



NITheCS

National Institute for
Theoretical and Computational Sciences

May 2026 



NEWSLETTER



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Prof Francesco Petruccione

Dear NITheCS Community

May is another productive and exciting month for NITheCS, with several important initiatives gaining momentum across our community.

We are delighted to welcome Prof Happy Sithole to the NITheCS Steering Committee. His extensive experience in high-performance computing and national research infrastructure brings valuable insight and leadership to the Institute, and we look forward to his contributions.

I would like to remind our community that the call for [nominations](#) for new NITheCS Associates remains open until 30 June 2026. Applications are also open for the 2026 Women's Self-run Writing Retreat for female NITheCS Associates. This initiative aims to provide dedicated space and support for focused academic writing and collaboration.

Another exciting development is the upcoming launch of our mentorship programme, NITheCS Village. This initiative is designed to support Grade 12 learners who are considering entering the theoretical and computational sciences through mentorship from NITheCS Associates.

After months of planning, the NITheCS internship programme is set to take place in June/July. We are excited to welcome the new cohort of students and are deeply appreciative of the NITheCS Associates who have volunteered to supervise these interns.

Finally, our event programme continues to thrive, with a variety of colloquia, seminars, mini-school and talks taking place this month. Thank you to everyone who continues to contribute to the growth and success of NITheCS.

Best regards

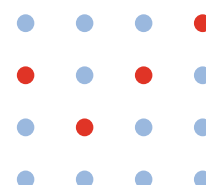
Prof Francesco Petruccione
Director

Dr Happy Sithole appointed to the NITheCS Steering Committee

We are pleased to announce that the National Research Foundation (NRF) has appointed Dr Happy Sithole, Centre Manager of the National Integrated Cyber-Infrastructure System (NICIS), to the NITheCS Steering Committee.

Dr Sithole is a key leader in South Africa's cyber-infrastructure ecosystem. He is responsible for coordinating a comprehensive national cyber-infrastructure to support the South African National System of Innovation.

[READ MORE](#)





NITheCS roadshow to strengthen national network

NITheCS has embarked on a roadshow aimed at strengthening connections across its national network and engaging more closely with its Associates.

The initiative kicked off on 21 April 2026, when Prof Francesco Petruccione and René Kotzé visited two branches in NITheCS's North node, one of the Institute's five regional groupings. The visits were facilitated by the North node head, Prof Du Toit Strauss.

[READ MORE](#)



NITheCS bursary holders attend workshop

The NITheCS Bursary Holders Workshop was held at the NITheCS offices in Stellenbosch on 13 and 14 April, bringing together 22 bursary students for two days of academic engagement and research presentations.

During the workshop, each bursary holder delivered a presentation, followed by a Q&A session, to showcase their research, exchange ideas, and engage with peers and senior researchers.

In the photograph above, NITheCS Director Prof Francesco Petruccione congratulated the bursary holders who received awards for their presentations. First prize was awarded to Emily Morgan of Rhodes University (centre), second prize to Saarisha Govender of the University of KwaZulu-Natal (right), and third prize to Dhiya Dharampaul of Stellenbosch University (left).

[READ MORE](#)

Celebrating World Quantum Day with a Public Talk and Launch

NITheCS celebrated World Quantum Day on 14 April with a special public event featuring an inspiring talk by Dr Maria Schuld, a leading researcher in quantum machine learning. In her presentation, “Why is it so hard to know what quantum computers are good for?”, Dr Schuld explored the challenges of predicting the future applications and real-world impact of quantum computing.

The event also marked the launch of the Quantum Africa Society, a new initiative aimed at strengthening collaboration, advancing research, and building a vibrant quantum ecosystem across Africa. With both in-person and online participation, the celebration brought together researchers, students, and members of the public to engage with developments in quantum science and

[READ MORE](#)



Nominations open for new NITheCS Associates

NITheCS invites nominations for new Associates.

Only current NITheCS Associates may nominate eligible candidates, who must:

hold a PhD in a NITheCS discipline and

occupy an academic position at a recognised South African institution.

Please submit your nominations, supported by at least two additional NITheCS Associates, via our online form (accessible when signed in to Google with your NITheCS email account).

An independent evaluation committee will review the nominations. The closing date is 30 June 2026.

