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NSTF e-Newsletter

S.E.T. for socio-economic growth

Letter to matrics who have to rewrite their maths and science exams

Message from the NSTF Executive Director, Ms Jansie Niehaus

It was distressing news that the matric exam papers in mathematics and physical science had been leaked. For the first time in history papers will have to be rewritten in order to protect the credibility of the exams. Although it is stressful to rewrite exams, it is also a definite benefit if approached with a positive mindset. [Read the message.](#)



NSTF News

Call for nominations: 2020/2021 NSTF-South32 Awards

The NSTF calls for nominations for the 2020/2021 [NSTF-South32 Awards](#). Register [nominations](#) electronically by **Monday, 14 December 2020**. This is the first step in a two-stage [nomination process](#).

Special Annual Theme Award: The NSTF's theme for 2021 is **Creative Economy for Sustainable Development**, aligned with the United Nations' [International Year of Creative Economy for Sustainable Development](#). The [Special Annual Theme Award for 2020/2021](#) will be made for an outstanding contribution to science, engineering, technology (SET) and innovation towards the creative economy for sustainable development in South Africa (SA). The concept of **creative economy** is the income-earning potential of creative activities and ideas. It encompasses photography, graphic design, fashion design, filmmaking, architecture, publishing, video games and more. The concept of sustainable development is embodied in the Sustainable Development Goals (SDGs) of the United Nations. **As NSTF, we are looking at where these concepts intercept with science and technology.** [Read more](#) about this Award.



25 years of serving the SET and innovation community in SA

The [National Science and Technology Forum \(NSTF\)](#) is celebrating 25 years of its existence this year. This [stakeholder body](#) draws together more than 100 organisations, councils and institutions involved in science, engineering, technology (SET) and innovation in South Africa. Its core vision is a transformed society where SET contributes to improving lives, the demographic profile of SET professionals is reflective of that of South Africa's (SA's) population, and where the education system functions properly, especially in SET subjects. Watch the [video](#) and reminisce on past events and members participating over the 25 years of existence of the organisation.

Mail & Guardian supplement celebrates NSTF's Silver Jubilee

The Mail & Guardian published a special supplement on the NSTF in its 27 November issue, as well as an article on the NSTF's milestones over the last 25 years. This supplement was made possible by five advertisements from member organisations (Department of Science and Innovation, South32, National Research Foundation, University of Limpopo and South African Council for Natural Scientific Professions). Click [here](#) to read it. **Please note:** The NSTF does not gain financially from this supplement. The intention is to increase awareness among the public of the non-profit activities, and further the aims of the NSTF – *SET for socio-economic growth*.

National Orders: NSTF Award Winners and people associated with us who have been honoured in this way

National Orders are the highest awards that a country, through its President, bestows on its citizens and eminent foreign nationals. The President as the holder of honour in the country bestows these [Orders and Decorations](#) and is assisted by the Director-General in the Presidency, who is the Chancellor of National Orders and an Advisory Council on National Orders, in the execution of this responsibility. Over the years, a number of people associated with or active in the NSTF have been honoured with National Orders by the President of South Africa:

- **Prof Ismail Mohamed:** Posthumously awarded in 2014: The Order of Mapungubwe in Silver. The citation in the National Orders booklet refers to “the contribution that he has made and continues to make in bringing closer the issues of science and society and having the two work in harmony. His contributions at Parliament include, amongst others, his contribution to the Green Paper on science and technology (S&T), his ongoing efforts to secure increased national funding for S&T at Parliament, and his efforts to position and support a dedicated Department of Science and Technology whilst Chairperson of the Sub-committee of S&T. He also represents the S&T

Portfolio Committee of parliament at the NSTF of which he was a founding member”.

- **Dr Wieland Gevers:** 2008 Order of Mapungubwe in Silver (2003/2004 NSTF Lifetime Award) Dr Gevers served on the NSTF Panel of Experts that reviews the decisions of the NSTF Awards Adjudication Panel from 2006 to 2013.
- **Prof Malegapuru William Makgoba:** 2013 Order of Mapungubwe in Silver. Prof Makgoba was the first official Chairperson of the NSTF.

