the PGO offers advisory and administrative support to prospective and enrolled postgraduates (e.g., about programme options and joint degrees), administers postgraduate funding – a critical aspect of support – and runs a postgraduate skills development (PGSD) programme.

In 2021, the PGO introduced an institutional [postgraduate welcoming and orientation web page](#) dedicated to the needs of new and returning SU postgraduates. The page functions as a tailored postgraduate go-to hub offering information on all technical, academic and social support available to postgraduates at SU.

Also as part of the PGO's 2021 welcoming campaign, the Office created a special [welcoming video for SU postgraduates](#) which was featured on the new welcoming page and shared digitally via their annual welcoming email [notification](#) in February 2021 to all SU postgraduates who had registered by then. Of the 7 900 postgraduate students to whom the email was sent, 69,5% viewed the message. In case postgraduates had missed the first welcoming email,

the PGO included the link to the email notification in their March 2021 *Postgraduate Times* newsletter. This generated a further click-through rate of 409 views and tallied an additional 1 260 views via the Office's YouTube channel. The video subsequently earned a bronze award at the 2021 Marketing, Advancement and Communication in Education (MACE) Awards.

In addition to the above efforts, the PGO published their annual [Postgraduate Studies Guide](#), which collates extensive information on what SU postgraduates need to know, highlighting important SU policies and procedures, providing helpful tips on maintaining an amicable supervisor/student relationship, listing faculty-specific contact details and including a range of other resources, services and support available to postgraduates at SU.

Through its PGSD programme, the PGO provides relevant research-related information and capacity-building workshops annually to supplement what postgraduate students receive from their academic departments. The programme also promotes additional institutional postgraduate training opportunities in collaboration with other key SU support services.

In 2020, the programme was sustained during Covid-19 lockdown measures by the PGO taking the full PGSD offering online. In 2021, this mode was continued successfully; moreover, five new workshops were added to their offering in response to the findings of the Office's 2021 doctoral needs analysis.

- The new workshops were: Project Management Principles for Postgraduate Researchers; Managing Money in the Real World; Preparation for Publication; Delivering Talks with Confidence and a piloted course, Science Communication Lifeology.
- The [workshops](#) were presented online via Microsoft Teams and SUNLearn, recruiting participants via the PGO [website](#), [Postgraduate Times](#) newsletter and [social media](#) platforms. The online mode allowed the PGSD programme to reach an even broader audience in 2021 than in 2020, affording postgraduates who would ordinarily not have access to the programme's Stellenbosch campus workshops the opportunity to attend, either synchronously or asynchronously.
- The virtual [Shut Up and Write writing sessions](#) continued with two writing sessions of 1½ hours each facilitated per day (mornings and evenings, every weekday).
- The PGO's updated bouquet of training modules loaded on [SUNLearn](#) afforded postgraduates access to additional online resources.

Overall, the PGSD programme hosted 48 online workshops during 2021, as well as a virtual Pop-up Café and a virtual science communication training opportunity combined with a virtual FameLab institutional competition. By means of the

opportunities set out above, the programme reached over 880 individual postgraduates via workshop training (1 554 enrolments in workshops in total, some students attending more than one PGSD programme workshop in 2021), 139 participants via Pop-up Café engagements, 25 participants via specialised FameLab science communication training and competition, 198 participants via Shut Up and Write

daily writing sessions, 11 faculty-specific cohorts via online postgraduate support orientation sessions and 372 Faculty of Engineering postgraduates via asynchronous online Professional Communication modules (59447-871 and 59447-771) which the programme has been presenting annually on behalf of the Faculty since 2017 and which deal with academic writing integrity and avoiding plagiarism.

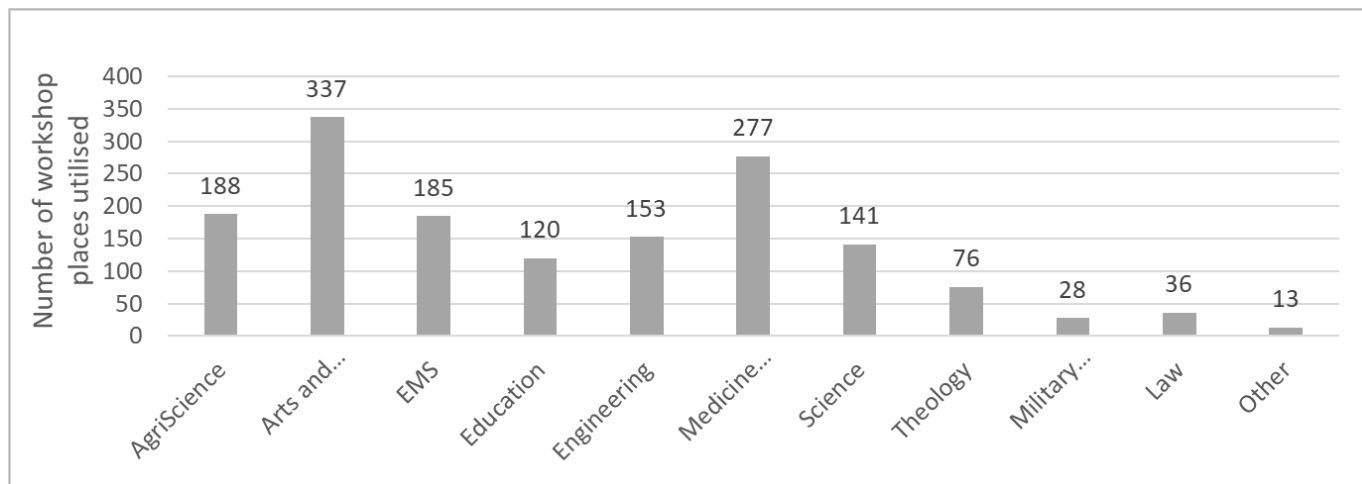


Figure 5: Postgraduate workshop attendance according to faculty

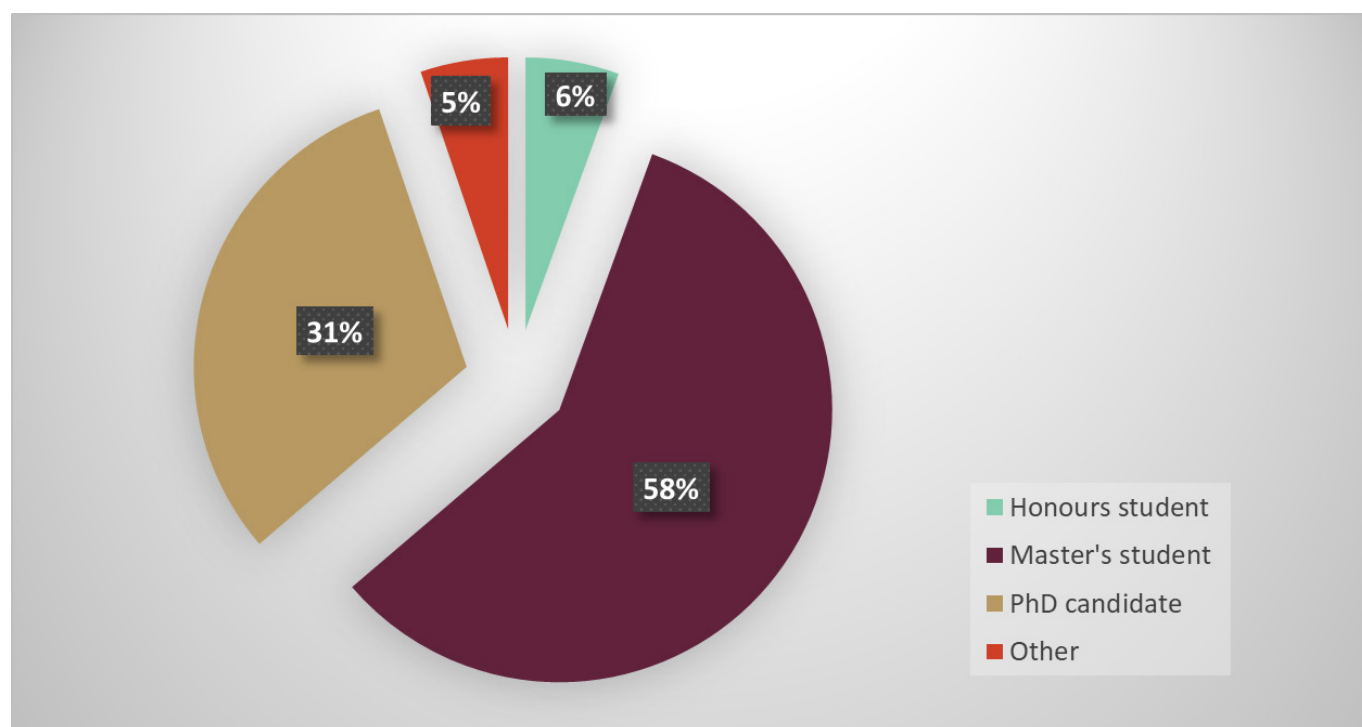


Figure 6: Total number of workshop places utilised according to level of postgraduate studies

2.4 The Postgraduate Office's social media footprint

The number of followers and interactions on the PGO's social media accounts has increased noticeably following their #postgraduateSUccess campaign. The Facebook account (created in 2017) reached 24 871 people in 2021 through posts, stories and adverts, and the number of followers has grown to 1 772. The PGO's Stellenboschunipgo Instagram account (created in 2020) reached 613 people in 2021.

Figures 7a and 7b show examples of posts that did particularly well in 2021.

2.5 Institutional academic supervisor training course

The PGO facilitated, in collaboration with Dr Therina Theron and Prof Leslie Swartz, the development of a new supervisor training course in support of SU academic staff during 2021.

The need for a course of this kind stemmed from several sources. In short, following the reputational risks to which SU was exposed following the publication of "The Article" in 2019, the Audit and Risk Committee of Council commissioned a full audit by Deloitte of all research processes at the University. The audit was in January 2020. The recommendations included the following: "There is a need to support and enable new and existing research supervisors to fulfil this key monitoring and supervisory role by providing a defined supervisory training and accreditation program for new supervisors." In addition, in July 2019 the CHE undertook a national review to establish the state of doctoral qualifications awarded by South African higher education institutions. Following SU's SER and the institutional site visit interviews conducted by the CHE in October 2020, the SU Review Panel made several key recommendations in their report. This included that SU establish a formalized, mandatory supervisor training course for all novice supervisors at the institution.

Besides the findings of the Deloitte audit and the CHE's recommendation, there was significant imperative for SU to urgently establish an appropriate course to serve our academic supervisors and provide some preparation for the highly responsible task of postgraduate supervision.

On the strength of her wealth of experience in supervision and in developing and presenting supervision training, Prof Chrissie Boughey – a former deputy vice-chancellor and current emeritus professor at the Centre for Postgraduate Studies at Rhodes University – was contracted in to develop a tailored introductory supervisor training course for SU.

The course was piloted with a cohort of 30 SU mentees and mentors from the DRD's early-career academic development (ECAD) programme during November 2021. It consisted of nine lunchtime



Figure 7a: Sharing information on the top three institutional heat winners of the FameLab science communication competition hosted by the Postgraduate Office; 804 hits



Interactions

👍 8 reactions

💬 2 comments

➦ 11 shares

Figure 7b: Advertising of institutional scholarships available to all postgraduates; 2 328 hits

MS Teams discussion sessions and four weeks of asynchronous self-study sessions. The topics were available on SUNLearn. The course took participants through the full research supervision journey, starting from the student's first conceptual notes to skills, rules and regulations in dealing with various committees (including committees for higher degrees and ethics), to appointing examiners, guiding the student towards submission for examination, handling changes required by examiners and final submission via SUNScholar. The emphasis was on practical skills rather than on theories of education, and on recognising both supervisees and supervisors as people with full and complex lives and responsibilities.

The course concluded with an optional assignment. The participants' general feedback was overwhelmingly positive. Prof Boughey will compile a formal report and facilitate another iteration of the course during 2022 to refine it according to this feedback and the lessons learnt from running the pilot course.

2.6 Postgraduate funding

Postgraduate funding administered by the PGO increased from R240 million in 2020 to R251 million in 2021. This increase, attributed largely to additional funding allocated via the SU Registration Bursary 2021

(specifically earmarked for student debt assistance) and the commencement of allocations under the SU Postgraduate Scholarship Programme, should be considered against the backdrop of decreasing funding support from the NRF (from R60,5 in 2020 to R55 million in 2021).

For the 2021 financial year, 45% of all bursaries allocated to SU postgraduates (±R113 million) were departmental bursaries – an indication of departments' and faculties' strong capabilities in securing funding via research contracts, agreements and donations. This reiterates the key role of postgraduate research at the institution.

