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NSTF e-Newsletter

S.E.T. for socio-economic growth

The doors of learning

Message from the NSTF Executive Director, Ms Jansie Niehaus

Are our schools ready for reopening, even in phases as suggested? Some schools in privileged areas may be. When the COVID-19 crisis is more resolved, we should be thinking of new methods of achieving inclusiveness in education. [Read the message.](#)



NSTF News

25 years of serving the science, engineering, technology and innovation community in SA

The [National Science and Technology Forum \(NSTF\)](#) is celebrating 25 years of its existence this year. This [stakeholder body](#) represents more than 110 organisations, councils and institutions. Its core vision is to be an instrument of democracy, encouraging free speech and critical voices through a transformed society.

Why does South Africa need an umbrella organisation for science, engineering and technology (SET) and innovation organisations?

The many reasons to belong to the NSTF range from [NSTF Discussion Forums](#), the monthly overview of SET and innovation news through the [e-newsletter](#), and being part of SET [youth outreach](#). However, membership of the NSTF goes far beyond this:

- The NSTF is a unique organisation and the only one of its kind in South Africa. We unite the voices and represent more than 110 stakeholder organisations of many different kinds, including both public and private sectors. We have the ability to build bridges – between science and education, between engineering and science, SET and innovation, and between, amongst others, parts of government and SET.
- We provide a unique platform for consultation and have a proud history of public policy engagement. We provide an independent platform for engagement and vibrant SET debate through the NSTF Discussion Forums.

- The NSTF plays a coordinating and unifying role, making it easier to get an overview of and navigate the small but complex local SET and innovation landscape.

There is strength in numbers and a greater likelihood of being heard. There are common concerns, such as cuts in funding, among others. Together we can come up with creative proposals and more voices can be heard.

Collaboration is of great value for innovation, and often essential. Innovation is one of the outcomes of the triple helix concept which involves interactions between three sectors: researchers, industry/business, and government. The NSTF structure already operates on the triple helix. This ranges from [membership and committees, to the sectors](#) we bring together at the [NSTF-South32 Awards](#) and in the NSTF Discussion Forums. Civil society is often added to the triple helix as the fourth strand. From NSTF's perspective, civil society is essential and has been part of the Forum's activities [since inception in 1995](#). The NSTF is able to be part of the collaboration process when there is the need for a platform that is non-partisan and neutral. Read more in the Executive Director's message in the 2018/2019 [NSTF Annual Report](#).

A Business Report special feature – #NSTF25yrs

The 30 April Business Report newspaper carried a [special feature](#) to celebrate the NSTF's 25 years of influencing science, engineering, technology (SET) and innovation in South Africa (SA).

This special feature not only elaborates on how SET are key to SA's current challenges but also reminisce on milestones achieved through collaborative efforts with [members](#) (36% from founding stages) and stakeholders of the SET community.

Business Report has been an [NSTF Awards](#) media partner since 2010 and is carried nationwide by The Star, Pretoria News, Cape Times and The Mercury newspapers. [Read more](#).

This special NSTF 25 year anniversary feature is made possible by the following member organisations – the [Academy of Science of South Africa \(ASSAf\)](#), [Council for Scientific and Industrial Research \(CSIR – founding member\)](#), [Central University of Technology \(CUT\)](#), [South African Mathematics Foundation \(SAMF\)](#) and [South African Council for Natural Scientific Professions \(SACNASP\)](#). We thank them for their participation in the celebration of a quarter of a century.

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 – *S.E.T. for socio-economic growth*.



2019/2020 NSTF-South32 Awards

Nominees announced: We are pleased to announce the nominees for the [2019/2020 NSTF-South32 Awards](#). The full [list of nominees](#) is available on the NSTF website. The finalists will be announced later this month.

Awards Gala Dinner: The [Awards gala dinner](#), postponed until a later date, will be in an online format this year as a result of the COVID-19 pandemic.

2020 Theme: The 2020 [Special Annual Theme Award](#) will be made for research and development (R&D) and innovation in Plant Health. This is in recognition of the UN celebration of the '[2020 International Year of Plant Health](#)'.