NSTF Award Winners who received National Orders

Many of the individual [Award Winners](#) over the years have been honoured by other awards and some received National Order Awards from the President of South Africa. The following NSTF Award Winners received National Orders:

- **Prof Friedel Sellschop** (1930-2002): 2002 Order of the Supreme Counsellor of the Baobab in Gold* (1999/2000 NSTF Lifetime Award)
- **Prof Tshilidzi Marwala:** 2004 Order of Mapungubwe in Bronze**** (2003/2004 TW-Kambule Award: Emerging Black Researcher; 2006/2007 TW Kambule-NSTF Award: Researcher, and 2010/2011 Research Capacity Development Award)
- **Prof Pragasen Pillay:** 2008 Order of Mapungubwe in Silver (2006/2007 TW Kambule-NSTF Award: Senior Black Researcher)
- **Prof Timothy David Noakes:** 2008 Order of Mapungubwe in Silver (2005/2006 NSTF Lifetime Award)
- **Prof Douglas Butterworth:** 2008 and 2010 Order of Mapungubwe in Silver (2006/2007 NSTF Lifetime Award)
- **Prof Johann RE Lutjeharms:** 2010 Order of Mapungubwe in Silver (2007/2008 NSTF Lifetime Award)
- **Dr Monique Zaahl:** 2010 Order of Mapungubwe in Bronze (2008/2009 TW Kambule-NSTF Award: Emerging Researcher)
- **Prof Pieter Steyn:** 2011 Order of Mapungubwe in Silver (2008/2009 NSTF Lifetime Award)
- **Prof Quarraisha Abdool Karim:** 2013 Order of Mapungubwe in Bronze (2010/2011 NSTF Innovation Award to CAPRISA – Centre for the Aids Programme of Research in South Africa)
- **Prof Rosina Mamokgethi Phakeng** (previously Setati): 2016 Order of the Baobab in Silver** (2003/2004 TW Kambule-NSTF Award: Emerging Black Researcher)
- **Prof Helen Rees:** 2016 Order of the Baobab in Silver** (2014/2015 NSTF Lifetime Award)
- **Dr Olive Shisana:** 2017 Order of the Baobab in Bronze*** (2004/2005 TW Kambule-NSTF Award: Senior Black Researcher)
- **Prof Fulufhelo Nelwamondo:** 2017 The Order of Mapungubwe in Silver (2009/2010 TW KambuleNSTF Award: Emerging Black Researcher)
- **Prof Thokozani Majozi:** 2019 Order of Mapungubwe in Bronze (2006/2007 TW Kambule-NSTF Award: Emerging Black Researcher and 2015/2016 NSTF Engineering Research Capacity Development Award)
- **Prof Malik Maaza:** 2019 Order of Mapungubwe in Silver (2017/2018 NSTF-GreenMatter Award)

* The Order of the Baobab is awarded to South African citizens for distinguished service in the fields of: business and the economy; science, medicine, and for technological innovation; and community service. The Supreme Counsellor of the Baobab in Gold is awarded for exceptional service.

** The Grand Counsellor of the Baobab in Silver is awarded for excellent service.

*** Counsellor of the Baobab in Bronze is awarded for outstanding service.

**** The Order of Mapungubwe is awarded to South African citizens for achievements that have impacted internationally and served the interests of the Republic of South Africa.

S.E.T. for socio-economic growth

Science Forum South Africa

The Department of Science and Innovation (DSI) has confirmed that the 2020 Science Forum South Africa (SFSA) - #SFSA2020 will take place on a virtual platform from [Wednesday 9 to Friday 11 December 2020](#). Participation in the Forum will be open to all and free of charge. Anyone with an interest in the role of science in society can join the debate and ignite conversations about science.