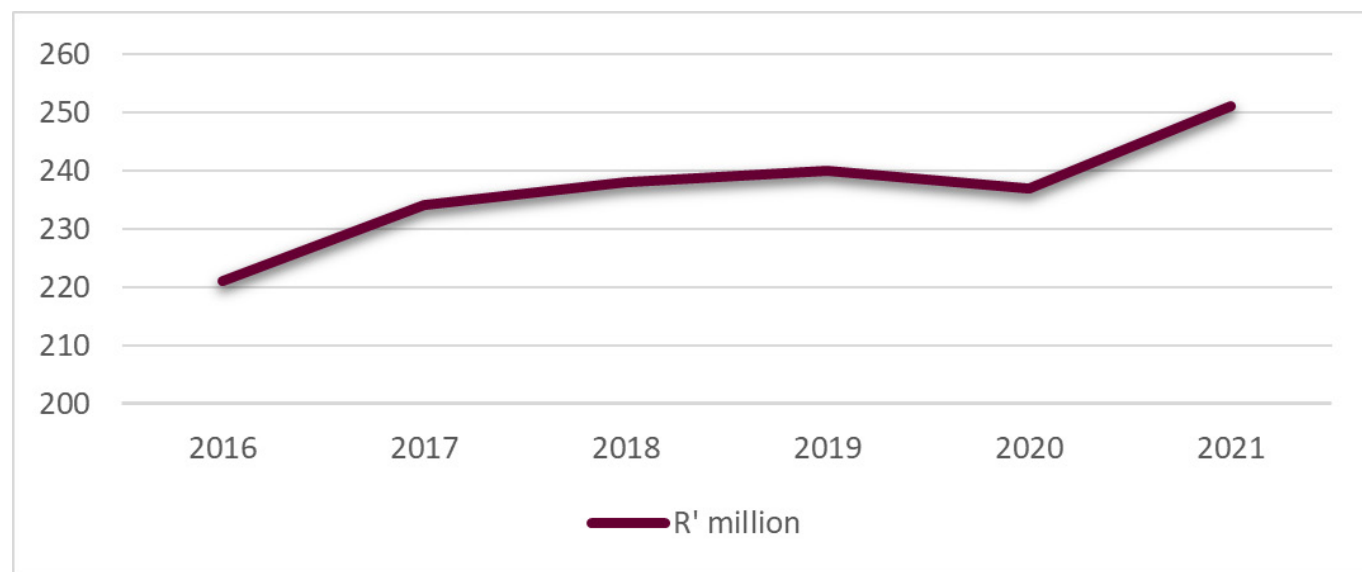


Figure 8: Postgraduate funding administered 2016–2021

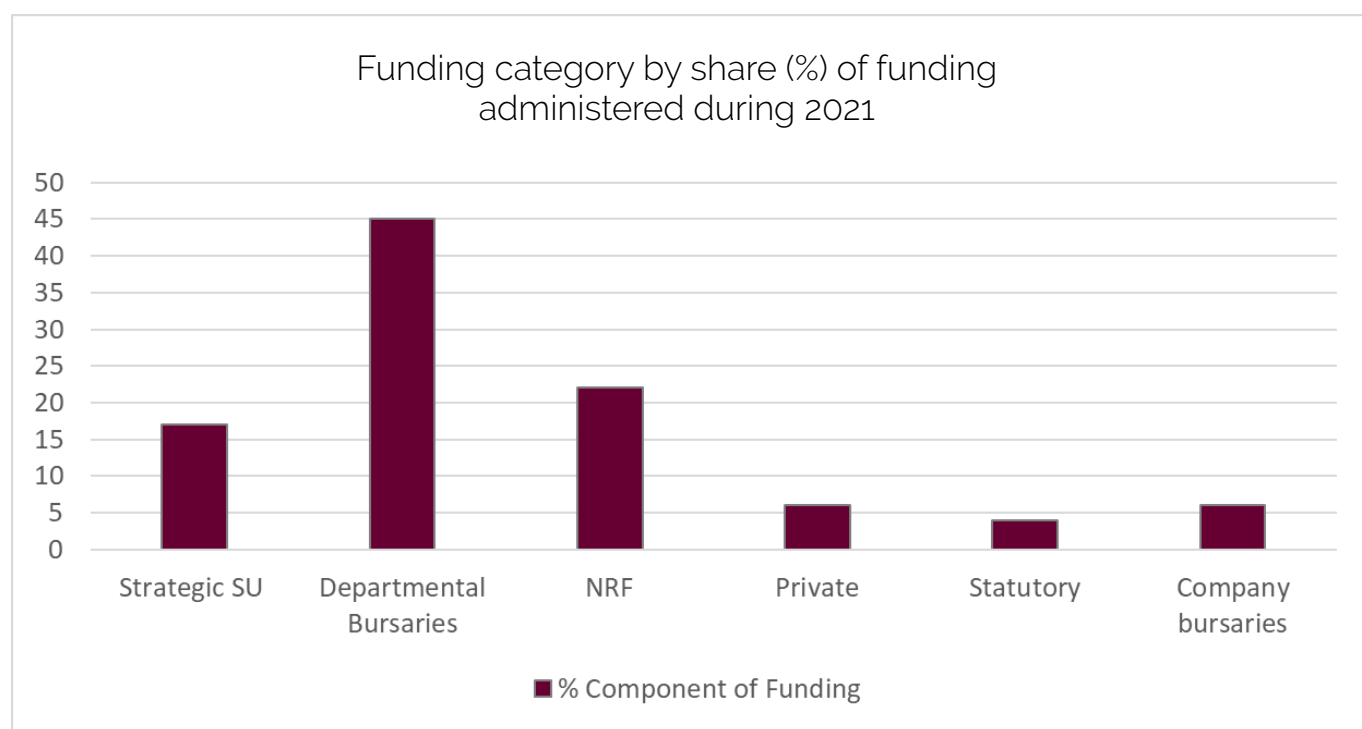


Figure 9: Contribution to total funding, according to category

2.7 National Research Foundation (NRF) scholarship programme

Policy changes introduced by the NRF during 2020/2021 reduced the number of scholarships awarded to SU students; among other reasons, because of the eventual phasing-out of Grantholder Linked bursaries. The NRF's new scholarships policy sets a minimum academic requirement of 65%, and applicants for honours, master's or doctoral funding may be no older than 28, 30 and 32 years respectively in the year of application. Successful applicants may be funded either at full cost of study (FCS) or partial cost of study (PCS).

FCS funding is awarded exclusively to South African citizens and permanent residents who are either financially needy (i.e. with a combined annual household income of ≤R350 000), exceptional academic achievers or living with a disability. PCS funding may be awarded to 5% of international students and to South African citizens and permanent residents who could not meet the FCS requirements but do fulfil other eligibility criteria for NRF funding.

The NRF also instituted funding category caps (on tuition, accommodation and living expenses); the accompanying strict criteria limited scholarship claims further. Following multiple high-level deliberations with the NRF over the past three years, led by the DVC: RI&PS (Prof Eugene Cloete), the NRF announced that funding caps on cost categories would be phased out as from 2022. Moreover, new NRF scholarship awards for 2022 to date indicate a modest increase in the number of recipients at SU.

2.8 The Stellenbosch University Postgraduate Scholarship Programme (PSP)

In response to the decline in NRF funding over the past five years, the Committee for Bursaries and Loans (CBL) approved the re-allocation of ±R120 million from undergraduate bursary reserves to postgraduate bursaries. The resulting funding currently supports the **SU PSP** up to 2023.

Currently in its second year of implementation, the PSP has developed into a uniquely positioned flagship scholarship programme that other universities often refer to as a benchmark. Benefitting from a collaborative process that includes all SU faculties, the PSP seeks to maximize a return-on-investment principal while supporting our academically most meritorious and financially most needy postgraduates. In 2021, the PSP supported **397 postgraduates** – students who symbolise the engine room of research at a university. Among them, **233 students** will be continuing with their degree programme within the maximum allowable period of support (two years for master's studies, three years at doctoral level).

Furthermore, **±200** new awards have already been made for 2022. This number ought to rise when the final award list is announced shortly.

Funding at the level required to sustain the PSP will be exhausted by 2023 because of the projected depletion of undergraduate reserve funding. That is to say, funding currently sustaining the Programme at >R40 million per annum will return to the base level of the institutional postgraduate allocation of R18 million per annum – unless an urgent reconfiguration of the institutional bursary budget is approved.

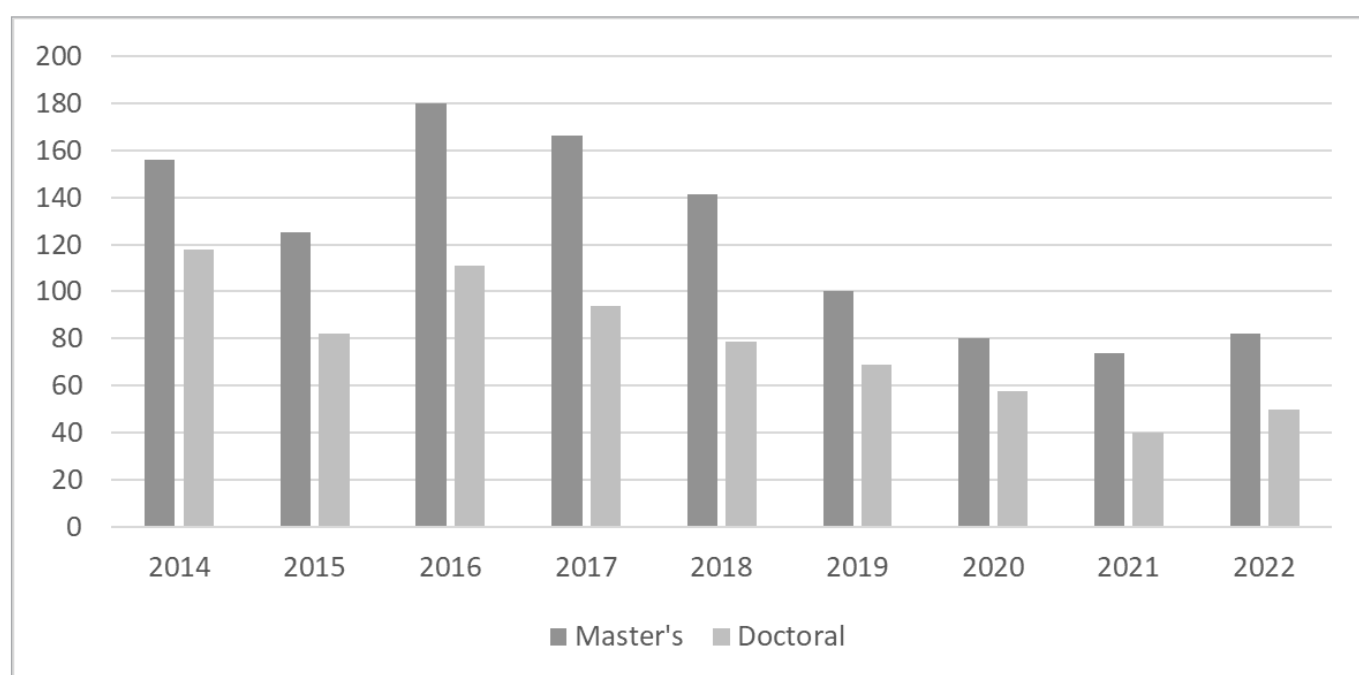


Figure 10: NRF-funded students 2014–2022

2.9 Prestigious scholarship awards

- The [Harry Crossley Foundation](#) will support 36 postgraduates during 2022 at a cost of R4,5 million. In addition, a co-funding agreement between SU and the Harry and Doris Crossley Foundation will support another 7 students.
- The Wilhelm Frank Trust will support 16 postgraduates in science and engineering. These awards are worth R150 000 per master's student and R200 000 per PhD student, totalling R2,5 million for 2022.
- The HB Thom Trust will support 15 postgraduates who excelled in leadership roles with scholarships totalling ±R1 million.
- Mr Bright Amanful (Process Engineering) and Dr Chioni Siwo (Psychiatry) are currently funded by the prestigious [Queen Elizabeth Commonwealth Scholarship](#) (QECS) programme.
- The [Imperial-Stellenbosch University Collaboration Initiative](#) will support 6 postgraduates in logistics and engineering. Imperial has earmarked R3 million to support the continuation of this scholarship programme, which is to focus on supply chain responses to Covid-19 and other healthcare challenges, and on the impact of the fresh food supply chain on climate change.
- The Beit Trust will again support up to 6 postgraduates from Malawi, Zambia and Zimbabwe.
- The South African Institute for Race Relations (SAIRR) will continue to support a number of postgraduate students in nursing. The Institute supported 16 students during 2021.
- The sector education and training authority (SETA) for Fibre Processing and Manufacturing will continue to support postgraduates in journalism, marketing, forestry and wood science as well as other areas related to the broad objectives of the SETA. It supported 25 postgraduates during 2021 at a total cost of R1,3 million.
- [NinetyOne](#) has signed a formal agreement with SU, offering prestigious scholarships to 3 to 5 students in health sciences. The 2021 cohort were the first beneficiaries.

2.10 Demand for digital content

As in 2020, the pandemic has made the increased need for digital content abundantly clear. The SU Library has a well-established collection of e-journals, e-books, e-theses, e-reference works, e-newspapers and various digital collections available via its website. However, the need for more e-books remains dire. Unfortunately, e-books often are much more expensive than printed copies, putting the books budget under severe strain. Also, many e-textbooks are unavailable for licensing by libraries; and those that are available often are unaffordable. With a view to improving the situation, the SU Library and

Information Service (LIS) participated in or contributed to national and international forums and investigations about e-book pricing to libraries. These efforts have not resulted in improved pricing yet, but the debate continues, locally and abroad.

2.11 Implementation of SUNLearn integrated course reading system

The implementation of the SUNLearn integrated course reading system, Leganto, is well under way after project inception in August 2020. Leganto was implemented in the SUNLearn system on 1 December 2020 and introduced to the SU community through a well-attended virtual launch event on 17 February 2021.

Since the project launch the focus has shifted from technical implementation in SUNLearn to workflow adaptations of course reading lists within faculties and academic support divisions. This is in line with the project plan's objective to improve lecturer end-to-end workflows by integrating course reading lists to enhance instruction and ease of use. The goal was to drive the adoption of online course reading lists in SUNLearn from the outset of the 2021 academic year, and thereafter to incrementally increase the adoption rate across and within faculties.

To facilitate this process in a structured and coordinated way, a set of adoption targets set out in a Leganto Outreach Plan were onboarded by the LIS.

By the end of 2021, 46 reading lists have been created in academic departments spread over several faculties, which is expected to foster faster adoption within faculties. In 2022 the LIS will work towards including Leganto into the SUNOnline system for short courses at SU and start investigating how they could integrate the Leganto copyright clearance workflow with the Cape Higher Education Consortium (CHEC) Publishing Liaison Office (PLO) system in collaboration with other higher education institutions in the Western Cape.

2.12 Undergraduate student training

The number of undergraduates attending module-specific training done by faculty librarians has declined steadily from 2018 to 2020, but this trend took another direction in 2021 with a 23% increase – from 6 915 in 2020 to 8 496 in 2021 (Figure 11). This could be attributed to lecturers recognizing the need for digital and information literacy skills training after remote learning and teaching were used extensively in 2020. They requested their faculty librarians to present additional training opportunities. This occurred especially at SU's largest faculty, Economic and Management Sciences, where MS Teams training sessions for their large number of students turned out to be extremely successful and popular, with the quality of students' assignments improving after each session.

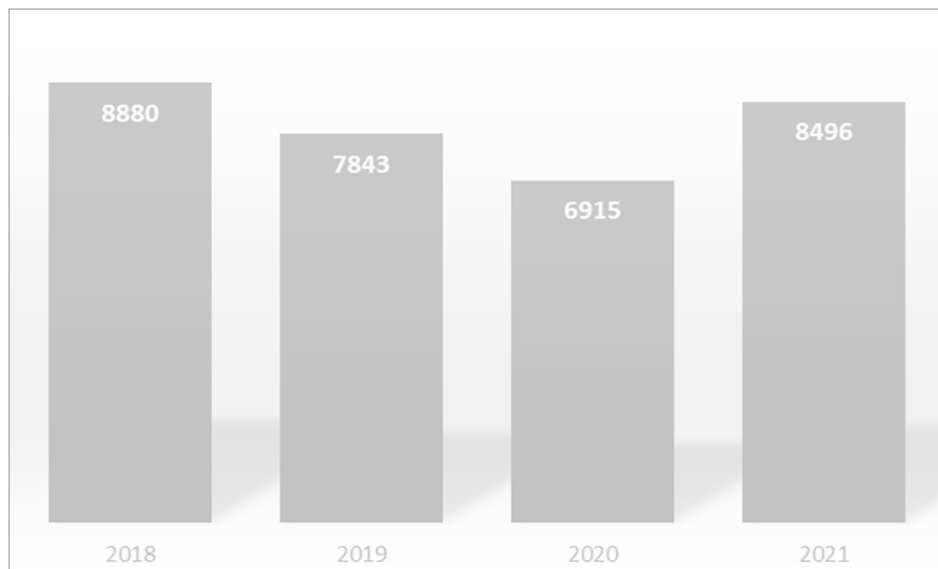


Figure 11: Number of undergraduates who attended module-specific training opportunities

2.13 #SmartResearcher workshops

Some of the #SmartResearcher workshops were switched to the new #SmartStudent workshop series, which meant that the #SmartResearcher series became more focused on the needs of postgraduate students and researchers. All workshops were presented as webinars, which proved to be even more popular than in 2020. A total of 1 802 clients attended the series in 2021, whereas 1 484 clients attended in 2020. The recordings of the webinars were viewed by 466 clients.