Partners

The mining company [South32](#) is our co-branding sponsor for the 5th year. Eskom is the sponsor for the [Engineering Research Capacity Development Award](#) as far back as 2003, The Lewis Foundation for the [Green Economy Award](#), National Intellectual Property Management Office (NIPMO) for the Small, Medium and Micro Enterprises (SMME) Award under the [Innovation Awards](#), which includes prize money for the winner, and the Water Research Commission (WRC) for the [NSTF-WRC Award](#).

[Click here](#) for more information on the 2019/2020 round of Awards.

COVID-19 radio interviews with NSTF Award winners

NSTF-South32 Award [winners](#) have been popular as knowledgeable speakers on the COVID-19 pandemic. These winners are all ambassadors for excellence in science, engineering, technology and innovation in South Africa (SA). You can catch up on the following interviews as podcasts:

- **Professor Stephen Tollman**, from the University of the Witwatersrand, on [Tru FM](#), talking on what scientists in South Africa are doing to provide solutions around the coronavirus and the research that he is doing on the health and wellbeing of rural populations in SA. He won the [2017/2018 NSTF Management Award](#).
- **Professor Refilwe Nancy Phaswana-Mafuya**, Deputy Vice-Chancellor Research & Innovation at North-West University (NWU), on [Ikwekwezi FM](#), talking about her research on complex ageing issues. She also did a talk on TruFM on an epidemiologist's perspective on the pandemic (we are awaiting the podcast which will be posted on the NSTF website). Prof Phaswana-Mafuya won the [2016/2017 TW Kambule-NSTF Award: Researcher](#).

Discussion Forum on plant health – latest news

The NSTF Discussion Forum on Plant Health (aligned with [IYPH](#)) has been postponed, and will be conducted in an online format. More information will follow in future issues of this eNews. [Subscribe](#) to this newsletter to get the invitation first-hand.

Membership fees

A reminder that [NSTF membership fees](#) are due from 1 April, the start of the NSTF's financial year. As a non-profit organisation we are completely dependent on our loyal members to sustain our efforts to communicate and promote the relevance and importance of science, engineering, technology (SET) and innovation. The role of research, science communication and the spread of misinformation during the pandemic show that the NSTF's role is crucial in these times.

Paid fees allow all employees of member organisations free access to NSTF Discussion events such as on Plant Health mentioned above.

Want to join the cohort of NSTF members?

Apply for your **organisation** to become a member and unite your profession, expertise and experience behind the NSTF non-profit company promoting SET and innovation in South Africa for the past 25 years. [Click here](#) to apply.

- **Prof Anne Grobler**, Head of Research at Austell Laboratories and former Director of the Preclinical Drug Development Platform at NWU, on [OFM](#) and [Smile FM](#) afternoon drive shows, talking about collaborative research by institutions towards producing local diagnostic tests. She won the [2013/2014 NSTF Management Award](#).

This service is currently sponsored by the [Fuchs Foundation](#).

Bursaries available

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

- [Shoprite Bursaries](#) (Deadline: 30 June 2020)
- [FMCSA Ford Bursary](#) (Open)
- [GAST Bursary Programme](#) (Open)

Visit the directory for information on bursaries, SET [career](#) guidance and inspirational [role models](#) in SET.

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

Share 'n Dare Activities

The activities of the NSTF's [Share 'n Dare programme](#) for April also had to be cancelled due to the outbreak of the COVID-19.

However, a snippet of the Eskom Expo for Young Scientists Executive Director Parthy Chetty's talk that he would have given at SciFest Africa, is available [here](#). The [Eskom Expo for Young Scientists](#) (Expo) won the 2018-2019 NSTF-South32 Award in the [Non-Governmental Organisation](#) category.

The Share 'n Dare programme is sponsored by the [Carl and Emily Fuchs Foundation](#).

Getting to know the 2018-2019 NSTF-South32 winners

Non-Governmental Organisation (NGO) Award

[Eskom Expo for Young Scientists](#) (Expo) won the 2018-2019 [NSTF-South32 Award in the Non-Governmental Organisation](#) category. The NGO Award is for any non-governmental organisation which has made an outstanding contribution to science, engineering and technology (SET) and innovation in South Africa over the last five to 10 years.