[MORE INFO](#)



NITheCS Mini-school

'Fundamentals of Artificial Neural Networks'

Dr Tian Theunissen, Dr Randle Rabe & Dr Coenraad Mouton (all from North-West University)

Wed, 13, 20 & 27 May 2026 | 14h00-15h00 SAST

Venues:

- Online

[POSTER](#) | [REGISTER](#)



NITheCS & UKZN Seminar

'On the symmetry between openness and compactness'

Dr Marco Abbadini (Université Catholique de Louvain, Belgium)

Thurs, 21 May 2026 | 12h15-13h15 SAST

Venues:

- NITheCS Seminar Room,
- University of KwaZulu-Natal, Westville Campus, 3rd Floor, H-Block, School of Chemistry and Physics
- Online

[POSTER](#) | [REGISTER](#)



NITheCS & QSUN Webinar

'Relativistic Langevin equation as a microscopic route to relativistic viscosity for QCD matter'

Prof Alessio Zaccone (University of Milano, Italy)

Fri, 22 May 2026 | 14h00-15h00 SAST

Venues:

- NITheCS Seminar Room, Stellenbosch University
- Online

[POSTER](#) | [REGISTER](#)



SAMS Women in Mathematics Division Talk

'Nuggets of wisdom for building a research profile'

Prof Dephney Mathebula-Periola (University of Fort Hare)

Fri, 22 May 2026 | 14h00-15h00 SAST

Venues:

- Online



NITheCS Colloquium

'Africa's electric motorbike future can be built locally and powered by solar (our 6,000km ride shows what's possible)'

Prof Thinus Booysen (Stellenbosch University) & Dr Stephan Lacock (Stellenbosch University)

Mon, 25 May 2026 | 16h00-17h00 SAST

Venues:

- Main venue: Stellenbosch University: Road House Cinema (Neelsie)
- Satellite venues: WITS & North-West University
- Online

[POSTER](#) | [REGISTER](#)



NITheCS & QSUN Webinar

'Can Neutrinos Hear the Echoes of Quantum Spacetime? Open-System Decoherence in Neutrino Oscillations'

Dr Partha Nandi (NITheCS)

Fri, 29 May 2026 | 14h00-15h00 SAST

Venues:

- NITheCS Seminar Room, Stellenbosch University
- Online

[POSTER](#) | [REGISTER](#)



NITheCS Colloquium

'Discovering New Antimalarial Compounds Through Computational Modelling and Experimental Validation'

Dr Fortunate Mokoena (North-West University)

Mon, 1 June 2026 | 16h00-17h00 SAST

Venues:

- Main venue: Stellenbosch University: Road House Cinema (Neelsie)
- Satellite venues: WITS & North-West University
- Online

[POSTER](#) | [REGISTER](#)



NITheCS Colloquium

'When the proxy breaks: What GenAI reveals about assessment'

Dr Hanelie Adendorff (Stellenbosch University) & Ms Sukaina Walji (University of Cape Town)

Mon, 8 June 2026 | 16h00-17h00 SAST

Venues:

- Main venue: Stellenbosch University: Road House Cinema (Neelsie)
- Satellite venues: WITS & North-West University
- Online

[POSTER](#) | [REGISTER](#)



NITheCS heat of FameLab 2026

9 & 10 June 2026

Venues:

- Venue: Online

[POSTER](#) | [MORE INFO](#) | [APPLY](#)



NITheCS Colloquium

'Smart Crawlers for Infectious Disease Modelling: Automating Data Acquisition in the Digital Age'

Prof Dephney Mathebula-Periola (University of Fort Hare)
Mon, 15 June 2026 | 16h00-17h00 SAST

Venues:

- Main venue: Stellenbosch University: Road House Cinema (Neelsie)
- Satellite venues: WITS & North-West University
- Online

[POSTER](#) | [REGISTER](#)



African Data Science Conference 2026

24-26 June 2026

Venues:

- Science Stadium, University of the Witwatersrand

[MORE INFO](#) | [REGISTER](#)



9th Biennial African School of Fundamental Physics and Applications (ASP2026)

5-19 July 2026

Venues:

- University of Nairobi, Kenya

[MORE INFO](#)



70th Annual Conference of the South African Institute of Physics (SAIP2026)

6-10 July 2026

Venues:

- University of the Western Cape

[MORE INFO](#) | [REGISTER](#)



47th South African Institute of Computer Scientists and Information Technologists (SAICSIT) Conference

13-15 July 2026

Venues:

- UCT Graduate School of Business Conference Centre: 9 Portswood Rd, V & A Waterfront, Cape Town

[MORE INFO](#)



NITheCS & UWC Public Talk 'Astroseismology: The Real Music of the Spheres'

Prof Donald Kurtz (North-West University)

Wed, 15 July 2026 | 18h00-19h00 SAST

Venues:

- Road House Cinema at the Neelsie, Stellenbosch University,
- online

[POSTER](#) | [MORE INFO](#) | [REGISTER](#)



NITheCS Colloquium 'The European Union Emissions Trading Scheme (EU ETS): Design, Analysis & Trading'

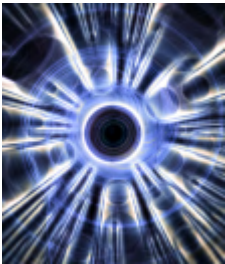
Prof Dr Rüdiger Kiesel (University of Duisburg-Essen, Germany)

Mon, 20 July 2026 | 16h00-17h00 SAST

Venues:

- Main venue: Stellenbosch University: Road House Cinema (Neelsie)
- Satellite venues: WITS & North-West University
- Online

[POSTER](#) | [REGISTER](#)



10th International Conference on Quantum Techniques in Machine Learning (QTML2026) 'Bridging Quantum Computing and Machine Learning'

6-11 December 2026

Venues:

- Jan Mouton Learning Centre, Stellenbosch University

[MORE INFO](#)



Missed an Event?

Want to rewatch an event?

- [Visit our website](#) for details of past events.
- Watch recorded talks on the [NITheCS YouTube channel](#).
- To inform us of an event that may interest the NITheCS community, [upload your content HERE](#).



External events

Abdus Salam International Centre for Theoretical Physics (ICTP), Italy

View events in the [ICTP Scientific Calendar](#).

CoE-MaSS Seminar Series

'A hybrid Box-Jenkins and Artificial Neural Network model based on the extreme learning machine in time series performance'

Leonard Marevhula (University of Venda)

Date: 29 May 2026 | 10h30-11h30 SAST

Venues: Seminar Room, 1st Floor, TW Kambule Building, West Campus, WITS and Online

[MORE INFO](#) | [REGISTER](#) | [ZOOM LINK](#)

MFC CDT Summer School

'Uncertainty Quantification for Climate'

Date: 2-5 June 2026

Venues: Online via Zoom, with possible hybrid sessions on 5 June

[MORE INFO](#)

International Conference on Mathematical Models and Methods in Biosciences (Biomath)

Date: 14-19 June 2026

Venues: Bolyai Institute, Szeged, Hungary

[MORE INFO](#)

University of Johannesburg Research Workshop

'Digital Pathogens, Mental Health & Modelling: Network & Deterministic Approaches'

Date: 29 June - 3 July 2026

Venues: Shumba Valley Lodge, Lanseria

[MORE INFO](#)

9th Biennial African School of Fundamental Physics and Applications (ASP2026)

Date: 5-19 July 2026

Venues: University of Nairobi, Kenya

[MORE INFO](#)

American Institute of Mathematical Sciences (AIMS)

15th AIMS Conference

Date: 6–10 July 2026

Venues: Athens, Greece

[MORE INFO](#) | [REGISTER](#)

Deep Learning IndabaX South Africa 2026

Date: 6–10 July 2026

Venues: University of Kwa-Zulu Natal

[MORE INFO](#) | [REGISTER](#) (Early Bird rates until 12 June)

UWC Department of Physics and Astronomy Conference

'Photometric Surveys of Southern Stars'

Date: 12–17 July 2026

Venues: Stias, Stellenbosch

[MORE INFO](#) | [REGISTER](#)

International Space Summit Africa

Date: 10–12 August 2026

Venues: CSIR International Convention Centre, Pretoria

[MORE INFO](#) | [REGISTER](#)

Workshop on Mathematical Optimization and Control For Industrial and Societal Challenges in Sub-Saharan Africa

Date: 7–10 September 2026

Venues: Manhattan Hotel, Pretoria

[MORE INFO](#) | [APPLY](#) (by 24 May)

24th International Conference of Numerical Analysis and Applied Mathematics

Date: 5–21 September 2026

Venues: Galaxy Hotel, Heraklion, Crete, Greece

[MORE INFO](#) | [REGISTER](#) (by 1 July 2026)