Mendeley for Reference Management, and Useful Tools and Applications for Research have remained the most popular workshops in the series. The LIS's induction for postgraduates and academic staff also was very well attended. Some of the feedback received proved that this series is of much value to our postgraduate students and researcher communities.

"I think that you and your team are exceptional in what you are doing in supporting the students in their research journey."

"I find that this team of librarians works tirelessly in organising, sharing, and disseminating important information that helps me in my research journey. Much appreciated."

2.14 Library guides

With LibGuides software librarians create easy-to-navigate, subject-specific, research-related web pages that assist clients in finding information and assistance at other stages in the research life cycle. These web pages, or library guides, help develop digital, data and information literacy skills, curate knowledge, share

information, organise subject-specific resources and support research. Therefore, they fully support SU's adoption of the ARTLA (augmented remote teaching, learning and assessment) model. Our library guides have become considerably more popular since the Covid-19 lockdown, seeing that most students were forced to study remotely. Figure 12 illustrates the 13% increase in usage when library guide views crossed the 300 000 barrier for the first time to reach 323 363.

2.15 Ask a Librarian and Chat with Us

Clients made good use of the LIS's virtual information service, Ask a Librarian, resulting in an 8% increase in the number of new questions – from 612 in 2020 to 659 in 2021 (Figure 13). A complementary virtual service, Chat with Us, was launched on 2 December 2021 as an additional way for clients to contact the Library and receive assistance from Monday to Friday, from 08:00 to 16:30. This service runs on the LibChat software and makes connecting with and serving our clients fast and extremely easy.

2.16 Library Research Week

The Library Research Week (LRW2021) took place virtually from 17 to 21 May 2021. The overarching theme was, 'Research unmasked: Being agile in a time of change'. Overall, LRW2021 sessions drew 992 attendees – a significant improvement from 2020, when 802 persons attended.

Presentations focused on various topics regarding research, such as proposal writing, systematic reviews, ethical issues, copyright, research methods, data management planning, data visualization and strategies to reduce anxiety.

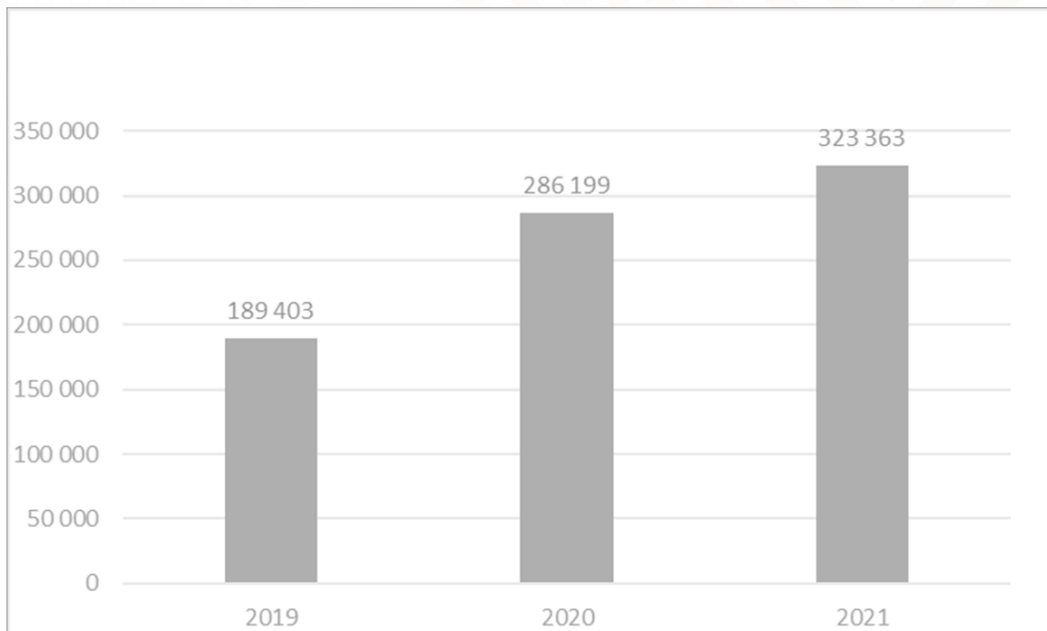


Figure 12: Annual library guide views, 2019–2021

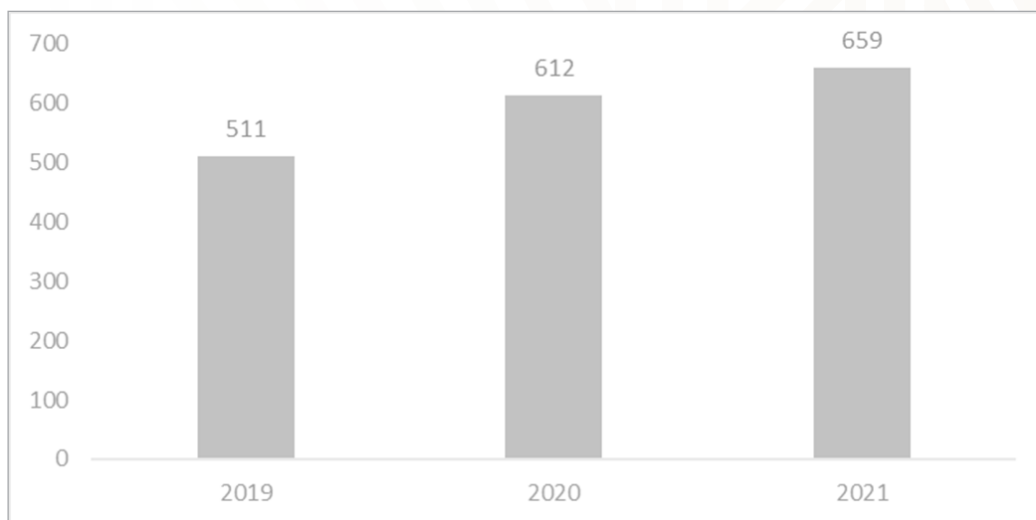


Figure 13: Ask a Librarian – number of new questions

3. Purposeful partnerships and inclusive networks

The institutional goals for this theme are:

- Develop a framework of principles to ensure local relevance, regional impact and a global reach to enable transactional partnerships and promote transformative partnerships.
- Promote a deep connectedness and interaction with business, industry and government to leverage our strengths, which will include work-integrated learning, continuing professional development, collaborative research, consulting, licensing, spin-out companies and commercial ventures.
- Embrace the communities we serve to bring about social, cultural, environmental and economic development and change.
- Enhance and expand engagement opportunities for, and foster our relationship with, our substantial alumni community.
- Build effective collaborations through partnerships, alliances and networks with other universities, institutions and organisations, where such collaboration contributes to excellence in teaching and learning, outstanding research and social engagement and impact.
- Foster distributed, networked and reciprocal partnerships that are nurtured by both institutional structuring and personal relations.
- Establish appropriate partnerships with institutions in all societal sectors, including the spheres of civil society, public discourse, public opinion-formation and public policy-making.

3.1 HB and MJ Thom awards for study leave for academic staff

The HB and MJ Thom Trust supported ten new study leave grants to be taken up in 2022.

3.2 EU-related research grants

3.2.1 Horizon Europe

EU HORIZON EUROPE COLLABORATION 2021:
TOTAL R26 596 546

The EU's Horizon Europe Research and Innovation Framework for 2021 to 2027 is a consortium-driven programme with vast opportunities for international research collaboration – the budget for the full period is €93 billion. Horizon Europe was launched in the third quarter of 2021 and included a focused EU-Africa Funding Initiative for 2021-22. EU funding opportunities have a global success rate of below 20%. Despite this stringent competition, SU has already succeeded in the past six months with five new Research and Innovation Action Programme applications totalling R26 596 546.

3.2.2 EU-SA Joint Collaboration funded by the Division for Social Impact (Dsi)

SU also successfully applied for five new joint collaboration programmes called ERANETs funded by participants' national funding agencies – in our instance, the DSI. The total amount awarded was R8,3 million.

3.2.3 Stellenbosch University Library Symposium

The SU Library Symposium was held in hybrid format from 12 to 14 October 2021. The theme was, 'From hero to superhero: Agile, innovative, responsive libraries'.

Presenters outlined, among other things, the challenges they had encountered during the transition from traditional to virtual teaching and research. They also talked about the critical role of open research data during the Covid-19 crisis. Prof Kanshukan Rajaratnam felt that opening data for sharing could contribute to saving lives and minimising the impact of misinformation. Librarians were advised to find creative ways of analysing and making sense of data in their environments. They were commended for the role that librarians had played in saving the 2020 and 2021 academic years, and for the seamless way they moved from offering library services in person to doing it on virtual platforms. On the last day of the Symposium, library leaders shared their insights and perspectives on providing leadership during a time of crisis. They commented that it was important to lead with compassion, seeing that they were responsible for staff either affected by or infected with Covid-19.

Table 6: Research and Innovation action programmes

Surname	Name	Faculty	Department	Project name	Coordinator institution	Coordinator country	Total project cost in € – entire consortium	Project cost in ZAR – SU participant only
De Oliveira	Tulio	FMHS	Health	COVICIS	Uni Vaudois	Switzerland	10 048 971	7 650 000
Rautenbach	Adam	Science	Biochemistry	TRIPLE-A-COAT	Uni Leuven	Belgium	5 383 032	2 559 200
Van der Zalm	Marieke	FMHS	Paediatric TB	VERDI	Penta	Italy	9 981 000	3 400 000
Warren	Rob	FMHS	Medical Biochemistry	XACT	UCT	SA	5 510 162	747 346
Young	Taryn	FMHS	Global Health	GELA	SAMRC	SA	3 216 366	12 240 000
TOTAL							€34 139 531	R26 596 546

Table 7: EU-SA joint collaboration funded by DSI

Surname	Name	Faculty	Department	Acronym	Coordinator institution	Coordinator country	Total SU project cost (ZAR)
Du Plessis	Anton	Science	Physics	NiWReAlloys	Hochschule Mittweida	Germany	3 238 000
Klumperman	Bert	Science	Chemistry and Polymer science	3D4D ²	Leibniz Inst	Germany	1 518 345
Moore	John	AgriSciences	Viticulture and Oenology	Crops For Change	CREA	Italy	1 200 000
Salie	Khalid	AgriSciences	Animal Sciences	BlueCycling	Uni Gothenburg	Sweden	1 200 000
Von der Heyden	Sophie	Science	Botany and Zoology	GenClim	Tech Uni Denmark	Denmark	1 134 000
TOTAL							8 290 345



Prof Rajaratnam at the SU Library Symposium 2021

4. Networked and collaborative teaching and learning

The institutional goals for this theme are:

- Focus on a learning-centred approach to teaching, whilst promoting a holistic understanding of teaching and learning.
- Foster interdisciplinary and interprofessional teaching and learning by empowering students to participate in a learning community where staff and students work together to learn, solve problems, research and innovate.
- Create an institution of continuous learning that is skilled at co-creating and sharing knowledge and insights.
- Promote the professionalisation of academics in their teaching role, and the scholarship of teaching and learning.
- Develop a digital strategy to provide the basis for digital fluency and the meaningful integration of learning technologies towards a networked University that engages and inspires students, staff and alumni.
- Expand on SU's knowledge offering to serve new student markets.
- Promote the continuous renewal of the University's academic programmes by means of a systemic process with clearly assigned roles and responsibilities for the various role-players.

5. Research for impact

The institutional goals for this theme are:

- Develop a research agenda derived from SU's values, societal needs and the sustainability imperative.
- Conduct research of significance based on selected, focused strategic research areas.
- Inform the future research agenda and strategically involve our stakeholders.
- Conduct collaborative and interdisciplinary research that addresses the grand challenges of society.
- Create an embedded culture of innovation and entrepreneurship in our research.

5.1 Research outputs

According to the official DHET report on 2019 publications, SU produced 3 999,67 weighted research outputs (master's, doctoral degrees and publications) – a new record for the University. This makes SU one of the most research-productive institutions nationwide.

The DRD, who manages the annual submission of research output to the DHET for subsidy purposes, has opened tenders for a new product that will replace the current online system for capturing research publications, which has been used for more than 15 years.

SU has submitted three rounds of creative outputs since the DHET announced that creative outputs could be included for subsidy purposes from the end of 2019.

The previous DVC: RI&PS report gave feedback on the outcome of the first round (outputs from 2016 to 2018), in which SU fared exceptionally well, having received subsidy for 46 approved units. The DRD was given a feedback opportunity to the DHET by means of a survey after the first round of submissions. We hope for another opportunity to do so.

The second and third rounds of submissions were made in November 2020 (outputs from 2017 to 2019) and November 2021 (outputs from 2018 to 2020) respectively. The DHET will report back on the 2020 submission later this year, while feedback on the 2021 submission will be received in 2023. Table 9 shows what was submitted.

A call has been circulated within the University for the next submission, which will cover outputs from 2019 to 2021. The DHET deadline has changed, which means that this submission will be finalised by 30 September 2022.

5.2 Innovation



5.2.1 Auda-Nepad/CSIR, SU Centre Of Excellence In Science, Technology and Innovation (COE-STI)

During an AUDA-NEPAD/CSIR/SU workshop, the following areas were identified for further implementation in 2022 and beyond:

Table 8: Weighted research outputs

	2012*	2017*	2018*	2019*
Total weighted research outputs	2 982,11	3 725,53	3 706,15	3 999,67

*Refers to publication output year.

Table 9: Research outputs and subsidy units submitted

Submission year	Subsidy units submitted
2020 (outputs 2017–2019)	36,28
2021 (outputs 2018–2020)	35,81

5.2.1.a 35 Innovations aligned with Agenda 2063 impact areas

1. Industrialisation and wealth

creation: transformed economies and job creation, modern agriculture for increased production and productivity, blue/ocean economy for accelerated economic growth, industrialisation, job creation, world-class infrastructure; peace, security and stability; GDP; markets and trade, CFTA, et cetera.