The Eskom Expo is a science fair that gives students a chance to show others their projects about their own scientific investigations. It creates excitement for science through research-based projects and encourages more students to take up science-oriented subjects and careers. Eskom Expo walked away with this award due to its commitment to providing promising young scientists with opportunities to develop their passion for the sciences, while enhancing their depth of knowledge.

Eskom Expo Executive Director Parthy Chetty says this ground-breaking Expo that was started 40 years ago in Pretoria by the late Dr Derek Gray, has rapidly mushroomed into the largest science fair in the country and now on the continent. "Universities across the country are now seeking out Expo participants to groom them into researchers and engineers for our country," says Chetty.

Source: <http://www.eskom.co.za/news/Pages/2019Jul2.aspx>



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 of the [proSET sector](#).

- The April issue of [IMIESA](#), official publication of the **Institute of Municipal Engineering (IMESA)** is now available.
- The latest edition of [Civil Engineering](#), the official magazine of the **South African Institution of Civil Engineering (SAICE)**, is now available.
- Read the following interesting articles on the website of the **Geological Society of South Africa (GSSA)**:

[USGS releases first-ever comprehensive geologic map of the Moon](#) (phys.org). For the first time, the entire lunar surface has been completely mapped and uniformly classified by scientists from the US Geological Survey, in collaboration with NASA and the Lunar Planetary Institute.

[Study reveals the secret of magmatic rocks consisting of only one mineral](#) (miningreview.com). Geologists from the University of the Witwatersrand, Johannesburg, have come up with an original explanation of how nature may produce an intriguing class of magmatic rocks that are made up of only one type of mineral.



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 Qualifications Framework Act: Consultative Paper on Proposed Amendments](#) (Comments invited, no deadline given)
- [Standards Act: Standards matters](#) (Comment by 8 May 2020)
- [Standards Act: Standards matters: Draft](#) (Comments invited by 24 May 2020)
- [National Environmental Management: Protected Areas Act: Regulations: Marine Protected Areas: Amendments](#) (Comment by 22 May 2020)

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.

Policy

- [SANSA stepping up its support to National Disaster Management Centre](#) (engineerit.co.za)
- [Committees welcome additional allocation of funds for water provision](#) (infrastructurenews.co.za)
- [Parliament prioritises its virtual transition](#) (itweb.co.za)
- [Government sets up Covid-19 situational awareness platform](#) (engineerit.co.za)
- [Why social distancing is a big challenge in many African countries](#) (ethz.ch)

Energy

- [Should Africa consider the nuclear energy route?](#) (infrastructurenews.co.za)
- [Power shortages will remain a big challenge in a post-Covid-19 South Africa](#) (bizcommunity.com)

4th Industrial Revolution and technology

- [SA deploys hi-tech to fight COVID-19 disinformation](#) (itweb.co.za)
- [Freeing up spectrum during lockdown a matter of 'survival'](#) (itweb.co.za)
- [White paper: Information security under exceptional circumstances – instructions for private individuals](#) (itweb.co.za)
- [SITA zeroes in on government connectivity during lockdown](#) (itweb.co.za)

Education

- [Higher Education Act: Extension dates for Post-School Education and Training Institutions \(Public and Private Higher Education Institutions as well as Public Colleges\) due to Coronavirus COVID-19 lockdown](#) (gov.za)

Infrastructure

- [Call for construction industry to be declared essential service](#) (infrastructurenews.co.za)

Medicine and Health

- [Lockdown has bought us time, Professor Karim says, as South Africa bucks the trend](#) (dailymaverick.co.za)
- [The lockdowns worked – but what comes next?](#) (science.sciencemag.org)
- [Governments need to do more for refugees affected by COVID-19](#) (uj.ac.za)
- [COVID-19: The science and policy calculus behind SA's new mask recommendations](#) (sun.ac.za)
- [Minister Blade Nzimande: Outcome of HSRC second survey and measures implemented by Department of Science and Innovation in response to Covid-19](#) (gov.za)
- [Coronavirus: never been a more compelling time for African scientists to work together](#) (bizcommunity.com)



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.