SFSA is presented in partnership with the Human Sciences Research Council's (HSRC) Radical Reason Consortium this year. The programme is available at <https://esastap.org.za/sfsa2020/>. Please also register for SFSA on this website.

Further information:

Mabatho.Ndwandwa@dst.gov.za / +27 79 940 1498.

ISPIM conference

The NSTF participated in the International Society for Professional Innovation Management (ISPIM) Connects [conference](#) on 7 December 2020.

A panel of six South African experts, including current and recent [NSTF Award Winners](#) discussed innovation challenges and breakthroughs as one of the African events in an around-the-globe series of virtual events as part of the *ISPIM CONNECTS GLOBAL - Celebrating the World of Innovation* initiative. The NSTF represented South Africa.

Discussion Forum: Internet of Things technologies and 5G roll-out

The NSTF and its [proSET](#) (Professionals in science, engineering and technology) sector hosted an online [discussion forum](#) on 23 November 2020 on Internet of Things (IoT) technologies and 5G roll-out. The seminar speakers were:

- Mr Sean Laval, Executive: Solutions and Innovations, [SqwidNet](#). It is his job to advise customers on strategic technical decisions to enable key business outcomes. Access the video of his talk [here](#).

NSTF office closing date in December

The NSTF office closes on 15 December 2020 and will reopen on 11 January 2021. We wish our members and stakeholders a merry Festive Season and happy New Year.

Share 'n Dare programme

Videos of five more 2020 [NSTF-South32 Award winners](#) are now available on the NSTF YouTube channel in the playlist '[Career advice from top scientists](#)'. Awards winners have the opportunity to encourage and inspire the youth to pursue studies and [careers](#) in science, engineering, technology and innovation through these videos.

[Mr Thami Molefe](#) – 2019/2020 NSTF Award Winner for the Innovation Award: Small, Medium and Micro Enterprise, Memeza Shout (Pty) Ltd. They won the award for reducing crime, improving the South African Police Service (SAPS) service levels and creating jobs.

"Taking the problem-solver subjects at school – maths and the sciences – will open up your perspective on many things."

[Dr Vhahangwele Masindi](#) – 2019/2020 TW Kambule-NSTF Award: Emerging Researcher, Magalies Water. He won the award for his specialisation in the valorisation and beneficiation of wastewater through drinking water reclamation and minerals.

"Wastewater is water that contains contaminants and that has to be managed."

[Prof Judith Kinnaird](#) – 2019/2020 NSTF Award Winner for the Management Award, University of the Witwatersrand. She won the award for directing economic geology research studies on metals for everyday needs now and for the future.

"We need metals for everything in our daily lives. A cell phone, for instance, contains about 40 different metals."

[Dr Fisseha Mekuria](#) – 2019/2020 NSTF Award Winner for Innovation Award: Corporate Organisation, The Smart

- Dr Fisseha Mekuria who leads the 5G standards and Digital inclusion research at the [CSIR](#). He works with the mobile and internet service industry in developing countries. His focus is on network resource sharing for affordable broadband connectivity, and development of telecom regulatory frameworks and capacity building for telecom regulators in Africa. Access his talk [here](#).

Watch the full [webinar discussion](#).

Read more: [An assessment of claims regarding health effects of 5gG mobile telephony networks](#); and a CSIR [fact sheet](#) on 5G mobile telephony.

The NSTF Executive Director, Ms Jansie Niehaus was interviewed on [Lotus FM The Official Drive show](#) about the main issues discussed at the seminar.

Discussion Forums in the pipeline

- February 2021: How prepared are we for outbreaks of diseases among humans and animals? Planned by the NSTF [Science Councils and Statutory Bodies](#) sector.
- April 2021: Plant Health Discussion Forum coming up.

Look out for the email invitations to these and other events.