2. Shared prosperity and transformed

livelihoods: a high standard of living, quality of life and wellbeing for all citizens; healthy and well-nourished citizens, democratic values, practices, universal principles of human rights, justice and rule of law entrenched, African

cultural renaissance is pre-eminent, engaged and empowered youth and children, access to energy, water, health care, employment, education, et cetera.

3. Human capital development and transformed institutions: well-educated citizens and skills revolution underpinned by science, technology and innovation, financial and monetary institutions on the continent established and functional, capable institutions and transformative leadership in place, a fully functional and operational African peace security architecture, governance, et cetera.

4. Natural resources management and environmental resilience: environmentally sustainable and climate-resilient economies and communities, environmental resilience, and climate change.

5.2.1.b Agenda 2063 impact area 1: Industrialisation and wealth creation

<ol style="list-style-type: none"> 1. Aquaculture 2. Bio-energy – ethanol processing 3. Bio-energy – alternative sweeteners ScFOS 4. Agro-processing – traditional medicine 5. Agro-processing – traditional food products 6. Bio-manufacturing of agricultural biologicals and probiotics 7. Safe and efficient ports 8. Post-harvest technologies 9. Post-harvest virtual prototyping platform 	<ol style="list-style-type: none"> 10. Remote sensing for precision agriculture 11. Diagnostic and surveillance systems to manage disease outbreaks 12. AUDA-NEPAD SANBio 13. AUDA-NEPAD Networks of Water centres of excellence 14. Portal for the provision of status indicators related to land use, land-use change, and forestry 15. Food science – indigenous products 16. CSIR Centre for High Performance Computing
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5.2.1.c Agenda 2063 impact area 2: Shared prosperity and transformed livelihoods

<ol style="list-style-type: none"> 1. Vaccine development for Covid-19 2. Point-of-care test for tuberculosis 3. High throughput screening technologies for application in drug discovery 4. Epidemiological modelling 5. Bioinformatics and data analysis 6. Telehealth scale-up framework (TDSF) 7. Network Emulation and Simulation Laboratory (NESL) 8. MaRoON Health Passport – early detection of non-communicable diseases (NDCs) and prevention/health screening tool 9. Renewable energy – heliostat/heliopod 10. Renewable energy – PV health monitoring 	<ol style="list-style-type: none"> 11. Renewable energy – Solar Turtle 12. Renewable energy – wind generator 13. Modular clinic with capability to use renewable energy and other environmentally friendly innovations, handheld CO2 devices for risk assessment 14. Future Pharma – localization of active pharmaceutical ingredient production for both small-molecule and biopharmaceutical drugs 15. Precision medicine-based screening, precision medicine – ovarian cancer, development of affordable human vaccines
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5.3 SU Research Facebook and Twitter pages



Facebook and Twitter pages

The Facebook and Twitter pages for Research at Stellenbosch University serve as platform to enhance and expand the reach of the research being done at the University, and to highlight the profile and achievements of our researchers.

Facebook: <https://www.facebook.com/stellenboschuniresearch>

Twitter: <https://twitter.com/MatiesResearch>

The Facebook page Research at Stellenbosch University was created in July 2019 and has attracted 1 630 followers.

- The highest reach in 2021 was 6 454 (October 2021). Reach refers to the number of people who had any content from our page or about our page enter their screen – including posts, check-ins, ads and social information from people who interact with our page. This is organic reach; we have not used paid boosting to reach more people. The particular post formed part of our #DistinguishedProfessors campaign and featured

Prof Yusef Waghid, a distinguished professor in the Department of Education Policy Studies.

- Our highest number of engagements per post was 700 (August 2021). Post engagements refer to the number of reactions, comments, shares and clicks on a post.

The Twitter page Research at Stellenbosch University/@MatiesResearch was established in June 2021 through the former @MatiesStudent Twitter page. To date, we have 17 323 followers.

Impressions

Impressions on Twitter is a total tally of all the times a Tweet has been seen; i.e. not only the times it appears in followers' timelines, but also the times it has shown up in searches or as a result of someone liking the Tweet. These are organic impressions; none of our content is promoted Tweets.

Profile visits indicate the number of times users have visited the *profile* page. Over 12 000 users have visited our Twitter profile page in June to December 2021.

5.4 Stellenbosch University Knowledge Directory opening up expertise to the world



The Knowledge Directory

In 2015, SU established a Knowledge Directory to increase the visibility of its research expertise by making information about SU researchers more accessible by means of a web console featured on the SU website. The value of the Directory lies in the following: prospective postgraduate students can identify potential supervisors; it will facilitate media liaison; potential national and international research collaborators and industry partners can

search the Directory for SU experts; it may promote interdisciplinary networking among SU researchers; and it has the general potential to enhance the visibility of SU research strengths and individual research expertise.

Visit the SU Knowledge Directory at http://www0.sun.ac.za/knowledge_directory/.

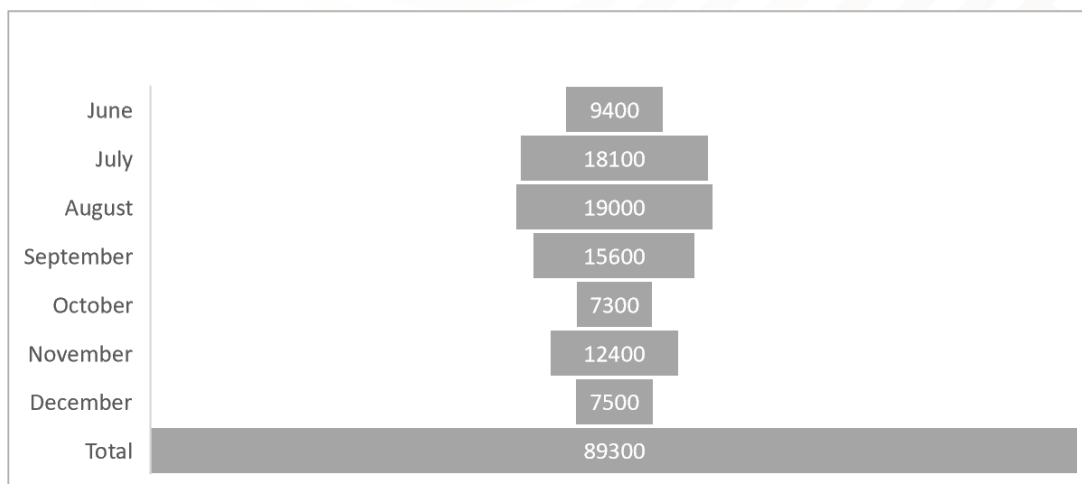


Figure 14: Tweet impressions 2021

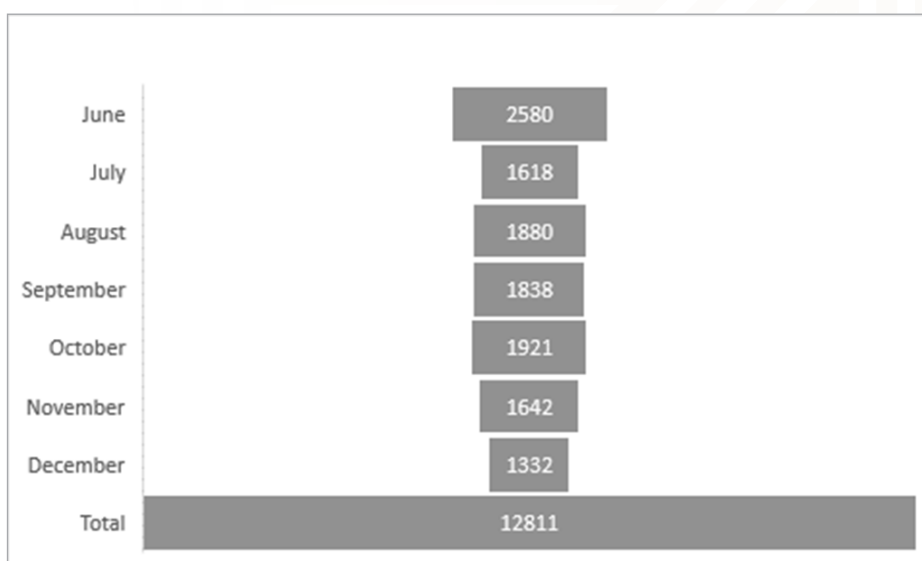


Figure 15: Profile visits 2021

5.5 Research at Stellenbosch University publication (Research@SUN)



The publication *Research@SUN*

Produced annually by the DRD, *Research at Stellenbosch University* is regarded as one of SU's flagship publications and a platform to raise the visibility of our research excellence and the relevance and benefit it has in addressing societal needs.

The latest edition features innovative and interesting Covid-19 research at SU during 2020 and beyond that places the pandemic front and centre in studies across all academic disciplines. Offering the national and international scientific community as well as other interested parties a comprehensive yet accessible overview of such research, *Research@SUN* features breakthroughs in medical explorations, highlights the important role SU immunology experts play in combatting the pandemic and shows how biotechnology is being employed to overcome Covid-19-related challenges. This issue also includes research that tracks the socio-economic impact of the pandemic and emphasises how researchers and thinkers in the humanities have responded to our current situation.

Some of the contributions focus on Covid-19 research related to full-genome sequencing, wastewater management, immunology, biomarkers, new diagnostic tools, synthetic pharmaceuticals, conservation, oxygen treatment, pathogen transfer, housing, children, sport and exercise medicine, vaccines, education, personal protective equipment, food security, woman researchers, music, coronavirus visualisations, social distancing, lockdowns, mental health, tax relief, rehabilitation, nurses, gender equality, disability and businesses.

- Read the flipbook version of *Research at Stellenbosch University* here: https://bit.ly/su_research_20.
- SU researchers also wrote many Covid-19-related editorials and opinion pieces. The DRD compiled this [report](#) with more than 50 of these contributions produced between March 2020 and February 2021.
- Watch the [video](#) about the publication to get a sneak peek of what you can expect!

5.6 SU distinguished professors





Prof F Bauer

In 2014, SU introduced a programme for honouring our top researchers by means of distinguished professorships. The title was created to recognise the very best SU academics who have reached the pinnacle of achievement in their careers. Eligibility criteria include having been appointed as professor at SU for at least five years; continuous excellent performance in the past three years; international stature in their particular field; proven exceptional performance and leadership in higher education with reference to research and publications, postgraduate study leadership, learning and teaching, and community interaction. Furthermore, appointees must have demonstrated their alignment with the University's vision of being inclusive, innovative and



Prof T Young

future-focused. Currently, we have 38 distinguished professors at SU.

The DRD launched an online campaign in 2020 to highlight the profiles of some of our distinguished professors with reference to a series of questions. From August to November 2021, interviews conducted with them were published on a dedicated website for distinguished professors (<https://sites.google.com/view/distinguishedprofessors/home>) and shared across several social media platforms – the Research at Stellenbosch University Facebook page, SU Facebook page and Research at SU Twitter page. The Research at Stellenbosch University Facebook and Twitter pages are a useful platform for sustained visibility of research activities at SU.

5.7 SU women in research



The SU Women in Research platform

Our research community includes woman researchers with exceptional talent and innovative ideas who deliver excellent research with relevant outcomes. Through their research and research-related activities they have been able to influence decision-making processes, contribute directly to improving people's lives, and present innovative ideas that lead to technological developments and new concepts that give rise to more sustainable practices. The DRD created an online platform dedicated to these accomplishments of the past few years: Women in Research (<https://bit.lysuwomen>).

5.8 Research chairs and centres of excellence



The brochure for research chairs and centres of excellence

SU's vision is to be innovative and inclusive, and to advance knowledge in service of society. Our strategic position and the focus of our research chairs and centres of excellence (CoEs) show that we are aligned with national needs and priorities, as confirmed in the our presidency's Medium Term Strategic Framework (MTSF), the National Development Plan (NDP) for South Africa and the United Nation's global Sustainable Development Goals (SDGs). A booklet on our research chairs and CoEs is available and provides a snapshot of

the key initiatives undertaken by them that enable us to pursue research excellence vigorously and contribute to the development of local and global capacity. We realise the benefits that these initiatives bring, not only in the form of increased visibility for the University, but also for researchers – enabling funding opportunities, research collaboration and networking. The booklet also showcases the relevance and applicability of our research in society, and our contribution to improving societal conditions.

Read it here: <https://tinyurl.com/chairs-coe>.

5.9 Stellenbosch Forum lecture series 2021

ANOD/DRD
AFDELING/DIVISION
NAVORSINGSONTWIKKELING
RESEARCH DEVELOPMENT
UNIVERSITEIT STELLENBOSCH UNIVERSITY

PRESENTS:

STELLENBOSCH FORUM

LECTURE SERIES

RAGE

People in the world have every reason to be in a state of total rage. What we do with that rage together is important. Rage can be crafted—it's sort of an art form of politics (Butler, New Yorker, 2020).

Why is it that our current time is referred to as 'the age of rage'? Why is it that so many very different feminist scholars (Butler, Nussbaum, Rose among others) are writing about rage, claiming also that 'feminists are raging'? What are South Africans specifically so enraged about? To what extent is this rage gendered and raced and classed? In this paper I will address some of these questions by looking at South African rage from a psychological perspective, trying to unpack the nature of rage, the causes of rage and the impact of rage in our particular context. I want to explore how rage, when recognized, understood, and managed can become an energizing and constructive force, rather than a destructive one. I will do this by looking at the recent literature, but also by discussing some clinical vignettes.

PROF LOU-MARIÉ KRUGER

Professor Lou-Marié Kruger obtained a M.Soc.Sci. (Political Studies) from the University of Cape Town (1989) and a M.A. and Ph.D. (Clinical Psychology) from Boston University (1996). She completed an American Psychological Association accredited internship for Clinical Psychology at Massachusetts Mental Health Center, Harvard Medical School in 1996. She was a runner-up for the national award Distinguished Women Researcher in 2016. She was also awarded a B-2 rating by the NRF in 2017. She is currently Professor and Chair of the department at the Department of Psychology of Stellenbosch University. In her research, she focuses on the emotional worlds of low-income South African mothers, utilising mainly psychoanalytic, feminist and postmodern theoretical frameworks. Kruger has also had a small part-time private practice in Stellenbosch for more than 20 years.

Wednesday, 20 October 2021
13:00 - 14:00
Register: <https://bit.ly/3iWSzsV>
Enquiries: drdcomm@sun.ac.za

A MS Teams link will be sent to all participants via e-mail.

