



S.E.T. for socio-economic growth

National Science and Technology Forum (NSTF)

eNews

Save our science

Message from the NSTF Executive Director, Ms Jansie Niehaus

The line-up of NSTF-South32 Awards winners is excellent as usual, and makes us proud to be South African. But will SA be able to keep up the high standard of researchers in the national system of innovation for the foreseeable future? Severe funding constraints are being experienced in the system – from both the public and private sectors. [Read](#) the ED's message.

NSTF News

NSTF-South32 Awards celebrated Silver Jubilee at gala event

On Thursday 13 June, the 2022/2023 NSTF-South32 Award winners were announced at a prestigious event taking place at two locations simultaneously and broadcast live on the NSTF YouTube channel. The Silver Jubilee of the [Awards](#) was celebrated by South Africa's who's who of science, engineering and technology (SET) and innovation at [gala dinners](#) in Johannesburg and Cape Town and with live video participation together reaching more than 650 people on the night. The theme for the evening was 'ocean science for sustainable development'.

The [video](#) of the event is available for those who missed out and the [gallery of photos](#) of the event is available on the NSTF website.

Click [here](#) to see the media release that lists all the winners. The winners are also featured in a [supplement](#) in the *Mail&Guardian*, and in an online [article](#) of IOL. A second [feature](#) by *Business Report* (an insert in *The Star*, *Cape Times* and *The Mercury*) was published on Friday 21 July 2023. A digital magazine by Independent Newspapers is being planned. Contact [Ms Mankwe Mojapelo](#) if you would like to associate your brand with the articles of winners and the prestige of the 'Science Oscars of South Africa', the NSTF-South32 Awards.

Brilliant students in the limelight

Twenty-six students were selected for the NSTF [Brilliant Students Programme](#), the top performers in matric mathematics and physical science from around the country. Twenty of the students attended the NSTF-South32 Awards gala dinner in Johannesburg and one in Cape Town, after an exciting [three-day tour](#) of science facilities in Gauteng and North-West Province. A few of them also told their life stories and aspirations to the delight of the audience. [Read more](#) about this year's Brilliant Students – our future STEM leaders and innovators. See the students at the gala event 45 minutes into the [video](#).

The Brilliant Students Programme was featured in the [Mail&Guardian](#); three of the students were interviewed by the *Sowetan* newspaper; and another interview was broadcast by [Cape](#)

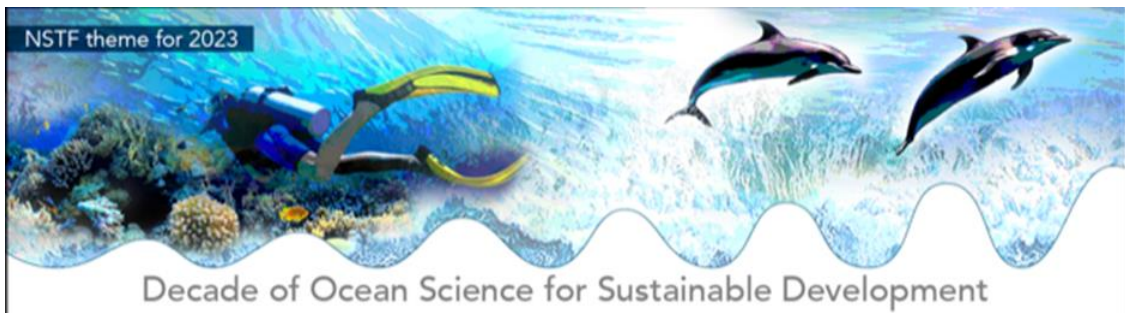
[Talk Radio](#).

Two Brilliants students are packing their bags to attend the LIYSF

Through a new partnership between the NSTF and the London International Youth Science Forum (LIYSF), two students from the NSTF Brilliants Programme get an opportunity of a lifetime: to participate in the 2023 LIYSF, 26 July to 9 August 2023. This happens to be just a week after Nelson Mandela International Day on 18 July. We are reminded of Mandela's words: "Education is the most powerful weapon which you can use to change the world," and "The power of education extends beyond the development of skills we need for economic success". The NSTF firmly believes in furthering young talent by exposing them to opportunities for education, training, development and networking and sees this opportunity to do just that. [Read](#) the media release with information on the trip and the two students.