Meet our 2020 NSTF-South32 Award winners

NSTF-Lewis Foundation Green Economy Award

Sponsored by the Lewis Foundation since 2019

Sharksafe (Pty) Ltd received this award for developing the SharkSafe Barrier™, the first shark specific barrier which is eco-friendly and can protect swimmers and surfers without harming the marine life. The SharkSafe Barrier protects both shark and beach goer. It was developed by a team of researchers based at the University of Stellenbosch. The team includes Dr Sara Andreotti (lead researcher and COO), Professor Conrad Matthee (CEO and Co-Inventor), shark conservationist Michael Rutzen (inventor), Dr Craig O'Connell, marine engineer Laurie Barwell, and plastic manufacturer Rory Bruins of Labscheme Allchem. [Read more](#).

Spectrum Sharing Team, CSIR. They won the award for developing the Smart Spectrum Sharing Technology (S3T) for a Smarter ICT Infrastructure and Digital Inclusion.

“Teamwork is very important for the development of new technologies. Learn how to work in a team.”

[Traditional Doctor Ephraim Mabena](#) – 2019/2020 NSTF Award Winner for the Non-Governmental Organisation (NGO) Award, Mothong African Heritage. He won the award for uniting scientists, government and the community through the Mothong African Heritage in nature.

“Indigenous knowledge systems and modern medicine must work together towards a common goal – the health of our communities.”

Help us to reach young people and share the videos to as many contacts you can. This programme is sponsored by the [Fuchs Foundation](#).

New NSTF staff members

Welcome to the four volunteers who will be assisting NSTF staff in the following areas:

- Mr Lucky Mokhosi – Knowledge Management, Databases and ICTs
- Ms Felicia Likhethé – Committees Secretary and Stakeholder Relations
- Ms Pertunia Ndlovu – Media Liaison, Outreach and Communication
- Ms Gabriela Mankune – Desktop Research and Career Guidance

NSTF-Water Research Commission (WRC) Award

Sponsored by the Water Research Commission since 2017

Prof Faizal Bux, Director of the Institute for Water and Wastewater Technology, and Chair: DSI/NRF SARChI: Wastewater Treatment, Durban University of Technology, received this award. The focus of his research is on wastewater as a resource and not a burden to society. [Read more](#).

Read about all the winners in the *Mail & Guardian* [special report](#) on the 2020 NSTF-South32 Awards. Mail & Guardian is a media sponsor of the NSTF Awards.

Today's research ... tomorrow's innovation

The NSTF pays tribute to Dr Belinda Bozzoli

The NSTF heard with dismay that Dr Belinda Bozzoli had passed away on 5 December 2020. Our sincere condolences are extended to her husband and three children. She will be sorely missed in her political party also. [Read more](#).

Bursaries available

Find the latest news on bursaries in science, engineering and technology in the NSTF [Bursary Directory](#). Currently available are:

- [SAIBPP](#) (Deadline: 15 December 2020)
- [Macademia South Africa \(NPC\) Bursary](#) (Deadline: 15 December 2020)
- [NRF](#) (Deadline: 18 December 2020)
- [Hexagon Trust](#) (Deadline: 31 December 2020)
- [PSG](#) (Deadline: 31 December 2020)
- [KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs Aeronautical Bursary programme: 2021](#) (Deadline: 28 February 2021)
- [Armcor Bursary Scheme](#) (Deadline: 28 February 2021)
- [Access Trust Bursary and Student Support Scheme](#)
- [FMCSA Ford Bursary](#) (Open)

The Bursary Directory is sponsored by the [Fuchs Foundation](#).

STEMulator.org

In the year of the 25th anniversary of the NSTF, **the STEMulator is born for you to Explore > Discover > Learn!**

A proudly South African platform, the STEMulator.org attracts learners and students to the exciting world of science, technology, engineering and mathematics (STEM). It provides a virtual world full of stimulating content to excite and inform the youth, including STEM career guidance.

The STEMulator is the flagship project of [proSET](#) (Professionals in science, engineering and technology), a sector of the NSTF representing about 40 professional bodies and learned societies.