UNIVERSITEIT
STELLENBOSCH
UNIVERSITY 100
1918-2018

ANOD/DRD
AFDELING/DIVISION
NAVORSINGSONTWIKKELING
RESEARCH DEVELOPMENT
UNIVERSITEIT STELLENBOSCH UNIVERSITY

PRESENTS:

STELLENBOSCH FORUM

LECTURE SERIES

COASTAL ECOLOGY AND CONSERVATION: MERGING SCIENCE AND TRADITIONAL KNOWLEDGE IN INHAMBANE BAY, MOZAMBIQUE

Mangroves occur in tropical and subtropical coastal areas around the globe where they serve several ecosystem functions. In South Africa and Mozambique, mangroves face several challenges. In South Africa, mangroves are well-studied and occur largely in government-mandated protected areas. In Mozambique, very little is known about mangrove habitats and protection is largely community-based. Although conservation measures are in place and monitoring is rigorous, the effectiveness of these zones has not yet been studied. Using scientific methods and traditional knowledge, we examined the biodiversity of mangroves in South Africa and Mozambique, and attempted to examine the effects of community-based no-take zones and human influence on mangrove ecosystems and diversity. The Inhambane Bay Mangrove Study provides a unique opportunity to understand: 1) what makes a community-supported conservation initiative successful; 2) how this system works with little to no conflict between stakeholders each with a unique understanding and set of knowledge; and 3) how to involve communities in scientific study of their environment. Using multiple approaches, we reveal not just the biology and ecology of the Inhambane Bay mangroves, but also the stories of the communities that have protected this habitat for centuries and the lessons we have learnt from them. We also discuss the importance of working together respectfully and incorporating indigenous knowledge into scientific studies and resource management.

DR NASREEN PEER

Dr Nasreen Peer holds a BSc (Hons) in Marine Biology from UKZN, and a PhD in Zoology from NMU. She specialises in the diversity and ecology of aquatic invertebrates in a wide range of coastal and freshwater habitats, particularly in estuaries, rocky shores and mangroves. She is currently a lecturer at Stellenbosch University and the co-founder of Argonaut Science (Pty) Ltd. Her current research interest involves understanding community-based conservation in Mozambique and South Africa, a project that involves collaboration between community members and researchers. Peer's interest in science communication and knowledge exchange is growing as she tries to incorporate citizens, indigenous communities and other researchers into each of her research projects. She believes that each person has something unique to offer about their environment and encourages every person to learn and research beyond just what is expected.

Thursday, 11 November 2021
13:00 - 14:00
Register: <https://bit.ly/3jInG0o>
Enquiries: drdcomm@sun.ac.za

A MS Teams link will be sent to all participants via e-mail.

UNIVERSITEIT
STELLENBOSCH
UNIVERSITY 100
1918-2018

Two lectures in the Stellenbosch Forum series

The Stellenbosch Forum lecture series was introduced in 1990 and provides regular opportunities for University staff and students as well as interested members of the public to learn more about the relevant, world-class research that is conducted at SU. Researchers are requested to present their academic research topics in a way that is understandable for non-experts in the field. Therefore, these lectures provide the ideal opportunity for critical debate and interesting discussions across disciplinary boundaries. In 2021, the series was presented online.

Recordings of the lecture series have been uploaded here: <http://www.sun.ac.za/english/research-innovation/Research-Development/research-facts/lectures-presentations>.

5.10 Research Indaba Series

The theme for 2021 was, 'Integrity, quality and security: Key considerations in the knowledge production process'.

Table 10: Registrations per lecture

Presenter	Title	Registrations
Prof Lou-Marie Kruger	Rage	132
Dr Nasreen Peer	Coastal ecology and conservation: Merging science and traditional knowledge in Inhambane Bay, Mozambique	30
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ANO|DRD
ASSOCIATE DIVISION
NAVORSINGSONTWIKKELING
RESEARCH DEVELOPMENT

PRESENTS:

RESEARCH INDABA SERIES

Integrity, Quality and Security: key considerations in the knowledge production process

Save these dates!

The aim of the Indaba is to provide an opportunity where researchers from across the ten Faculties at SU can discuss and debate topics of common interest.

The theme this year will be around key considerations that researchers have to keep in mind during the knowledge production process. The Indaba will be presented online in three separate sessions and will focus on research integrity, research publication practices and research data management. Each session will include a presentation by SU experts in the field, as well as an opportunity to discuss the SU support structures in place related to these topics. Researchers will also be given the opportunity to share their experiences and opinions on these topics.

We trust that this will provide a platform for dynamic discussions!

19 July 2021 - research integrity
18 August 2021 - research publication practices
25 October 2021 - research data management

The sessions will take place from 10:00 to 12:00. More information on each session and how to register will be advertised closer to the time.

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1918-2018

ANO|DRD
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NAVORSINGSONTWIKKELING
RESEARCH DEVELOPMENT

BIED AAN:

NAVORSINGSINDABA REEKS

Integriteit, Kwaliteit en Sekuriteit: sleuteloorwegings in die kennisproduksieproses

Onthou hierdie datums!

Die doel met die Indaba is om 'n geleentheid te skep waar navorsers regoor die tien fakulteite aan die US saam kan praat en verskillende opinies kan uitspreek rondom temas van gemeenskaplike belang.

Hierdie jaar se tema fokus op sleuteloorwegings wat navorsers tydens die kennisproduksieproses in gedagte moet hou. Die Indaba word in drie afsonderlike sessies aanlyn aangebied en fokus op navorsingsintegriteit, navorsingspublikasiepraktyke en die bestuur van navorsingsdata. Elke sessie sal 'n aanbieding deur US-kundiges in die veld insluit, asook 'n geleentheid om die US-ondersteuningstrukture te bespreek wat verband hou met hierdie onderwerpe. Navorsers sal ook die geleentheid kry om hul ervarings en menings oor hierdie onderwerpe te deel.

Ons vertrou dat hierdie 'n platform vir dinamiese besprekings sal bied!

19 Julie 2021 - navorsingsintegriteit
18 Augustus 2021 - navorsingspublikasie praktyke
25 Oktober 2021 - navorsingsdatabestuur

Die sessies sal vanaf 10:00 tot 12:00 plaasvind. Meer inligting oor elke sessie en hoe om te registreer sal nader aan die tyd geadverteer word.

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Schedule for the Research Indaba Series

The aim of the annual Research Indaba is to host an occasion where researchers from across the ten faculties at SU can discuss and debate topics of common interest.

The theme for 2021 was about key considerations that researchers have to keep in mind during the knowledge production process. The Indaba was presented as an online series for the first time. Three separate sessions were held, focusing respectively on research integrity, research publication practices and research data management. Each session included a presentation by SU experts in the field as well as an opportunity to discuss the support structures for related activities available at SU. Researchers were also given the opportunity to share their experiences and opinions on the topics under discussion.

Recordings of the indaba sessions have been uploaded here: <http://www.sun.ac.za/english/research-innovation/Research-Development/research-facts/lectures-presentations>.

5.11 New cross-cutting research entities

5.11.1 STELLENBOSCH UNIVERSITY SCHOOL FOR CLIMATE STUDIES

On 29 July 2021, SU officially launched the Stellenbosch University School for Climate Studies as part of its efforts in the battle against climate change. The School is the first of its kind in South Africa that has the status of a faculty. The aim is to create transdisciplinary capacity that will combine the climate-related knowledge systems of SU faculties, public sector climate policies and initiatives, private sector climate redress and innovation capacities, and SU's social impact mission in both academic and applied ways – all in support of the transition to a climate-resilient society and a low-carbon economy.

- Read more on the climate-related research done at SU in a special publication dedicated to this very important focus area at <https://bit.ly/SUclimatestudies>.
- For more information on the School, visit <http://www.sun.ac.za/english/research-innovation/Climate-Studies>.
- Watch an overview of the School's activities here: <https://www.youtube.com/watch?v=dYFVWN1TFf0>.



The publication on the School for Climate Studies



School for Data Science and Computational Thinking

5.11.2 School For Data Science And Computational Thinking

The official opening of SU's School for Data Science and Computational Thinking on 29 July 2019 was celebrated at a function at the Stellenbosch Institute for Advanced Study (STIAS). Aiming to be a world-class institution for data science and computational thinking in and for Africa, the School works across SU's ten faculties, generating multi-, inter- and trans-disciplinary collaboration. It also spans the entire academic project, from under- and postgraduate training to research and specialist consultation.

"Through our new School for Data Science and Computational Thinking, Stellenbosch University is ready to enhance South Africa's competitiveness in the Fourth Industrial Revolution." For this quote and more on the School visit <https://www.sun.ac.za/english/data-science-and-computational-thinking/>.

5.11.3 Biomedical Research Institute (BMRI)

The BMRI's main aims are to investigate diseases that have the greatest impact on communities in South Africa and the rest of Africa, and to translate its discoveries into improving the diagnosis, prevention and treatment of illnesses such as TB, HIV, diabetes, heart disease and neurological disorders. The facility is on par with the most advanced and sophisticated biomedical research facilities in the world. It facilitates the immediate expansion of current research activities as well as strengthening of research and teaching capacity in fields such as bioinformatics, genomics, anatomy, neurobiology, advanced surgical sciences and biobanking.

For more on the Institute visit <http://www.sun.ac.za/english/faculty/healthsciences/biomedical-research-institute>.



Inside the Biomedical Research Institute (BMRI)

5.12 Research Facts and Figures

The DRD brochure Research Facts and Figures provides an overview of research at SU, ranging from information about rankings to postdoctoral fellowships, international funding and research publication data. Read the brochure here: <https://online.fliphtml5.com/cvapr/ihia/>.

5.13 Researcher Persona on My.SUN

The My.SUN tab on the SU home page hosts "personas" for staff, undergraduate and postgraduate students, and researchers. Researcher Persona is a one-stop platform for researchers to find links to research-related information.

The links found in this way cover important research-related information from different support services, including the DRD, the Postgraduate Office, Stellenbosch University International (SUI), the LIS and the Division for Information Technology (IT). The DRD coordinates the personas. Information is divided into five main categories, namely: Skills Development, Research Information, Systems and Tools, Support

Services and Support Divisions. The platform is dynamic – it is updated with links to relevant information as the need arises. Visit at .

5.14 Research information package

The DRD has developed a research-related information package that they send once a year to deans, vice-deans: Research and heads of department.

The package provides a snapshot of research activities within each faculty and department, including – to name but a few – statistics on research outputs, information on funding obtained, NRF ratings, ethics applications and general information on the DRD's functions and services.

The DRD also works with the Division for Information Governance (IG) by providing the research-related data used to populate the PowerBI™ warehouse in an effort to enhance the value of the information package and create synergy between the two offerings.



The Research Facts and Figures brochure



The research-related information package

5.15 Library research support

The LIS strives to increase our leadership role in digital scholarship and research support at the institution. This is aligned with the University's strategic theme of "Research for impact".

5.15.1 Digital Scholarship

The LIS's digital repositories grew significantly in 2021 and showed improved usage statistics compared to previous years.

A total of 1 154 theses and dissertations and 1 233 research articles by SU authors were added to the institutional repository, SUNScholar, in 2021. This is a significant increase in research articles from 2020. Use of the repository also increased, with 461 735 visits and 158 470 downloads.