The aims of the NSTF Brilliants Programme are to inspire and motivate young talented people who were top matric performers in science and mathematics. The programme is sponsored by the Department of Science and Innovation (DSI) this year, together with the South African Council for Natural Scientific Professions (SACNASP).

Today's research ... tomorrow's innovation



Welcome to new members

The NSTF welcomes two new members:

- [Maluti TVET College](#) under the Higher Education sector
- [Arid Zone Ecology Forum \(AZEF\)](#) under the Civil Society/NGO sector

Join the NSTF's existing cohort of over 130 member organisations involved in science, engineering, technology (SET) and innovation in South Africa.

Visit the [Membership section](#) on the website for more information.

SET for socio-economic growth

STEMulator up in the clouds

STEMulator has been flying high in the July 2023 edition of the official in-flight magazine of FlySafair, [Inflight Magazine](#). FlySafair carries close to half-a-million passengers per month across a vast network of domestic and international destinations. With each turn of the *Inflight Magazine* pages, the STEMulator flies the flag of education innovation high above the clouds.

STEMulator also features in the special NSTF-South32 Awards supplement in *Mail&Guardian*, published on 14 June.

To contribute or sponsor a page or subject area of the STEMulator, contact [Ms Kgaugelo Pule](#).

Explore>Discover>Learn – inspiring the next generation of STEM professionals

Share 'n Dare: Career talks by 2022 NSTF-South32 Award winners

The NSTF's [Share 'n Dare programme](#) provides platforms for our award winners to act as role models and ambassadors for science, engineering, technology (SET) and innovation. The NSTF plans to produce career talk videos to inspire the youth with the recently announced 2023 [NSTF-South32 Award winners](#) throughout the coming year. All the career talk videos of **2022's winners** have now been completed and are available on YouTube:

Meet Vaccinologist, Prof Shabir Madhi

Prof Shabir Madhi is Dean of the Faculty of Health Sciences; and Professor: Vaccinology of the University of the Witwatersrand (Wits). He won the 2022 Lifetime Award for his leadership in research on vaccines against life-threatening diseases in Africa and globally. [Listen to his talk.](#)

Meet Biochemist, Dr Boitumelo Semete-Makokotlela

Dr Boitumelo Semete-Makokotlela, Chief Executive Officer of the South African Health Products Regulatory Authority (SAHPRA), won the 2022 Management Award for being pivotal in establishing the Innovation Hub's Biotech Incubator. She was instrumental in authorising a number of COVID-19 diagnostic tests, vaccines and therapies to ensure the regulator was an enabler during the pandemic. [Listen to her talk.](#)

Meet Hydrogeologist, Prof Tamiru Abiye

Prof Tamiru Abiye, Professor of Hydrogeology at Wits, received the 2022 TW Kambule-NSTF Researcher Award for his dedication to water science and his focus on building research capacity and solving community problems to attain sustainable development in South Africa. [Listen to his talk.](#)

Meet Civil Engineer, Prof Wellington Thwala

Prof Wellington Thwala, Research Professor: Construction Project Management and Leadership, Department of Civil Engineering, College of Science, Engineering and Technology at the University of South Africa (UNISA) received the 2022 Engineering Research Capacity Development Award for his work in the area of sustainable construction management, digitalisation, design error containment and leadership within the built environment. [Listen to his talk.](#)

Meet Physicist and Science Centre Coordinator Dr Nnditshedzeni Eric Maluta

For the substantial impact the Vuwani Science Resource Centre makes on public awareness of SET, Dr Nnditshedzeni Eric Maluta, coordinator at the Centre, won the 2022 Communication Award. His work includes education outreach programmes to the previously disadvantaged learners in Venda and surrounds. [Listen to his talk.](#)

Please spread the word about [these career talks](#) and [others produced by NSTF](#), which highlight wonderful career opportunities in STEM for young people.

SET for knowledge driven solutions!