Explore and send us your feedback enquiries@nstf.org.za





proSET (Professionals in science, engineering and technology) is a sector of the NSTF representing about 40 professional and learned societies. This section shares news about [members](#) and introduces new members of the [proSET sector](#).

- **New member: Geostatistical Association of South Africa**

The [Geostatistical Association of South Africa](#) (GASA) is an association created to promote the professional interests of geostatisticians through increasing awareness of geostatistics and the application of spatial statistics in Southern Africa. It aims to facilitate communication between practitioners, and represents the opinions of professional geostatisticians to the public and industry.

Historically, the science of geostatistics has been developed within the context of the mining and petroleum industry, but it can also be practically applied in the fields of environment, agriculture, forestry, fishery and epidemiology. [Read more](#).

- **New member: Southern African Institute of Mining and Metallurgy**

The [Southern African Institute of Mining and Metallurgy](#) (SAIMM) started as a learned society in 1894 after the invention of the cyanide process that saved the South African gold mining industry of the day. This 125-year-old professional body enjoys both local and international links aimed at disseminating knowledge and assisting its members to source information regarding technological developments in the mining, metallurgical and related sectors.

The overarching objective is to ensure that their member engineers remain relevant and are able to continue developing professionally as they progress in their respective careers. They are also guided by a professional code of ethics that ensures reciprocity with similar bodies around the globe. This allows them to collaborate on global initiatives and to influence policy that directly affects the industry. The SAIMM also actively participates in promoting and meeting industry related obligations to various communities and the environment. [Read more](#).

- **Institute of Electrical and Electronics Engineering (IEEE)**

Professor Saurabh Sinha, Deputy Vice-Chancellor of Research and Internationalisation at the [University of Johannesburg](#) (UJ), has been elevated to a Fellow by [the Institute of Electrical and Electronics Engineering](#) (IEEE). This is a remarkable achievement, as an IEEE Fellow is the highest distinction only reserved for select IEEE members in recognition of their extraordinary contributions in any of the association's fields of interest. Prof Sinha also won the [2012/2013](#) NSTF Award as an Emerging Researcher.

IEEE is the world's largest professional association for the advancement of technology, with more than 400 000 members whose technical interests are rooted in electrical and computer sciences, engineering and related disciplines. Out of a membership number in over 160 countries "less than 0.1% of voting members are selected annually for this member grade elevation" (ieee.org). Apart from the technical aspect, the associated professional development reinforces the prominent role that IEEE plays to advance technology for the benefit of humanity.



SET-related policies currently open for public comment

Policies open for comment allow the science, engineering and technology (SET) community to keep track of the changing regulation environment.

- [National Environmental Management Act: Consultation on the proposed amendment to Chapter 2 and Chapter 5 of Integrated Environmental Management Plan for Phase 1 of the Square Kilometre Array and proposed amendment to the conditions of exclusion](#) (gov.za)
- [National Environmental Management Act: Consultation on proposed amendments to environmental impact assessment regulations](#) (Comment by 13 December 2020)
- [International Treaty on Plant Genetic Resources for Food and Agriculture: Accession to the International Treaty on Plant Genetic Resources for Food and Agriculture](#) (Comment by 13 December 2020)
- [Occupational Health and Safety Act: Driven machinery regulations](#) (Comment by 21 December 2020)
- [International Trade Administration Act: Investigation: Remedial action in the form of safeguard measure against increased imports of structural steel](#) (Comment by 22 December 2020)
- [Electronic Communications Act: Regulations: Digital Sound Broadcasting Services](#) (Comment by 29 December 2020)
- [National Water Act: Breede-Gouritz Water Management Area: Extending boundary and area of operation to include Berg-Olifant Water Management Area](#) (Comment by 30 December 2020)
- [Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act: Regulations: Stock remedies: Classes of stock remedies](#) (Comment by 4 January 2021)
- [Electronic Communications Act: Amendment: Pre-register for digital community television broadcasting service and radio frequency spectrum licences: Extension of closing date for comments to 15 January 2021](#)
- [National Energy Regulator Act: Concurrence with ministerial determination on procurement of 2 500MW new generation capacity from nuclear](#) (Comment by 5 February 2021)
- [Plant Breeders' Rights Act: Receipt of applications for plant breeders' rights](#) (Comment by 23 April 2021)

SET-related policy news

Some articles included in the section below are opinion pieces. The opinions expressed in these articles do not necessarily reflect the views of the NSTF Executive Committee, Directors, Secretariat or Members.