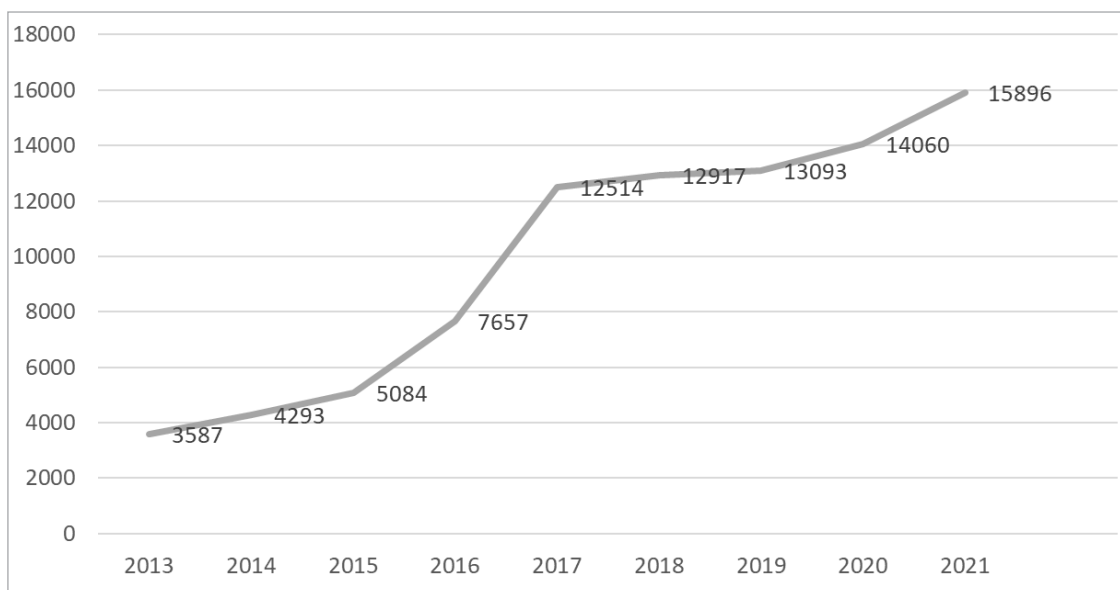


Figure 16: Total items in SUNDigital collections

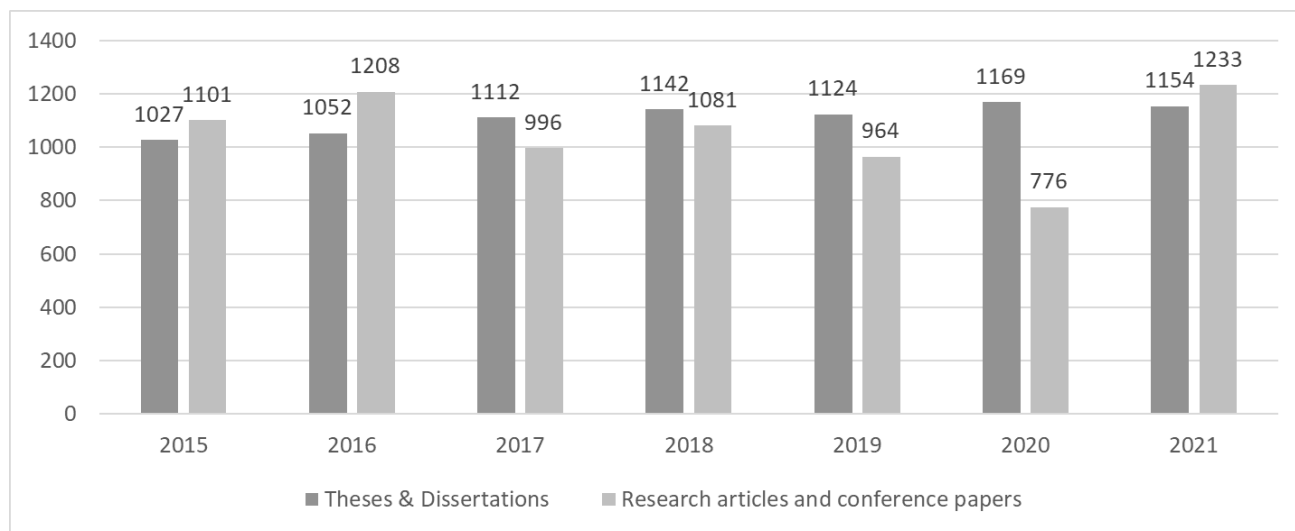


Figure 17: Research outputs added to SUNScholar

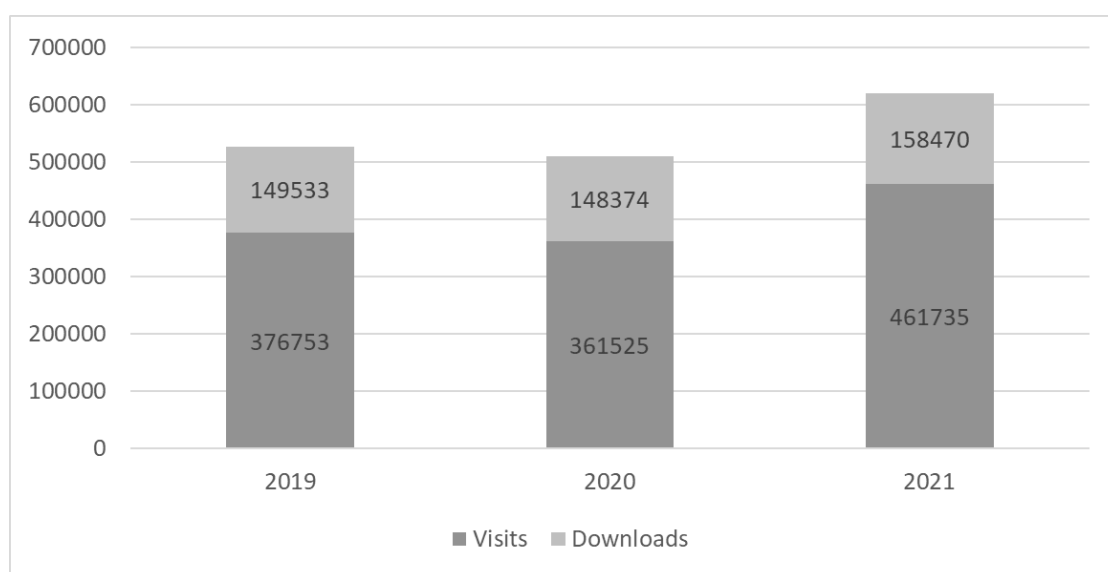


Figure 18: SUNScholar usage

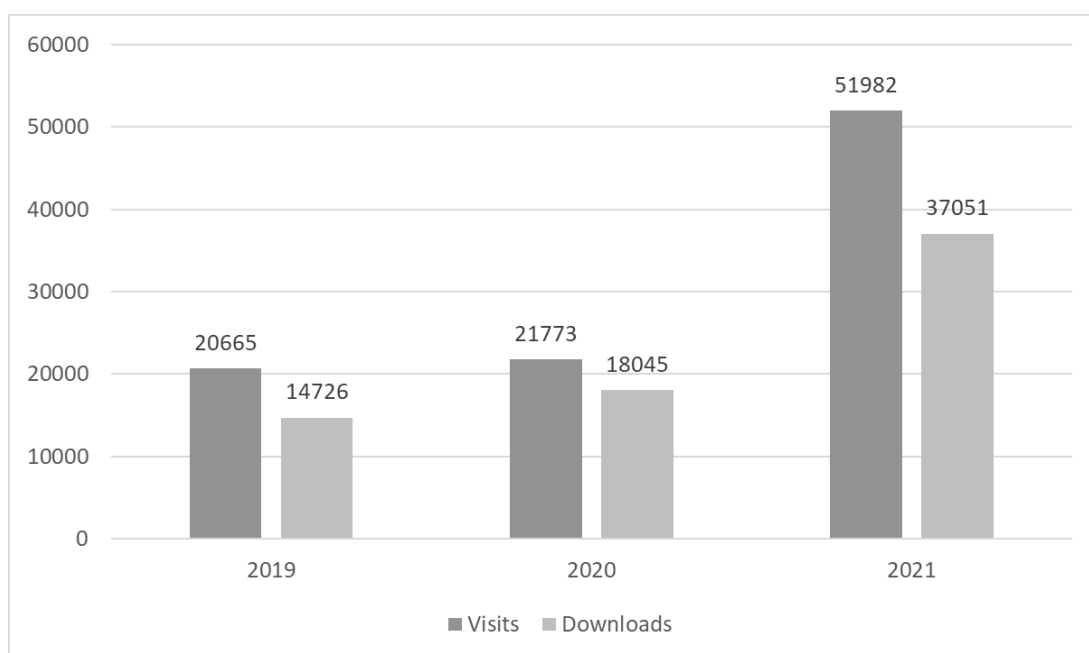


Figure 19: SUNDigital usage statistics

The 1 836 new items that were added to our digital heritage repository, SUNDigital Collections, in 2021 have brought the total number of items in the repository to 15 896. Use of this repository also improved significantly; the figures more than doubled from 2020. Noteworthy collections that were added include the Hidden Years Music Archive and the Genadendal Museum music collection.

SUNScholarData, the LIS's research data repository, also showed growth and increased usage in 2021, as summarised in Table 11.

SUNJournals, the LIS's open access journal hosting service, hosted 93 research outputs by SU authors in 21 active journals in 2021.

5.15.2 Digital Humanities

A Digital Humanities Team was established in March 2021 to investigate what role libraries can play in supporting digital humanities and developing related services. 'Digital humanities' is an umbrella term for theories, methodologies and practices related to humanities scholarship that uses the digital computer as an integrated and essential part of its research and teaching activities.

In May 2021 the Team submitted a report and subsequently developed a library guide and web pages for digital humanities. A collaborative project with the Department of Economics followed, which entailed the digitisation of *Men of the times: Old colonists of the Cape Colony and Orange River Colony*. A high-resolution searchable digital copy is hosted at SUNDigital Collections, which means that the book now is freely available to researchers to access, analyse and use. Subsequent projects entailed the digitisation of two more Africana resources for the Department of Economics and the digitisation of an Anglo-Boer War diary for research purposes. The LIS hopes to keep collaborating with researchers in digital humanities in future and to expand its service in this field.

5.15.3 Open Access Week

International Open Access week 2021 was celebrated worldwide from 25 to 31 October with the theme 'It matters how we open knowledge: Building structural equity'. The LIS presented a topical webinar on 26 October featuring three presentations: 'How can ShareYourPaper make self-archiving simpler for researchers?' by Joe McArthur, Assistant Director of the Right to Research Coalition; 'The wicked problems of academic publishing' by Dr John Measey, Chief Researcher and Deputy Director at the Centre for Invasion Biology (CIB) located in the Department of Botany and Zoology at SU; and 'Building sustainable information structures through open access: Impact of transformative agreements and beyond for Africa' by Naomi Visser, Manager: E-resources, SU Library.

5.15.4. OA Publication Fund

The Open Access Publication Fund was established in 2009 to support SU researchers who wished to publish in open access journals. In April 2021, however, funds ran dry and the LIS was forced to close the Fund permanently. While the Fund was functioning, 1 035 articles were funded at a total cost of R11 090 416.

The LIS continues to administer the University's deposit account with SpringerNature (formerly BioMed Central), which allows SU researchers to submit open access articles to SpringerNature without having to pay author fees before publication. It also affords researchers a 15% discount on the article processing charge (APC) for some SpringerNature titles. However, researchers have to refund the LIS for 100% of the author fees, plus 15% VAT, upon publication.

Furthermore, the LIS has signed agreements with some publishers that make it possible for SU researchers to publish open access without paying any article processing charge (APC). These publishers include Cambridge University Press (CUP), Association for Computing Machinery (ACM), SAGE, ImedE and Emerald.

5.15.5 Research Data Services

As regards training, we hosted three sessions as part of the #SmartResearcher workshop programme in 2021. Table 12 sets out the figures.

Table 11: Research data repository

	2019	2020	2021	Total
Total deposits	47	43	91	181
Number of depositors	10	15	23	40
Total views	2 774	7 970	5 034	15 778
Total downloads	209	1 765	3 078	5 052

Table 12: *Training sessions 1st semester*

Training session	Attendees	Views (of the recording)
Introduction to RDM	62	30
Data Sharing and Dissemination	41	7
How to Use the Institutional Research Data Repository	36	11

Table 13: *Training sessions 2nd semester*

Training session	Attendees	Views (of the recording)
Introduction to RDM	29	11
Data Sharing and Dissemination	15	1
How to Use the Institutional Research Data Repository	25	3

RDM-related training sessions were also presented for several faculties and departments upon their request, for example:

- The Faculty of Economics and Management Sciences requested an introductory session for its postgraduate students.
- The Centre for Historical Trauma and Transformation requested an introductory session for its master's and doctoral students.
- The Graduate School of Arts and Social Sciences requested a session on the LIS's research support services, which included a presentation on research data services.
- The Department of Curriculum Studies requested an introductory session as well as a session on data management planning.
- The Faculty of Military Sciences requested an introductory session as well as a data management planning session as part of Military Week 2021.

As regards research data management consultation and information services, Senate's approval in November 2020 of the SU Research Data Management Regulations boosted the profile of RDM across the institution. Combined with the launch of the Research ICT Service Desk earlier this year, this has led to a significant increase in queries related to research data. Researchers and students submitted multiple requests via the Research ICT Service Desk. The bulk of research data management queries were related to data management planning and SUNScholarData.

As regards data management planning, the LIS conducted a landscape analysis on the various software solutions available and evaluated several options. The preliminary analysis pointed to Data Stewardship Wizard as the most promising option for institution-wide deployment. Functional testing of the software was conducted by setting it up in a development environment and making use of the black-box testing technique.

6. Employer of choice

The institutional goals for this theme are:

- Develop a comprehensive people strategy for SU that embraces diversity and equity, leverages unique talents and strengths, promotes life-long learning and celebrates achievements.
- Enhance the well-being of our people by creating and promoting an enabling, inclusive, equitable, healthy and safe working and learning environment that encourages our diverse staff to maximise their productivity, and where they feel valued and contribute to SU's excellence.
- Improve human resource processes through the application of technology and digitalisation.
- Develop and execute a game-changing talent acquisition and talent management plan, which includes equitable remuneration, the management and rewarding of performance, the identification of competencies and the development of talent and leadership throughout the career cycle of each SU employee.
- Support the development of SU as a learning organisation that is responsive to both individual and organisational needs.

6.1 Awards and prizes

6.1.1 Draper Memorial Medal



Prof Alex Kisters

Prof Alex Kisters, a structural geologist in the Department of Earth Sciences at SU, is this year's recipient of the prestigious Draper Memorial Medal, the highest scientific award of the Geological Society of South Africa (GSSA).

The award is made annually to a GSSA member for career-long exceptional contributions to geological science, with particular reference to the advancement of South African geology. The Draper Memorial Medal was instituted in 1932 in honour of Dr David Draper, who was the main driving force behind the founding of the GSSA in 1895.

Prof Kisters is honoured for his significant contributions in the course of his career to the understanding of the crustal architecture of Southern Africa, in a number of tectonic domains, and for his career-long commitment to student teaching and guidance.

6.1.2 Highly Cited Researchers 2021



F.l.t.r. Profs Oonsie Biggs, Linus Opara and Dave Richardson

Three eminent SU academics have been included on the Highly Cited Researchers™ list for 2021 released by the Web of Science Group on 16 November: Profs Oonsie Biggs (cross-fields), Umezurike Linus Opara (Agricultural Sciences) and Dave Richardson (Environment and Ecology).

The highly anticipated list identifies scientists and social scientists who have produced multiple papers ranking in the top 1% by citations for their field and year of publication, demonstrating significant research influence among their peers. The 2021 list contains 6 602 highly cited researchers from more than 70 countries and regions in 21 fields categorised under sciences and social sciences.

6.1.3 PSSA Lifetime Award



Prof Faadiel Essop

Prof Faadiel Essop, Director of the Centre for Cardio-metabolic Research in Africa (CARMA) at SU, received a Lifetime Award from the Physiology Society of Southern Africa (PSSA) in recognition of his contribution to the physiological sciences. He has had a long and distinguished career, both nationally and internationally.

6.1.4 Grand Challenges Africa Award



Dr Gabriel Mashabela

potential new treatments for tuberculosis (TB). The AESA grant is awarded specifically for drug discovery research.

Dr Gabriel Mashabela, a specialist scientist with the Centre for TB Research at the South African Medical Research Council (SAMRC), received the Grand Challenges Africa Award from the Alliance for Accelerating Excellence in Science in Africa (AESA). The Award will help to fund his research on South African medicinal plants with a view to finding

6.1.5 SAIIE Award for Industrial Engineering Excellence in Teaching and Learning



Prof Jan Van Vuuren

other aspects of the academic project.

Prof Jan van Vuuren, from SU's Faculty of Engineering, received the South African Institute for Industrial Engineering (SAIIE) Award for Best Industrial Engineering Excellence in Teaching and Learning. The Award recognises excellence in education, particularly innovation and novel teaching methods, course designs, assessments and

6.1.6 ESEEA Excellence in Structural Engineering Education Award



Prof Richard Walls

innovative approaches to developing technical competency in structural engineering and associated fields. The details included his involvement in teaching undergraduate and postgraduate courses at SU, such as Structural Steel Design, Advanced Concrete Design, Final Year Design Project and Investigational Projects.

Prof Richard Walls, from SU's Faculty of Engineering, won the 2021 Excellence in Structural Engineering Education Award (ESEEA). The Award celebrates innovative and effective teaching techniques that improve student learning at tertiary level. In his entry, Prof Walls put forward manifold details about his team that evidenced

6.1.7 Nobel Prize for Literature



Prof Abdulrazak Gurnah

the first black African author to win it since Wole Soyinka in 1986.