NSTF Discussion Forum news

[NSTF Discussion Forums](#) provide platforms for constructive interaction and discussion with science, engineering, technology (SET) and innovation stakeholders, including

Bursaries available

Visit the NSTF [Bursary Directory](#) for the latest available bursaries in science, engineering and technology (SET):

government, on key priority areas of concern to the SET community.

A discussion on South Africa's electricity crisis, called [Transitions in South Africa's energy provision](#), is taking place on 22-23 August 2023. [Register](#) now.

In the meantime, consider the discussion on 'Loadshedding and power cuts – what is really going on?' held in October 2021 for some background on the topic.

Make your voice heard and join in!

- [Afrimat Bursary Programme](#) (Deadline: 28 July 2023)
- [Ninety One Bursary](#) (Deadline: 31 July 2023)
- [Mediclinic/ER24 Bursary Programme](#) (Deadline: 31 July 2023)
- [Jones & Wagener Bursary Programme](#) (Deadline: 31 July 2023)
- [Thungela Bursary Programme](#) (Deadline: 31 July 20213)
- [Hortgro Bursary](#) (Deadline: 15 August 2023)
- [Sasol Foundation Bursary Programme](#) (Deadline: 21 August 2023)
- [CSIR Bursary Programme](#) (Deadline: 21 August 2023)

SET for life!



proSET (Professionals in science, engineering and technology) is a sector of the NSTF currently representing 47 professional and learned societies. This section shares news about [current members](#) and introduces new members of the [proSET sector](#).

- **SAIMC proposes new name**

According to CEO Johan Maartens, the [Society for Automation, Instrumentation, Mechatronics and Computer Engineering](#) (SAIMC) believes that changing the name of SAIMC to include computer engineering will benefit both SAIMC and computer engineers in South Africa. [Read more](#).

- **SAIIE to award engineers**

The [Southern African Institute for Industrial Engineering](#) (SAIIE) Awards honour and celebrate outstanding contributions to industrial engineering in Southern Africa. The prestigious 2023 SAIIE Awards and Gala Dinner will take place on Thursday, 17 August 2023. [Read more](#).

SAIIE has streamlined their LinkedIn communication channels. Click [here](#) to follow them on LinkedIn.

- **Showcasing Innovation at the CESA Aon Engineering Excellence Awards**

[Consulting Engineers South Africa](#) (CESA) has announced that the 2023 CESA Aon Engineering Excellence Awards will take place on 16 August this year. Celebrating excellence in the consulting engineering industry, the awards showcase the important role that infrastructure plays in sustainable development and the delivery of basic services to society. [Read more](#).

- **Nominations open for 2023 IITPSA President's Awards**

Nominations are now open for this year's [Institute of Information Technology Professionals \(IITPSA\) President's Awards](#). This year's awards will recognise those ICT professionals who are driving ICT innovation and progress in South Africa. Nominations close on 15 August and the winners will be named at an award ceremony in November. [Read more](#).

- **Southern African institute of Mining and Metallurgy to induct new President**

The President and Council of the [Southern African Institute of Mining and Metallurgy \(SAIMM\)](#) invite members, their guests, and members of other constituent societies to attend the Annual General Meeting 2023 on 17 August 2023 where the SAIMM will induct its new president, William Joughin. [Read more](#).

- **Entries for the 2023 SAICE Institutional Awards now open**

Deadline for submissions for the 2023 [South African Institution of Civil Engineering \(SAICE\) Institutional Awards](#) is 11 August 2023. Click [here](#) for more information.



SET-related policies currently open for public comment

Keep informed and have your say

- [Tobacco Products and Electronic Delivery Systems Control Bill](#) (Comment by 4 August 2023)
- [Electronic Communication Amendment Bill, 2022](#) (Comment by 4 August 2023)
- [Proposed reforms for whistleblower protection regime in South Africa](#) (Discussion Paper) (Comment by 15 August 2023)
- [Marine Oil Pollution \(Preparedness, Response and Cooperation\) Bill](#) (Comment by 16 August 2023)

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](#).