Energy

- [South Africa to invest more in renewable energy](#) (eNCA.com)

- [SA's pursuit of net-zero carbon emission requires visualisation and commitment](#) (bizcommunity.com)

Environment

- [Mboweni warns of looming water crisis](#) (eNCA.com)
- [Discussion between Jane Goodall and Members of the Parliament of South Africa](#) (wildernessfoundation.co.za)
- [No country, rich or poor, is immune from the health effects of climate change](#) (mg.co.za)

Agriculture

- [SA farmers free up energy and achieve production goals](#) (energize.co.za)
- [African governments should have a fresh look at agriculture as part of the economic recovery plan after Covid-19](#) (econ3x3.org)

Education

- [Maths Book – the Culmination of Six Years of Work for Emeritus Professor](#) (ukzn.ac.za) Emeritus Professor Poobhalan Pillay of the School of Mathematics, Statistics and Computer Science (SMSCS) has written an e-book, 1000 Mathematics Olympiad Problems, to help pupils from Grade 7 to Grade 12 improve their mathematics skills. Compiled for the South African Mathematics Foundation (SAMF), Pillay spent more than 8 000 hours working on problems for the publication classified according to difficulty.

Education

- [How school maths could better prepare South Africans for the world of work](#) (theconversation.com)
- [What maths researchers learnt from the mistakes made by pupils in 'top' South African schools](#) (theconversation.com)

Infrastructure

- [Unilever on a drive to eradicate pit toilets in schools](#) (infrastructurenews.co.za)
- [Building a post-pandemic construction sector](#) (bizcommunity.com)
- [Construction industry banded together to survive COVID-19](#) (infrastructurenews.co.za)

Medicine and Health

- [Biovac now manufacturing six-in-one paediatric vaccine locally](#) (dst.gov.za)



The events posted below are correct as far as we could establish at the time of preparing this newsletter. Please check the relative websites for changes to dates and venues.

- [Water Institute of South Africa 2020 Conference](#): Online, 7-11 December 2020

- [Citation Programme in Applied Geostatistics](#): Live online lecturing, Johannesburg, 18-22 January, 15-19 February, 15-19 March and 12-16 April 2021
- [WasteCon2020](#): Johannesburg, 9-11 February 2021
- [The Sixteenth Annual Public Health Conference](#) (PHASA2020): Tshwane, 15-17 February 2021
- [Inaugural South African Clinician Scientists Conference](#): Cape Town, 25-26 February 2021
- [Agbiz Congress 2020](#): Building resilient and sustainable agri-food ecosystems: Sun City, 7-9 April 2021. Face-to-face sold out. Book a virtual spot now.
- [Second International Congress of Biological Control](#) (ICBC2): Davos, Switzerland, 26-30 April 2021
- [16th International Conference on Space Operations](#): Cape Town 3-7 May 2021
- The [Bio2021 Conference](#) at Spier Wine Estate has been postponed to 26-29 September 2021
- [23rd International Congress of Zoology](#): Cape Town, 21-25 November 2021
- The 7th [World Conference of Research Integrity](#) Cape Town, has been postponed to 29 May – 1 June 2022



Some articles included in the section below are opinion pieces. The opinions expressed in these articles do not necessarily reflect the views of the NSTF Executive Committee, Directors, Secretariat or Members.