The 2021 Nobel Prize for Literature was awarded to Tanzanian novelist and STIAS fellow Prof Abdulrazak Gurnah "for his uncompromising and compassionate penetration of the effects of colonialism and the fate of the refugee in the gulf between cultures and continents". Prof Gurnah is the first Tanzanian author to win the Prize and the

6.1.8 NRF Awards



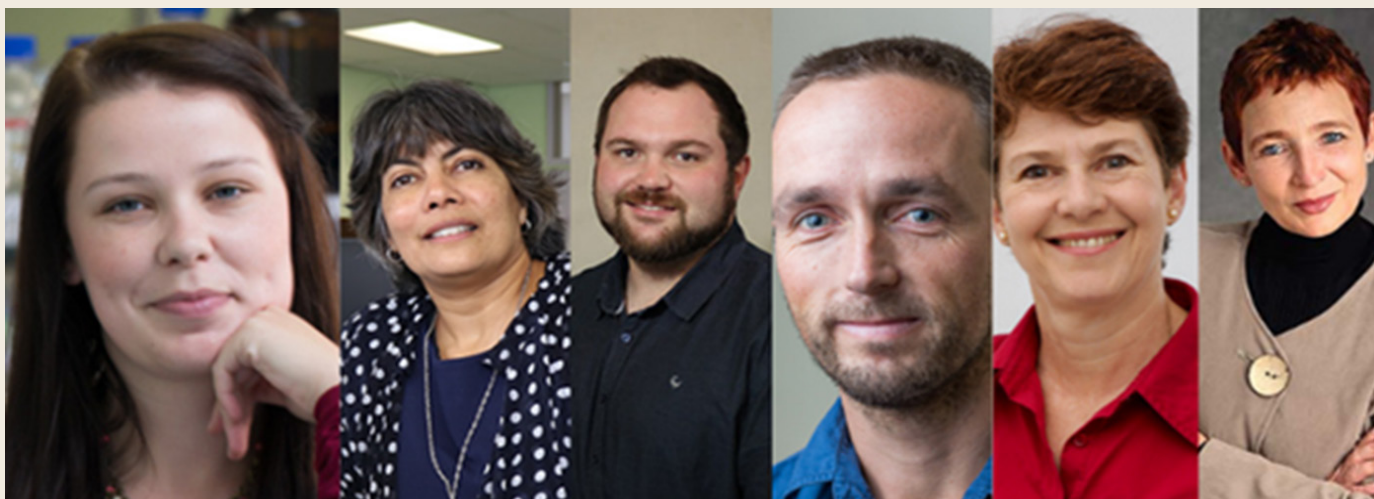
Prof Dieter Heiss



Prof Oonsie Biggs

Seven eminent SU researchers at SU were honoured with an NRF Award in 2021. The Awards recognise and celebrate South African research excellence.

Dr Isobel Brink received a Research Excellence Award for Early-career/Emerging Researchers, which recognises outstanding research excellence by current Thuthuka grant holders. Dr Nicholas Spaull received a P rating – the highest rating possible for researchers under 35. This makes Dr Spaull currently the only P-rated economist in the country. Profs Dieter Heiss, Elmi Muller and Oonsie Biggs all received their



NSTF Awards finalists

first A rating. Prof Cornelius van der Merwe received his third A rating, while Prof Andries Engelbrecht received his second A rating. An A rating is unequivocal confirmation that these researchers are recognised by their peers as leading international scholars in their respective fields for the high quality and impact of their recent research outputs.

6.1.9 NSTF/South32 Awards finalists

As in previous years, SU was well represented at the annual NSTF-South32 Awards (the National Science and Technology Forum in partnership with South32) with six finalists competing for the 2020/2021 Awards at South Africa's "Science Oscars" on 30 September 2021. They are, from left to right on the photos above, Dr Caitlin Uren (South African Human Genetics Database), Prof Soraya Bardien (Molecular Biology and Human Genetics), Dr Wynand Goosen (Molecular Biology and Human Genetics), Prof Anton Du Plessis (Physics), Prof Eileen Hoal-Van Helden (Molecular Biology and Human Genetics), and Dr Madelein Kleyn (Innovus Technology Transfer Office).

6.1.10 ATKV Woordveertjies



F.l.t.r. Prof Stephanus Muller, Dr Stephanie Vos, Dr Willem Anker

Prof Stephanus Muller, Dr Stephanie Vos and Dr Willem Anker, all from the Faculty of Arts and Social Sciences, and SU alumnus Mr Pieter Odendaal were honoured with ATKV Woordveertjie awards for their extraordinary literary contributions. Woordveertjies are awarded annually in recognition of exceptional achievements in Afrikaans literary art.

6.1.11 2021 Japan Foreign Minister's Commendation



Prof Scarlett Cornelissen

Prof Scarlett Cornelissen from the Department of Political Science has received the 2021 Japan Foreign Minister's Commendation. The Japanese government awards these Commendations to individuals and groups for "outstanding achievements in international fields" in acknowledgement of their contribution to international relations. Prof Cornelissen was commended for "the promotion of mutual understanding between Japan and the Republic of South Africa".

6.1.12 Social Sciences and Humanities Award



Prof Jonathan Jansen

Prof Jonathan Jansen, a distinguished professor at the Faculty of Education received the 2020/21 Medal for Social Sciences and Humanities from the Human Sciences Research Council (HSRC) and Universities South Africa (USAf) in a joint venture. The Medal is awarded annually to scholars who through their research have made outstanding contributions to the social sciences and humanities.

6.1.13 French knighthood in agriculture



Prof Benoit Divol

The French government has bestowed a ceremonial knighthood, the Chevalier dans l'Ordre du Mérite Agricole (Knight in the Order of Agricultural Merit), upon wine microbiologist Prof Benoit Divol in 2020. He is an associate professor in the Department of Viticulture and Oenology and the South African Grape and Wine Research Institute at SU.

The Order was created in 1883 and, 137 years later, Prof Divol is the only person with South African links to have received the knighthood. It was in recognition of his scientific contributions as well as his endeavours to enhance research cooperation between France and South Africa, particularly in the fields of viticulture and oenology.

6.2 Fellowships and grants

6.2.1 L'Oréal-UNESCO grants



Dr Rouxjeane Venter and PhD student Emogine Marnabolo

Two emerging woman scientists at SU were awarded research grants as part of the L'Oréal-UNESCO For Women in Science South African National Young Talents Programme. The Programme fits into the framework of the L'Oréal-UNESCO For Women in Science partnership, which was launched in 1998.

Dr Rouxjeane Venter and PhD student Emogine Marnabolo received the grants, in the postdoctoral and doctoral categories respectively, for their ground-breaking research. They were among six woman scientists from across South Africa who were recognised at an awards ceremony for the 2020/2021 winners in Johannesburg.

6.2.2 EDCTP fellowship



Dr Suvetha Moodley

Medicine and Health Sciences (FMHS), was awarded a three-year Career Development Fellowship from the European and Developing Countries Clinical Trials Partnership (EDCTP). She is a postdoctoral research fellow with the Clinical Mycobacteriology and Epidemiology (CLIME) research group of the

Division of Molecular Biology and Human Genetics Division at the Faculty.

6.2.3 GC Africa research grant



Prof Erick Strauss

Prof Erick Strauss, a specialist in chemical biology in the Department of Biochemistry at the Faculty of Science, has received a grant of R1.4 million to be paid over the next three years to explore a unique approach to discovering new antimicrobial agents. The grant was awarded under the auspices of the Grand Challenge Africa (GC Africa) programme, which aims

to promote Africa-led scientific innovations to help countries achieve the UN's SDGs by supporting "big, bold, impactful, innovative ideas that have a potential for impact, scale and sustainability".

6.2.4 MW bursary to become a Master of Wine



Dr Erna Blancquaert

SU viticulturist and researcher Dr Erna Blancquaert is one of only two recipients from around the world of the 2021 Taylor's Port Golden Vines Diversity Scholarships. The bursary of £55 000 (±R1,13 million) allows her to follow the internationally renowned Master of Wine programme of The Institute of Masters of Wine (MW) in the United Kingdom.

6.2.5 Wall Scholars Program fellowship, University of British Columbia



Prof Rika Preiser

Prof Rika Preiser from the SU Centre for Sustainability Transitions (CST) was awarded a fellowship for the academic year August 2021 to July 2022 at the Peter Wall Institute for Advanced Studies at the University of British Columbia in Vancouver, Canada. The Wall Scholars Program offers academics from all disciplines and at any career stage a year-long residency at the

Institute to engage in collaborative, interdisciplinary research that challenges and expands their way of thinking. The Institute seeks to create cohorts and communities of scholarship that stretch across both time and geographies by facilitating collaboration between scholars of diverse backgrounds to engage in deep and unconstrained research into some of the most profound questions and challenges facing humanity.

6.2.6 SACI Raikes Medal



Dr Katherine de Villiers

For the third time in her academic career as a chemist, Dr Katherine de Villiers was honoured by the South African Chemical Institute (SACI) for her outstanding contribution to research in this field. Dr De Villiers, a senior lecturer in bioinorganic chemistry in the Department of Chemistry and Polymer Science, received the 2021 SACI Raikes Medal. The gold-plated medal,

together with a monetary prize of R2 500, is awarded annually to a member of the Institute who is under the age of 40 and whose original chemical research shows outstanding promise.

6.2.7 Harry Oppenheimer Fellowship 2020



Prof Pumla Gobodo-Madikizela

Prof Pumla Gobodo-Madikizela from the Faculty of Arts and Social Sciences received the 2020 Harry Oppenheimer Fellowship Award. Her proposed project, titled Aesthetics of Trauma, Poetics of Repair, concerns re-thinking trauma and focuses on historical trauma and its transgenerational repercussions. The project will explore how the arts, rather than forgiveness

and reconciliation, might be deployed to pursue a reparative and transformative vision. This work will be an important factor shaping rigorous debates regarding its focus area. Prof Gobodo-Madikizela holds the South African National Research Chair in Violent Histories and Transgenerational Trauma.

6.2.8 Fulbright Research Scholarship



Prof Ronelle Carolissen

Prof Ronelle Carolissen from the Department of Educational Psychology was chosen as a Fulbright South African Research Scholar for the 2021/2022 academic year. She received the Scholarship for her work on decolonial theory, inclusive citizenship, belonging, social justice pedagogies and more.

6.2.9 UK Medical Research Council research grant



Prof Sarah Skeen

Prof Sarah Skeen from the FMHS received a research grant to the value of £638 050 (±R13,1 million) from the United Kingdom Medical Research Council. Skeen, Co-director of the Institute for Life Course Health Research (ILCHS) located in the Department of Global Health, will conduct an optimisation and feasibility trial titled If I Were Thabo. This is a

gender-transformative sexual and reproductive health intervention project aimed at young adolescents in Khayelitsha and in Maseru (Lesotho).

6.2.10 EDCTP grant for early- to mid-career researchers



Dr Moleen Dzikiti

Dr Moleen Dzikiti from the Division of Epidemiology and Biostatistics received a grant of more than R2,6 million to study infant feeding practices among women living with HIV. The grant is from the EDCTP, an EU-supported public-public partnership between countries in Europe and sub-Saharan Africa. Dr Dzikiti explained that the funding had been awarded

following a call from the EDCTP for proposals to support early- to mid-career researchers by providing them with opportunities to train and develop their clinical research skills in poverty-related diseases and child and adolescent health.

6.2.11 NIH and EDCTP grants to study paediatric tuberculosis



Dr Marieke van der Zalm

Dr Marieke van der Zalm was awarded three international grants, collectively valued over R44 million, to study various aspects of tuberculosis (TB) and lung health in children. Two of the grants are from the United States National Institutes of Health (NIH) and the third is from the EDCTP, all of them for a period of five years. Dr Van der Zalm works at the Desmond Tutu TB Centre situated in the Department of Paediatrics and Child Health. She is the principal investigator (PI) of a large prospective observational study cohort that aims to improve the diagnosis of TB in children and to investigate the long-term consequences of TB and other respiratory pathogens in young children.

6.2.12 L'Oréal Women in Science Fellowship



Ms Hannah Simba

Ms Hannah Simba from SU's African Cancer Institute (ACI), who is a PhD candidate in Public Health, was awarded the L'Oréal Sub-Saharan Africa Women in Science PhD Fellowship. The topic of her PhD studies is oesophageal cancer; it is entitled 'The role of genetic and environmental factors in the aetiology of oesophageal cancer'. In 2020, Ms Simba was one of 11 recipients of

the Margaret McNamara Education grant valued at US\$7 000 (±R106 000), which has allowed her to study this disease in more detail.

6.2.13 NIH grant to research the impact of exposure to HIV and ARV therapy on children



Prof Amy Slogrove

Prof Amy Slogrove, a paediatrician and epidemiologist in the Department of Paediatrics and Child Health, received a US\$2 225 382 (±R33,7 million) grant from the United States NIH for a study that is highly relevant for South Africa and, in particular, the Western Cape. She will use the grant to study the impact of exposure to HIV and antiretroviral (ARV) therapy on survival and morbidity among children who

were exposed to HIV but remained uninfected. This cohort will be compared to those unexposed as well as uninfected by HIV who live with similar socioeconomic, nutritional and environmental constraints to health in a setting where HIV is highly prevalent.

6.3 Early-career academic development (ECAD) programme

SU's ECAD programme is a structured support programme for early-career academics, which is managed by the DRD with the support of funding from the DHET University Capacity Development Grant (UCDG). The programme includes a mentoring component, which has matched 130 early-career academic staff members with experienced mentors in 2021. The participants also benefited from career acceleration awards and access to several capacity and skills development opportunities offered by internal and external providers to the University.

6.4 Postdoctoral Research Fellowship programme

The fellows are distributed across all faculties, with most of them in Science, FHMS, Arts and Social

Sciences, AgriSciences and Engineering. Distribution between national and international postdoctoral fellows is almost equal, and distribution by gender is equal. In its strategic focus on becoming a leading research university in Africa, SU is invested in developing young researchers who drive impactful research in South Africa, the continent and the rest of the world. This programme is proof of that. The DVC: RI&PS values these students and has ambitious plans to grow the postdoctoral cohort to 500 within the next two years, which aligns with the University's strategy and vision to have global impact.

Postdoctoral research fellows support SU in its research endeavours by assisting with graduate student supervision, teaching, applications for research grants and – most importantly – delivering publications. In this development phase of their academic careers, postdoctoral fellows at SU engage in independent research under the mentorship of a senior researcher. The Postdoctoral Research Support Office endeavour to support the postdoctoral community by providing assistance with administrative matters and with professional and career development.