4IR and information technologies

- [Propelling Africa's AI and data-driven research](#) (nrf.ac.za)
- [Tackling the skills shortage](#) (engineerit.co.za)

Agriculture

- [Getting agriculture policies right is key for the future of food in Africa](#) (worldbank.org)

Education

- [Two training authorities join forces to advance women and youth in the Green Hydrogen economy](#) (engineerit.co.za)
- [Mathematical modelling can reduce failure in maths in schools](#) (uj.ac.za)

Energy

- [A hydrogen economy may fuel a more solid development drive in Southern Africa](#) (dailymaverick.co.za)

- [Growing some backbone – reimagining the future of Eskom and the grid, beyond load shedding](#) (dailymaverick.co.za)
- [\\$1-billion fund to kickstart SA's hydrogen economy](#) (engineerit.co.za)

Environment

- [Urgent need for a comprehensive waste tyre management plan to guide dealers](#) (bizcommunity.com)
- [Several initiatives to address pollution of rivers](#) (bizcommunity.com)

Health and medicine

- [Professor Salim Abdool Karim's new book details South Africa's response to COVID-19](#) (sabcnews.com). In his new book, the world-renowned clinical infectious diseases epidemiologist charts his personal account from the frontlines of the COVID-19 pandemic, with lessons for future scientists.
- [Can the National Health Insurance scheme fix our broken health system?](#) (bhekisisa.org)
- [SA desperately needs a rare diseases policy framework more than mere legal actions](#) (dailymaverick.co.za)

Management

- [Every South African company should have a whistleblowing management system](#) (sabs.co.za)



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

- [ODEL in the Global South: Opportunities in times of volatility, uncertainty, complexity, and ambiguity \(VUCA\)](#): Hybrid conference, 13-17 August 2023
- [31st International Cartographic Conference \(ICC 2023\)](#): Cape Town, 13-18 August 2023
- [Symposium on innovative teaching practices](#), organised by The Mathematics for the Future Project: Oxford University, UK, 14-18 August 2023
- [International Association for Impact Assessment South Africa \(IAIASA\) National Congress](#): Kruger National Park, 20-25 August 2023
- [12th International Congress of Plant Pathology](#): France, 20-25 August 2023
- [Kimberley International Diamond Symposium](#): Kimberley, 23-27 August 2023
- [2023 SAAFoST Biennial Congress and Exhibition](#): Future Foods: Smarter and More Sustainable Solutions, Cape Town, 28-30 August 2023
- [Advanced Health Care Leadership](#): London - United Kingdom, 4-6 September 2023 (Face-to-Face and Online)
- [PHASA 2023](#) (Public Health Association of SA Conference): 'Transforming research translation- reimagining public health evidence, policies, and practice', Gqeberha, 10-13 September 2023
- [50th IAH Worldwide Groundwater Congress](#) of the International Association of Hydrogeologists: Cape Town, 18-22 September 2023
- [9th African Engineering Week and 7th Africa Engineering Conference](#): Pretoria, 25-28 September 2023
- [8th All Africa Conference on Animal Agriculture](#): Botswana, 26-28 September 2023

- [Colloquium of African Geology \(CAG29\)](#): Namibia, 26-29 September 2023
- [SA Innovation Summit 2023](#): Cape Town, 27-28 September 2023. Theme: "Africa's Innovation Frontier". [Pre-registration](#) is now open
- [69th Association of Municipal Electricity Utilities of Southern Africa \(AMEU\) Convention](#): Pretoria, 1-4 October 2023
- [International Conference on Industrial Engineering, Systems Engineering and Engineering Management \(ISEM2023\)](#): Western Cape, 2-4 October 2023
- [Windaba Conference and Exhibition](#): 2023: Cape Town, 3-5 October 2023
- [12th Oppenheimer Research Conference](#): Midrand, 4-6 October 2023
- [19th biennial International Conference on Accelerator and Large Experimental Physics Control Systems \(ICALEPCS\) 2023](#): Cape Town, 9-13 October 2023. Hosted by the South African Radio Astronomy Observatory (SARAO), the conference will be preceded by workshops on 7 and 8 October 2023
- [CIGRE Southern Africa Regional Conference 2023](#): Pretoria, 24-27 October 2023
- [1st IWA Non-Sewered Sanitation Conference](#): Johannesburg, 15-18 October 2023
- [IMESA Conference 2023](#): Gqeberha, 25-27 October 2023
- [Re-Connecting Human Capital with the Discourse of Digital Transformation to Achieve the United Nations Sustainable Development Goals](#): London - United Kingdom, 13-15 November 2023 (London - United Kingdom) (Face-to-Face and Online)
- [53rd Congress of the Southern African Society of Plant Pathology](#): Golden Gate National Park, Free State, 21-25 January 2024
- [Africa Energy Indaba](#): Cape Town, 5–7 March 2024. It will feature a focused Hydrogen Forum.
- [The XX International Plant Protection Congress \(IPPCATHENS2024\)](#): Athens, Greece, 1-5 July 2024



