S.E.T. for socio-economic growth

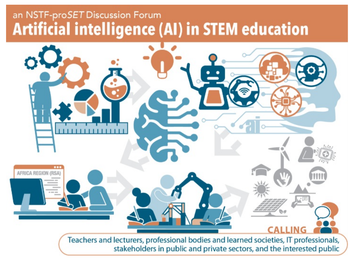
National Science and Technology Forum (NSTF)

invitation

Artificial intelligence in STEM education

18-19 August 2026

The National Science and Technology Forum (NSTF), in partnership with pro*SET* (Professionals in science, engineering and technology), invites you to an online discussion forum on '**Artificial intelligence (AI) in science, technology, engineering and mathematics (STEM) education**', to be held via Zoom on 18-19 August 2026.



Join the conversation and make your voice heard.
Click to register.

The rapid advancement of AI is transforming STEM education. AI-enabled tools can support personalised learning, strengthen problem-solving and critical-thinking skills, and connect classroom learning with real-world applications. They also offer opportunities to build learners' AI literacy and prepare them for a technology-driven society. At the same time, important questions remain about how AI can meaningfully complement teaching, deepen conceptual understanding and be used responsibly, with due attention to data privacy, algorithmic bias, equity and academic integrity.

In South Africa (SA), AI in STEM education presents both significant opportunities and complex challenges. National initiatives increasingly recognise the importance of digital skills, coding, robotics and AI literacy, yet barriers remain in infrastructure, teacher preparedness, curriculum integration and equitable access – particularly in under-resourced schools. Research in this field is growing, but further practice-oriented work is needed on classroom implementation, teacher development, inclusive approaches and ethical frameworks.

Brought to you by the NSTF's pro*SET* Sector

Representing more than 50 STEM-related organisations, pro*SET*, the professional bodies and learned societies sector of the NSTF (representing a third of the NSTF's membership) is convening this forum to bring together experts, researchers, professionals, educators, and policymakers, to exchange insights, critically explore the integration of AI in teaching and learning, share good practice and promote collaboration to strengthen STEM education through certain deliberate approaches to AI.

Purpose

This NSTF-pro*SET* Discussion Forum will bring together experts to examine the opportunities, gaps and challenges associated with integrating AI into STEM education across the education system, from basic education to universities. It aims to share current practice and research, consider emerging developments, strengthen preparedness in the education sector and highlight diverse perspectives on how AI is shaping teaching, learning and assessment.

See the concept document to read more about the background, objectives and themes.

Themes

- AI literacy in STEM education
- Pedagogical design and classroom practice
- Equity, access, and inclusion
- Teacher preparation and professional development
- Research collaboration and innovation
- Ethics, privacy, and responsible AI

Questions

1. How does the use of AI contradict or impede scientific thinking?
2. AI can be very useful when technical problems are to be solved. What are some examples and what can go wrong?
3. What best practice guidelines should be taught to students and learners for using AI to solve technical problems?
4. AI cannot do mathematical reasoning although it can solve mathematical problems. What are the implications for learning maths with AI?
5. It is very tempting to use AI for essay writing. How can students/learners be helped to develop their own skills – organising their knowledge, honing their debating skills, and formulating their arguments effectively?
6. How can assessment be done at university level to gauge with some accuracy what students are truly capable of?
7. How can it be ensured that learners master the basic skills of reading, writing and maths while AI is available to do everything for them?
8. How best can school learners' competencies be assessed given that AI can (e.g.) assist them with homework?
9. The wider context of the development of AI: the dependence of AI on vast quantities of (accurate) data, the environmental harm caused by data centres, and the use of AI in warfare: Where should this wider context be addressed in the school and university curricula?
10. Issues of access and the digital divide: does the integration of AI in curricula widen or narrow the digital divide?

Outputs

- A media release will be issued which summarises the most important issues and conclusions
- The following outputs will also be made available on the event page and/or NSTF's YouTube channel:
- Video recordings of speakers' presentations (subject to the speakers' agreement)
- Presentation slides (if available and subject to the speakers' agreement)
- Speakers' biographies
- Useful links (Feel free to let us know should you have any information that you would like us to consider posting here.)
- NSTF will engage the media on possible interviews and/or articles
- NSTF will post on social media before, during and after the event: on Facebook, Instagram, X, and LinkedIn

Delegate registration information: AI in STEM education

Date: 18-19 August 2026
Time: 09:00-14:00 (on both days)
Continuous Professional Development (CPD) points in collaboration with the following NSTF-pro*SET* members
CPD points will be awarded to attendees who are registered with the following NSTF members:

- SACNASP (South African Council for Natural Scientific Professions)
- ECSA (Engineering Council of South Africa), in collaboration with the Society for Automation, Instrumentation, Mechatronics and Computer Engineering (SAIMC)
- IITPSA (Institute of Information Technology Professionals South Africa)
- EAPASA (Environmental Assessment Practitioners Association of South Africa) may also be considered for CPD points

For any other affiliations, please contact the NSTF office at enquiries@nstf.org.za.

Register now (online on Zoom)! You will receive an email to confirm your subscription, whereafter you will be diverted to a web page with the Zoom link. Click here to register.

Attendance and participation in this NSTF Discussion Forum is FREE to all those interested.
Please note that if you do not register, the NSTF cannot be held responsible for any unforeseen changes or cancellations of programmes. Communications are sent only via e-mail or through notifications on the NSTF website.

About the NSTF: The NSTF is an independent non-profit stakeholder forum representing the science, engineering, technology (SET) and innovation community in SA. The membership consists of more than 150 organisations, and ranges from research institutions, universities and state entities to business, professional societies (pro*SET*) and civil society. The NSTF promotes collaboration and critical thinking among a broad range of stakeholders. NSTF Discussion Forums gather stakeholders together, across the public and private sectors, to exchange knowledge and ideas, and put forward recommendations.

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 pro*SET* 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 pro*SET*)

For more information
www.nstf.org.za
E-mail: enquiries@nstf.org.za

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