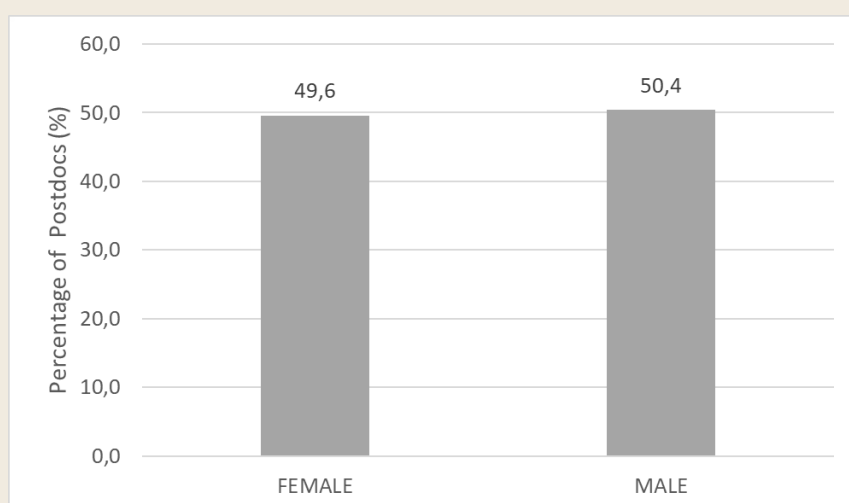


Figure 20: Gender distribution of postdoctoral fellows at SU

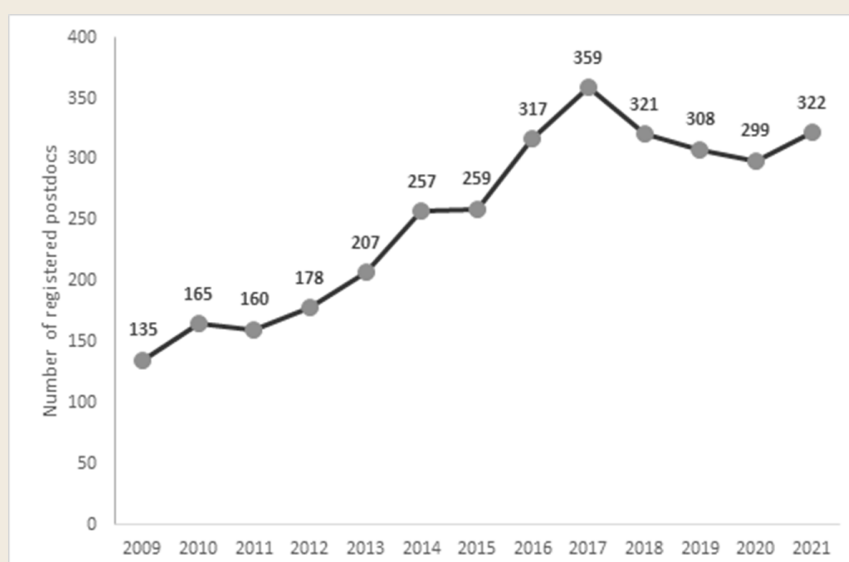


Figure 21: Total postdoctoral fellows at SU, 2009–2021

6.5 Postdocs in 2021

6.5.1 Demographics of postdocs

Gender and nationality (n = 268)

Distribution between national and international was almost equal: 56,6% (198) South African, 22,4% (60) other African countries and 20,9% (56) from other countries. SU have an equal distribution of male and female postdoctoral fellows.

6.5.2 Financial matters

Total funding for postdoctoral studies in 2021 amounted to R68 345 397,80 with postdoctoral bursaries ranging from R200 000 to R920 000 per year. Funders included the University (through the faculties, subcommittees, departments and DVC's strategic funds), the NRF (majority funder – 88% – of postdoctoral studies), external foundations (Mellon Foundation and Claude Leon Foundation) and industry funders (HortGro, Sasol, Citrus Research Institute and Volkswagen Foundation). Most of the postdoctorate fellows were sponsored by the FHMS (20; 7,5%), the NRF through Grantholder Linked (29; 10,9%), SARChI (19; 7,1%) and subcommittees (26; 9,7%).

6.5.3 Decrease in NRF-funded fellowships

Because of funding shortages, fewer NRF postdoctoral research fellowships have been awarded to SU. The competition for freestanding, innovation and scarce-skills instruments is fierce. In addition, there are some challenges with equity.

6.5.4 Postdoctoral Research Conference of Southern Africa

The second Postdoctoral Research Conference of Southern Africa was held virtually from 10 to 12 November 2021. It was attended by 152 delegates from 14 countries including the USA, UK and UAE. For more information visit www.postdocsa.co.za.

The Conference theme was Beyond the pandemic: Research now and in the future, and the topics were distributed across 12 symposia: Water research; Business and economics; Law amidst the pandemic; Land, agriculture and food security; Education,

communication and science; Innovation leading the future; Arts and culture; Bacteria and viruses; Humanity amongst the pandemic; Exercise, health and well-being; General science; and Research models. There were 50 speakers and 15 poster presentations, including the following:

- Prof Sehaam Khan, Deputy Dean: Health Sciences, UJ – keynote address;
- Prof Joel Chigada, Department of Information Systems, UWC – keynote address;
- Dr Richard Munang, United Nations Environmental Programs (UNEP) Africa Office, Nairobi, Kenya – keynote address, and
- Prof Tulio De Oliveira, School of Data Science and Computational Thinking, SU – plenary address.

Prof Eugene Cloete, DVC: RI&PS, gave the welcoming addresses. he highlighted the important role of postdoctoral studies and the leading role SU was playing in developing initiative to raise awareness and support, and to build funding mechanisms supporting postdoctoral studies in South Africa, the rest of Africa and the rest of the world.

The conference received the following generous monetary sponsorships:

- Diamond Sponsors – the Department of Science and Innovation (>R60 000) and Clarivate (>R40 000);
- Silver Sponsors – Whitesci (>R20 000) and The Scientific Group (>R20 000), and
- Bronze Sponsors – COMETA (>R5000) and Harvard University (>R5000).

In addition, non-monetary sponsorship was received from Whole Person Academy, the LaunchLab and Science Bridge. The Conference generated over R120 000 in participant registration fees.

6.5.5 Postdoc Fellow Awards to top 20 fellows

Postdoctoral fellows contribute significantly to academic performance at the University. Recognising this, the DVC: RI&PS launched the Postdoc Fellow Award in 2017 to honour the top-performing postdoctoral fellows at SU. Every year it has become increasingly difficult to choose the awardees. Fellows are measured with reference to their academic track



The Postdoc Fellow awardees of 2021

Table 14: *Postdoc Fellow awardees*

Name	Faculty	Department
Amaris Dalton	Engineering	Electrical and Electronic Engineering
Anandi Bierman	Agrisciences	Conservation Ecology and Entomology
Brandon Reynecke	Science	Microbiology
Caroline Beltran	FMHS	Molecular Biology and Human Genetics
Munyaradzi Chihota	Engineering	Electrical and Electronic Engineering
Daniel Standaer	Arts and Social Sciences	Afrikaans and Dutch
Haiko Schurz	FMHS	Biomedical Sciences
Jared Van Rooyen	Science	Earth Sciences
Jeanine Vonkeman	Engineering	Civil Engineering
Josu Gomez-Ezeica	FMHS	Sport Science
Leigh Kotze	FMHS	Molecular Biology and Human Genetics
Lovemore Kunorozva	Science	Physiological Sciences
Madhurananda Pahar	Engineering	Electrical and Electronic Engineering
Marnus Havenga	Arts and social sciences	Arts and Social Sciences (academic)
Owolabi Eytayo	FMHS	Global Health
Paul Eselem Bungu	Science	Chemistry and Polymer Science
Sanita Van Wyk	Science	Microbiology
Teun Van Erp	FMHS	Orthopaedic Surgery
Tobi Fadiji	Agrisciences	Horticultural Science
Winschau Van Zyl	Science	Microbiology

record in the form of publication numbers, conference presentations and other outputs; their grants and funds raised; academic service in the form of teaching and student supervision; peer reviewing among the academic community; and community service.

The top 20 postdoc fellows at SU were announced and received their awards in November 2021, at the gala closing event of the second Postdoctoral Research Conference of Southern Africa. Each awardee received a certificate and a R10 000 cash prize.

6.6 Notable postdoctoral recognitions and awards

Dr Natassja Kriel from the SU Centre of Excellence in Biomedical Tuberculosis Research was awarded a VALIDATE Network fellowship, which is funded by the Bill and Melinda Gates Foundation, in December 2021.

A project undertaken by **Dr Blake Balcomb** from the Department of Physiology obtained data that helped secure funding from Grand Challenges Africa (GC Africa – a programme implemented through the African Academy of Sciences' funding and programme implementation platform, the Alliance for Accelerating Science in Africa, in partnership with the African Union Development Agency and the Bill and Melinda Gates Foundation). Under the supervision of Prof Erick Strauss, Dr Balcomb coordinates this project alongside

fellow postdoctoral researcher Dr Anton Hamann and PhD student Tim Kotze. Read more at <http://www.sun.ac.za/english/Lists/news/DispForm.aspx?ID=8712>.

Dr Francois Van Schalkwyk from SU's Centre for Research on Evaluation, Science and Technology (CREST) was appointed to the Editorial Board of the journal *Learned Publishing*: <https://onlinelibrary.wiley.com/page/journal/17414857/homepage/editorialboard.html>.

Dr Lindani Moyo from the Department of Plant Pathology received an award from the Oppenheimer Memorial Trust.

The Postdoctoral Research Support Office aims to grow the African postdoctoral footprint and to be a leader in developing and promoting the African postdoctoral experience. Postdoctoral researchers are the research leaders of tomorrow, and by engaging them and creating awareness around them – especially on the African continent – will help us highlight innovative African research, attract funding and encourage the development of better systems to manage this community of early-career researchers.

6.7 New appointments

Dr Philippa Kerr from the Department of Sociology took up a new post as associate professor of social psychology at the Norwegian University of Science and Technology in Trondheim.



Dr Chioma Ohajungwa from the Centre for Rehabilitation Studies:

Invited by the World Bank to be a panellist at the Global Disability Summit 2022 side event titled, 'Every learner matters: Sharing experiences from the World Bank's programs on disability-inclusive education'. Won the World Bank Inclusive Education

Dr Chioma Ohajungwa

Initiative Blog competition with her entry 'Local knowledge is key to creating globally aware policies in disability-inclusive education' (7 October 2021; <https://www.inclusive-education-initiative.org/blog/local-knowledge-key-creating-globally-aware-policies-disability-inclusive-education>).

Dr Sherif Isa from the FMHS helped to set up a pain/neuroscience lab with state-of-the-art equipment for training and equipping postgraduate students with respect to pain research techniques and neurobehavioural skills. The setting up of the lab is a step in fostering a strong research collaboration between basic science (Medical Physiology) and clinical science (Anaesthesiology and Critical Care).

Postdoctoral research fellows **Drs Deon Neveling and Wilma van Rensburg** both received Innovus Inventors Awards.

The Consolidoc Prize for Best PhD was awarded to **Dr JP du Toit** from the Department of Process Engineering. His project explored engineering strategies to improve hydrogen production using photosynthetic bacteria, which would create a clean, renewable energy source from organic wastes. To this end, he created a new, transparent immobilisation material to allow continuous production, and collaborated with researchers at the University of Cambridge, UK, on developing an efficient genetic modification technique to enable metabolic engineering of the bacteria for higher hydrogen output. This work was published in the respected journal ACS Synthetic Biology.

6.8 Growing numbers of Consolidocs

The Consolidoc programme is a special postdoctoral programme funded by the DVC: RI&PS, starting in 2013 with funding for ad hoc cases. The programme was formally launched in 2014 and aims at giving new doctoral graduates across all fields of research a kick-start to their research publishing careers. These fellowships are intended as a bridge for doctoral

students between graduating and obtaining a position either as a longer-term postdoctoral fellow or as a full-time employee. The programme has become highly popular and competitive. In 2021, we registered 54 Consolidocs funded by various departments, subcommittees and the DVC's strategic funds.

6.9 Supporting SU's growing number of exemplary NRF-rated researchers

SU supports the NRF rating system – not only as a qualitative, peer-reviewed measure of excellence, but also as a gateway to selected competitive NRF funding programmes. The NRF rating programme is managed by the DRD. The Division offers a thorough internal review process to support researchers in preparing for their rating applications. This includes assigning a mentor to each applicant to assist with making their applications submission-ready.

For the current round of submissions, 91 applications have been submitted for review to the three research subcommittees. The subcommittees are tasked with providing the institutional recommendation required before submission to the NRF. Of the 91 applications that will be submitted, 51 are applications for re-evaluation of a rating and 40 are new applications.

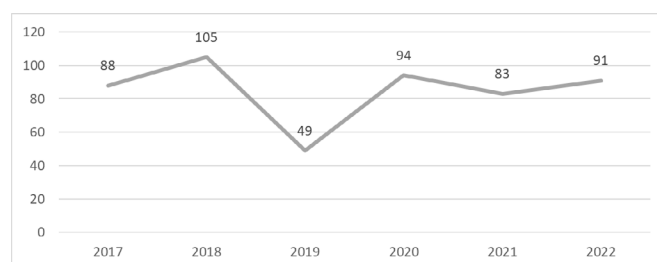


Figure 22: Number of NRF rating applications submitted for review 2017 – 2022

Over the past six years, the number of rating applications submitted to the NRF has remained relatively consistent. The decline in applications submitted for 2019 (closing date January 2019) may have resulted from the significant changes and uncertainty regarding the NRF incentive funding scheme. Judging by the applications submitted in 2020 and 2021, and those that will be submitted in 2022, the trend seems to have returned to the direction before 2019.

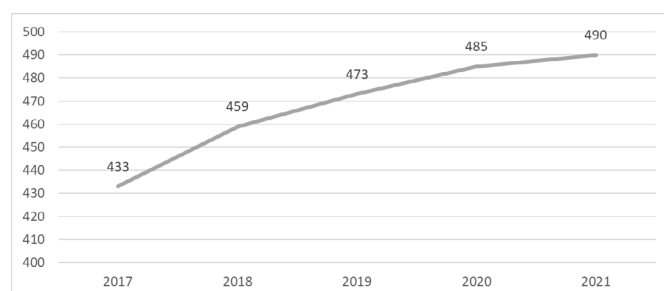


Figure 23: Increase in NRF-rated researchers at SU 2017–2022

6.11 Future Professors Programme (FPP)

The FPP is a competitive and selective programme of the DHET with a view to preparing promising mid-career academics for becoming a new cohort of South African professors across disciplines. Dr Nox Makunga (Department of Botany and Zoology) was selected to join the Programme in 2021, bringing the total number of SU participants to six.

6.12 SARChI Chair renewals

We are happy to report that the SA Research Chair in Integrative Skeletal Muscle Biology, Physiology and Biotechnology, held by Prof Kathy Myburgh, has been renewed. Prof Mehita Iqani replaced Prof Peter Weingart as incumbent of the SA Research Chair in Science Communication.

6.13 DRD capacity-building programme and information sessions

Every year, the DRD presents various research capacity-building workshops and information sessions. The Division did an opinion poll at the end of 2021 to obtain an indication of the specific needs of our research community; thus, the 2022 programme includes a few new sessions. The research-capacity building workshops focus on various aspects of the research cycle, while the information sessions focus on the services and support that the DRD provides.

More information on specific workshops and sessions as well as the registration process will be advertised before each event. Programmes for the capacity-building workshops and information sessions are available at <http://www.sun.ac.za/english/research-innovation/Research-Development/research-calendar>.

7. Acknowledgements

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Kind regards,

Prof TE Cloete
Deputy Vice-Chancellor:
Research, Innovation and Postgraduate Studies



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SENATE REPORT

of the Deputy Vice-Chancellor:
Research, Innovation and Postgraduate Studies

Prof TE Cloete
March 2022