- [Working World Exhibition 2020](#): Port Elizabeth, 21-23 April 2020 **Postponed to 14-16 July 2020**
- [16th International Conference on Space Operations](#): Cape Town 18-22 May 2020 **Postponed to 3-7 May 2021**
- [Water Institute of South Africa 2020 Conference](#): Johannesburg, 31 May – 4 June 2020 **Postponed to 5-9 December 2020**
- [Manufacturing Indaba](#): Johannesburg, 9-10 June 2020
- [14th International Conference on CFD In the Oil & Gas, Metallurgical and Process Industries](#): Trondheim, Norway 9-11 June 2020 **The organising committee is considering cancelling or postponing the conference**
- [XVIII Triple Helix Conference](#): Tampere, Finland, 15-17 June 2020. **The conference will be held online.** Register by 31 May to participate.
- [International Agrifood Conference IFAMA 2020](#): Rotterdam, the Netherlands, 15-18 June 2020
- [2020 Africa Energy Forum](#): Barcelona, Spain, 30 June – 3 July 2020
- [Agbiz Congress 2020](#): Building resilient and sustainable agri-food ecosystems: Sun City, 15-17 July 2020. **Postponed to 7-9 April 2021**
- [The Water Show Africa](#): Johannesburg, 20-21 August 2020
- [3rd African Symposium on Mycotoxicology](#): Stellenbosch, 6-9 September 2020
- [SA Innovation Summit](#): Cape Town, 30 September – 2 October 2020
- [25th WasteCon 2020](#): Johannesburg, 6-8 October 2020
- [IMESA Conference](#): Cape Town, 28-30 October 2020
- [World Engineering Education Forum - Global Engineering Deans Council Conference \(WEEF-GEDC\)](#): Engineering for the Sustainable Development Goals, Cape Town, 15-20 November 2020
- The 7th [World Conference of Research Integrity](#) is to be hosted by UCT in 2021
- [23rd International Congress of Zoology](#): Cape Town, 21-25 November 2021

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

- [Women take top spots in civil engineering](#) (uct.ac.za)
- [New centre tracks COVID-19 social fracture](#) (uct.ac.za)
- [NWU to validate new Covid-19 test](#) (nwu.ac.za)
- [UWC: No Student Will Be Left Behind](#) (uwc.ac.za)
- [NWU engineers rising to the Covid-19 challenge](#) (nwu.ac.za)

Science Councils and Statutory Organisations

- [CSIR, YES partner to upskill youth](#) (itweb.co.za)

Palaeontology

- [Dinosaur "Easter Eggs" Reveal Their Contents in 3D](#) (nrf.ac.za)
- [An Introduction to the fossils of Sterkfontein](#) (wits.ac.za)

Space Science and Astronomy

- [Astronomers stumble upon unexpected features in a distant galaxy using MeerKAT data](#) (sarao.ac.za)
- [SALT contributes to a new understanding of novae](#) (dst.gov.za)
- [Next COVID-19 outbreak 'predicted via satellite'](#) (scidev.net)
- [Two solar cycles active at once](#) (engineerit.co.za)

Medicine and health

- [Doing the 'Greatest Good for the Greatest Number of People'](#) - implementing crisis standards of care during COVID-19 (nationalacademies.org)
- [SA's TB research yields 'exciting results'](#) (health-e.org.za)
- [SAMRC: SA's war on COVID-19](#) (samrc.ac.za)
- [Will South Africa's younger population lead to fewer COVID-19 deaths?](#) (bhekisisa.org)
- [Will the TB vaccine you got as a baby protect you against COVID-19?](#) (bhekisisa.org)
- [Potential harm in acting before there's 'good science'](#) (uct.ac.za)
- [Covid-19: Treatments, but at what cost?](#) (wits.ac.za)
- [SA scientists on breaking the Covid-19 code](#) (ukzn.ac.za)
- [Migration Linked to Mortality Rate in HIV Positive Pregnant Women in KZN](#) (ukzn.ac.za)
- [Food aid parcels in South Africa could do with a better nutritional balance](#) (up.ac.za)
- [COVID-19 and mental illness: 'We must be sensitive to the needs of those living with a dual burden,' says UP academic](#) (up.ac.za)
- [Covid-19 opens a window of opportunity for mass testing for other diseases](#) (sun.ac.za)
- [How African genetic studies offer hope for preventing a common cause of blindness](#) (theconversation.com)