Universities and higher education

- [Wits University physicist wins top South African physics award](#) (wits.ac.za)
- [Congratulatory Message to Professor Refilwe Phaswana-Mafuya on her new appointment](#) (nrf.ac.za)
- [What complexity theory can teach leaders of South African universities today](#) (theconversation.com)
- [Royal Aeronautical Society medal for mechanical-engineering team](#) (uct.ac.za)
- [Post COVID-19: opportunity for universities to have a rethink](#) (theconversation.com)
- [World championship for UFS agriculture students](#) (ufs.ac.za)

Science Councils and Statutory Organisations

- [Touching lives through innovation](#) -CSIR (mg.co.za)
- [Agricultural Research Council scoops the DFI award for research and technology](#) (farmingportal.co.za)
- [SABS elected to serve on ISO council once again](#) (engineeringnews.co.za)
- [SABS appointed as test house for World Rugby equipment](#) (bizcommunity.com)
- [ASSAf elects new Office-bearers and Council members](#) (assaf.org.za)
- [ASSAf and SANSA seal collaboration](#) (assaf.org.za)

Botany and ornithology

- [New plant discovered at Ai-Ais/Richtersveld Transfrontier Park](#) (dfa.co.za)
- [NWU research group contributes to international bird study](#) (nwu.ac.za)
- [Artificial nests can help African penguins breed – but parasites like them too](#) (theconversation.com)

Space Science and Astronomy

- [South Africa is hunting for students in booming sectors of physics, including astronomy, optics, and nuclear physics](#) (physics.aps.org)
- [New Space Weather Network Extends over Africa](#) (scientificamerican.com)

Medicine and health

- [Study Reveals How Smoking Worsens COVID-19 Infection in the Airways](#) (technologynetworks.com)
- [Groundbreaking long-term injection 90% more effective in HIV prevention in women](#) (news24.com)
- [COVAX plan boosts Covid-19 vaccine hopes for developing countries](#) (dailymaverickj.co.za)
- [The hunt for an HIV vaccine](#) (wits.ac.za)
- [Why it's important to keep diagnosing and treating HIV during the COVID-19 pandemic](#) (wits.ac.za)
- [ASSAf and NAS on COVID-19 non-pharmaceutical interventions](#) (assaf.org.za)
- [Reversal of biological clock restores vision in old mice](#) (nature.com)
- [Discovery of Proteins to Fight Parasitic Disease](#) (unizul.ac.za)

Environment, climate change and energy

Environment

- [Polystyrene recycling in SA increased by 19 % during 2019](#) (infrastructurenews.co.za)
- [Mounting plastic waste risks lives, diminishes sustainable change](#) (infrastructurenews.co.za)
- [Know thy enemy in the exhaust](#) (up.ac.za)
- [Beach Survival in the Face of Sea Level Rise Explored in Nature Study](#) (ukzn.ac.za)
- [We've developed a framework to help World Heritage Sites manage invasive species](#) (theconversation.com)
- [River of bacteria: a South African study pinpoints what's polluting the water](#) (theconversation.com)

Energy

- [Another trickle of good news for South Africa's energy future](#) (energize.co.za)
- [Local carmaker launches massive new renewable energy project](#) (energize.co.za)
- [Local energy company wins international gold awards for 2020](#) (energize.co.za)

Mining and minerals

- [Modernisation in mining – a people-centric approach](#) (csir.co.za)

Infrastructure

- [UP launches Africa-first Engineering 4.0 facility for research on smart transport, cities and infrastructure](#) (up.ac.za)

Agriculture

- [Vote for your most promising Field Robot Concept!](#) (futurefarming.com)
- [A new model shows where desert locusts will breed next in East Africa](#) (theconversation.com)
- [ARC aims to free Southern Africa from the fruit fly](#) (bizcommunity.com)