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Science Councils and Statutory Bodies

- **ARC**: Read the latest issue [Agring Bulletin](#), the external newsletter of the ARC-Natural Resources and Engineering division.
- **ASSAf**: [International recognition for ASSAf Executive Officer](#) (assaf.org.za)
- [The reading literacy crisis in South Africa What can an Academy of Science do?](#) (assaf.org.za)
- The Academy of Science of South Africa (ASSAf) in partnership with the Department of Science and Innovation (DSI) invites you to submit [applications](#) to participate at the [8th BRICS Young Scientist Forum](#). The Forum will be held from 31 July – 2 August 2023 in the North-West Province
- **CSIR**: [CSIR driving SMART innovations to boost SA's healthcare system in rural areas](#) (engineerit.co.za)
- **SAMRC**: [SAMRC cultivating future leaders of science through GenS](#) (samrc.ac.za)
- [Heat-related health risks get AXA Research Chairs' attention through Wellcome Trust initiative](#) (samrc.ac.za)

- [Unravelling the mystery: SA builds capacity for cutting-edge DNA sequencing technology](https://samrc.ac.za) (samrc.ac.za)
- **NRF:** [Sasol-NRF Partnership Launches Energy Research Activities](https://nrf.ac.za) (nrf.ac.za)
- **SANSA:** [Baadjies and Carolus, First Locals Digging Ground in SANSA Matjiesfontein](https://sansa.org.za) (sansa.org.za)
- **WRC:** [Improving groundwater development and management for greater water security](https://bizcommunity.com) (bizcommunity.com)

Higher Education Institutions

- [FlexiGyn named joint winner of 2023 Africa Prize for Engineering Innovation](https://uct.ac.za) (uct.ac.za)
- [UP and Collège de France sign memorandum of understanding to strengthen partnership](https://up.ac.za) (up.ac.za)
- [Wits GCI co-leads pioneering initiative to fight the impact of tropical cyclones](https://wits.ac.za) (wits.ac.za)
- [Alumnus Explores Complexity of Science Communication](https://ukzn.ac.za) (ukzn.ac.za)

4IR and information technologies

- [African robotics developing in leaps and bounds](https://uct.ac.za) (uct.ac.za)
- [The future we're hurtling towards requires a fundamentally different skillset](https://uj.ac.za) (uj.ac.za)

Agriculture

- [SA's robust grains output supports slowing food inflation](https://agbiz.co.za) (agbiz.co.za)

Energy

- [HTMR-100 team aim for pebble bed SMR in South Africa](https://energize.co.za) (energize.co.za)
- [Grid storage plans key in addressing energy crisis, finds IISD report](https://bizcommunity.com) (bizcommunity.com)
- [Why solar won't collapse the national grid](https://energize.co.za) (energize.co.za)
- [Is this the end for new utility-scale RE in South Africa?](https://energize.co.za) (energize.co.za)

Environment and Climate change

- [Preliminary data shows hottest week on record. Unprecedented sea surface temperatures and Antarctic sea ice loss](https://public.wmo.int) (public.wmo.int)
- [Invasive fish, snails found in Kruger National Park](https://mg.co.za) (mg.co.za)
- [Climate change journalism in South Africa misses the mark by ignoring people's daily experiences](https://theconversation.com) (theconversation.com)

Ethics

- [Managing risk and harm in research ethically](https://wits.ac.za) (wits.ac.za)

Health and Medicine

- [Stellenbosch medical students use tech to turn the tide on organ donor shortage](https://sun.ac.za) (sun.ac.za)