- [Alzheimer's: the 'switch-on moment' discovered](#) (theconversation.com)
- [Africa joins the race to trace Covid-19 with genomics](#) (bizcommunity.com)

Environment, climate change and energy

Climate change

- [Climate change to accelerate biodiversity loss](#) (scidev.net)

Environment

- [Positive impact of coronavirus on the environment](#) (infrastructurenews.co.za)
- [Ways to commercialise waste](#) (issuu.com)
- [UCT to lead network on tackling mine dust](#) (uct.ac.za)

Energy

- [Industry cries foul as electricity demand drops](#) (energize.co.za)

Agriculture

- [Safe chemical kills hitchhiker pest, preserves fruit quality](#) (sun.ac.za)
- [Researcher receives doctorate in cheesemaking](#) (agriorbit.com)
- [Researcher provides tips on how olive farmers can ward off trunk diseases](#) (sun.ac.za)
- [Nixtamalization adds value for smallholder maize producers](#) (dst.gov.za)
- [Lower export demand will be among SA agriculture's COVID-19 challenges](#) (wandilesihlobo.com)
- [CropLife International appoints lead for plant biotechnology](#) (agriorbit.com)

Technology and the 4th Industrial Revolution

- [From weapons to ventilators: time for Denel to do some socially useful work](#) (dailymaverick.co.za)
- [Four times healthcare workers came up with creative solutions to coronavirus problems](#) (bhekisisa.org)
- ['Robot' helps Tygerberg specialists on ward rounds during pandemic](#) (sun.ac.za)
- [Game-changers: two inventions vital to the battle against Covid-19](#) (dispatchlive.co.za)
- [Students' portable hand sanitiser distiller](#) (uct.ac.za)
- [Cyber-threat reality highlighted in UKZN presentation](#) (ukzn.ac.za)
- [UP students create app to help homeless shelters speed up service](#) (up.ac.za)
- [How 3D printing is proving its worth in the fight against Covid-19](#) (bizcommunity.com)
- [Children at increased risk of harm online during global COVID-19 pandemic](#) (unicef.org)
- [New mapping tool could help fight COVID-19](#) (infrastructurenews.co.za)

Infrastructure

- [Namdock brings water treatment systems on board for international shipping sector](#) (infrastructurenews.co.za)
- [Construction industry establishes COVID-19 rapid response task team](#) (infrastructurenews.co.za)

Science awareness

- [Pseudoscience and COVID-19 — we've had enough already](#) (nature.com)

Opportunities

- [Van Schaik Announces Innovative Digital "Influencer Search" Campaign to Assist Students while South African Universities Remain Closed](#) (www.vanschaik.com)
- [Pride Factor launches online academy to provide vital life skills for South African youth](#). Free access while learning institutions remain closed (pridefactoracademy.com)
- [Microsoft offers free training for educators](#) (engineerit.co.za)

- [Apply today for the 2020 Science and SciLifeLab Prize for Young Scientists](#). Closing date: 31 May 2020 (scidev.net)
- [Become the Science Engagement of the Year 2020](#). Closing date: 31 May 2020 (scidev.net)



- [Obituary: Professor Maarten de Wit](#) (nrf.ac.za)
- [European Research Council Advanced Grant to Prof Erwin de Blok](#) (nrf.ac.za)
- [Wits' Forbes appointed as editor-in-chief of international journal](#) (wits.ac.za)

About the NSTF

The [National Science and Technology Forum](#) (NSTF), established in 1995, is a broadly-representative stakeholder body for all 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

The NSTF has taken all practical measures to ensure that the material contained in this newsletter is correct. The NSTF reserves the right to make changes as it deems necessary.

Privacy

Registration details submitted to the NSTF will be treated confidentially and will only be used by NSTF to communicate with its members and subscribers.

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