Science engagement

- Myriads of conspiracy theories about COVID-19 vaccines have been spread around the globe. One of the latest is a video about the AstraZeneca vaccine for COVID-19 that has purportedly been derived from “the lung tissue of a 14-week-old aborted Caucasian male foetus”. This video is thriving on social media. It also claims that “they know that this vaccine is going to hurt people. Or kill people. So badly”. Scientific facts are distorted throughout the video, but in such a way that the layman can easily believe in them.
- The traditional media has fortunately been debunking this and several other conspiracy theories. The following articles from the BBC and Reuters on this topic are worth reading: [The coronavirus pandemic 'Great Reset' theory and a false vaccine claim debunked](#) and [Fact check: COVID-19 is not a 'scam' being used to 'destroy the global economy' for a new world order](#)
- [Misinformation on social media fuels vaccine hesitancy: a global study shows the link](#) (theconversation.com)

Innovation

- Not sufficient budget for designing tailored brochures for all your innovations? The Innovation Bridge can enable you to generate an electronic brochure for your published innovations on the Innovation Bridge Portal. The electronic brochure functionality is designed in a way that allows you to customise it, to fit your organisation or individual corporate identity requirements. Click [here](#) for more information.

Technology and the 4th Industrial Revolution

- [4IR and its positive impact on waste sector](#) (infrastructurenews.co.za)
- [How VR, 5G will become the new frontier of sports](#) (bizcommunity.com)
- [Why Responsible AI is Built Around Human-Centred Design](#) (itnewsafrika.com)
- [Estimating effects of information and communication technology \(ICT\) on the productivity of manufacturing industries in South Africa](#) (tandfonline.com)
- [DeepMind AI cracks 50-year-old problem of protein folding](#) (theguardian.com)
- [Wits develops AI project with York University to tackle COVID-19 in Africa](#) (wits.ac.za)

Opportunities

- President and CEO of the South African Medical Research Council (SAMRC) Prof Glenda Gray has announced the launch of a [Bursary Programme](#) to fund a limited number of Clinician Scientists who wish to attend the upcoming Inaugural South African Clinician Scientist Conference. Applications are now open. Potential delegates from the Historically Disadvantaged Institutions (HDIs) are encouraged to apply. Bursary application closing date: 29 January 2021.
- If you're looking for fellowships, research funding or scholarships, a new website from Nature Careers [offers thousands of funding opportunities](#). You can also find tips on how to write a winning grant application, find a funded internship in industry, bounce back from rejection, and lots more — [all for free](#).

- [France - South Africa Scholarship Programme](#): This call for applications is open for students who intend to start their studies in France in September 2021. Deadline for online applications: 20 January 2021. Laureates will follow a specific programme in South Africa from March to July 2021. This track will include online French courses organised by the network of the Alliances Françaises. It may also include an internship in French Companies based in South Africa, depending on the opportunities and the profile of each laureate. This call for applications is open to all fields of studies.
- [Young Scientists Summer Program Applications Open](#): International Institute for Applied Systems Analysis (IIASA) offers PhD student fellowships to undertake a summer project on a topic related to the IIASA research agenda.



- [Tribute to South African plug standard champion Gianfranco Campetti](#) (mybroadband.co.za)
- [Cape marine biologist Prof Mike Bruton awarded prestigious Marloth Medal](#) (getaway.co.za)
- [UJ's Prof Saurabh Sinha receives highest distinction by world's largest technical professional body](#) (uj.ac.za)
- [UKZN Researcher gets Prestigious International Grant for HIV Study](#) (ukzn.c.za)
- [Obituary: Professor Olaf Weyl](#) (nrf.ac.za)
- [Wits mourns the passing of Professor Belinda Bozzoli](#) (wits.ac.za)

About the NSTF

The National Science and Technology Forum (NSTF), established in 1995, is a broadly-representative stakeholder body for all science, engineering and technology (SET) and innovation organisations in South Africa, which seeks to influence policy formulation and delivery.

The NSTF Awards are unique in SA, recognising the outstanding contributions of individuals and groups to SET and innovation.

The science bursaries page provides information on bursaries and bursary providers for science, engineering and related studies.

Disclaimer

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