Anthropology

- [San and Khoe skeletons: how a South African university sought to restore dignity and redress the past](https://theconversation.com) (theconversation.com)

Space science and astronomy

- [New radio astronomical observations confirm unintended electromagnetic radiation emanating from large satellite constellations](#) (ru.ac.za)



- [Pope Francis appoints Distinguished Professor Nyokong to the Pontifical Academy of Sciences](#) (ru.ac.za)
- [South African Academic Scoops International Science Prize](#) (assaf.org.za)
Professor Mark New of the University of Cape Town is the joint overall winner of the international Frontiers Planet Prize aimed at accelerating scientific solutions for healthy lives on a healthy planet.
- [South African Young Scientists at 72nd Lindau Nobel Laureate Meeting](#) (assaf.org.za)
- [UKZN maths professor wins Harry Oppenheimer Award](#) (itweb.co.za)
- Brian Warner, one of the most distinguished astronomers in South Africa, passed away (uct.ac.za). [Read more](#).
- [Renowned South African palaeontologist Bob Brain dies at 92](#) (dailymaverick.co.za)
- [Academic receives prestigious botany award](#) (sun.ac.za)
- [SU marine biologists scoop top awards at SASAqS conference](#) (sun.ac.za)
- [Nelson Mandela University's Professor Janet Wesson receives global Pioneer Award](#) (mandela.ac.za)

Opportunities

- [Grassroots Innovation Programme Call 1 FY2023/24](#): The Technology Innovation Agency (TIA) an entity of the Department of Science and Innovation (DSI) is calling for applications from grassroots innovators looking for funding, technical assistance and support for developing a new product or process up to prototype and proof of concept stage.
- [Circular Economy Demonstration Fund call for proposals 2023](#): The Department of Science and Innovation (DSI) announced an Open Call for Proposals for **Circular Economy Demonstration Projects** commencing in January 2024. The Fund is aimed at demonstrating proven circular economy interventions (e.g., technologies, innovative process improvements, social innovations) that have not yet achieved scale or impact in South Africa. The deadline for the submission of proposals is Friday, 28 July 2023 at 18:00.
- The **South African 2023 Science and Technology Research Partnership for Sustainable Development (SATREPS)** call for proposals closes on Friday 08 September 2023. For more information and if you need pairing with a Japanese institution, contact Sizo Zwane of the Department of Science and Innovation as early as possible at tel : [+2712 843 6357](tel:+27128436357) or email : Sizo.Zwane@dst.gov.za.
- The [GAP Innovation Competition](#) in collaboration with Technology Innovation Agency (TIA), Emory University Business School, Atlanta Georgia, and Tshwane Automotive Special Economic Zone (Tasez) is looking for innovators, researchers and entrepreneurs that are working on novel technologies that will improve the efficiency of government service delivery, increase the competitiveness of the local economy and enhance the quality of life of ordinary citizens. Categories are in the ICT, Medical, Biosciences, Green and Township economies. Register for the Business Basics Workshop which will

entail vital orientation and preparation for your GAP application. Closing date: 07 August 2023.

- **SAMRC Clinician Researcher Programme:** The SAMRC's Division of Research Capacity Development (RCD) invites applications from eligible South African citizen or permanent resident health professionals who hold an MBChB or BDS qualification to apply for PhD scholarship funding under the SAMRC Clinician Researcher Programme. Deadline: 15 August 2023. [Read more.](#)

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
- gathers stakeholders around [burning issues of national and global interest](#), across the public and private sectors, including matters of public policy
- includes a [network of professional societies in SET and STEM education](#) (STEM = science, technology, engineering and mathematics) - the [NSTF proSET membership sector](#).
- recognises, awards and profiles the outstanding contributions of individuals and groups to SET and innovation through the prestigious [NSTF Awards](#)
- runs and supports collaborative projects and [youth outreach](#), including recognition of top performance in mathematics and science, role modelling, bursary and STEM career information
- runs and supports the [STEMulator.org](#) which attracts youth and educators to Explore>Discover>Learn the world of STEM including careers. (Established by NSTF proSET)

For more information

www.nstf.org.za

E-mail: enquiries@nstf.org.za

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