2026 NRF Next Generation and Emerging Researchers Symposium

Date: 6–9 October 2026

Venues: Birchwood Hotel & OR Tambo Conference Centre, Boksburg

[MORE INFO](#)

Functional Analysis and Operator Theory South Africa Workshop (FAOTSA 2026)

Date: 28 October – 1 November 2026

Venues: North-West University, Potchefstroom

[MORE INFO](#) | [REGISTER](#) (from 20 Jul – 4 Oct)

AI, Uncertainty & Simulation Workshop


'Bayesian Methods & Neural Inference'

Date: 16–20 November 2026

Venues: Mauritius

[MORE INFO](#) | [APPLY](#) (by 31 May 2026)



 **SOUTH AFRICAN**
Theory and Computational School

NITheCS
National Institute for
Theoretical and Computational Sciences

Broaden your depth of knowledge across a range of fields in the theoretical and computational sciences at an Honours/Masters level.

Our FREE Courses for 2026:

Introduction to Pointfree Topology

18 May – 18 July 2026

Introduction to String Theory

1 July – 1 December 2026

Advanced Partial Differential Equations

27 July – 27 October 2026

Quantum Field Theory I

27 July – 27 October 2026

Riemann Surfaces

31 July – 23 October 2026

[MORE INFO](#)



FREE ONLINE COURSES 2026

Queries: inger.fabris-rotelli@up.ac.za

The University of Pretoria, in conjunction with the Gates Foundation and SAMRC, is presenting **FREE online courses**, including:

INTRODUCTION TO MACHINE LEARNING

Date: 18-19 June 2026T

Taught by: Prof Najmeh Nakhaeirad and Dr Kabelo Mahloromela

[MORE INFO](#) | [REGISTER](#)

Join the ADEQUATE course: free, online, hands-on.

50+ hours of beginner-friendly quantum programming with Qiskit & PennyLane.
No prior experience in quantum physics required.

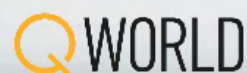
Enrol now
and earn
your
certificate.

Apply
quantum
algorithms on
real hardware.

Learn
Quantum.
No Physics
Needed.



ADEQUATE



Learn quantum the hands-on way!

Join the ADEQUATE course, a free 50-hour online programme developed by QURECA and QWORLD and funded by the EIT Deep Tech Talent Initiative. Designed for beginners with Python skills, this hands-on training will guide you through the foundations of quantum computing, quantum algorithms, and real hardware applications - no physics background needed.

[MORE INFO](#)



Featured scientist

Prof Eric Andriantiana

Prof Eric Andriantiana, Associate Professor and Head of the Department of Mathematics at Rhodes University, is a leading researcher in Graph Theory and Combinatorics, where abstract mathematical tools are used to understand complex networks.

Born in Madagascar, he began his academic journey at the École Normale Supérieure, University of Fianarantsoa, where he studied Mathematics and Mathematics Education. He later attended the African Institute for Mathematical Sciences before completing both his MSc and PhD in Mathematics

[READ MORE](#)



Publications

To view the most recent publications by NITheCS Associates, staff, postdoc researchers and students who included their NITheCS affiliation on their publications, [please click here](#).

Additionally, articles and publications with a NITheCS affiliation can be viewed on [Nature Index](#).

Quantum spectral clustering: Comparing parameterized and neuromorphic quantum kernels

Donovan Slabbert ; Dean Brand ; Francesco Petruccione 



ABSTRACT:

We compare a parameterized quantum kernel (pQK) with a quantum leaky integrate-and-fire (QLIF) neuromorphic computing approach that employs either the Victor–Purpura or van Rossum kernel in a spectral clustering task, as well as the classical radial basis function kernel. To our knowledge, this is the first study to employ quantum neuromorphic leaky integrate-and-fire neurons as kernel generators within a spectral clustering framework and to directly compare them against gate-based quantum fidelity kernels under identical conditions. Performance evaluation includes label-based classification and clustering metrics, as well as optimal number of clusters predictions for each dataset based on an elbow-like curve, as is typically used in K-means clustering. The pQK encodes feature vectors through angle encoding, with rotation angles scaled parametrically. Parameters are optimized through grid search to maximize kernel-target alignment, producing a kernel that reflects distances in the feature space. The quantum neuromorphic approach uses population coding to transform data into spike trains, which are then processed using temporal distance metrics. Kernel matrices are used as input into a classical spectral clustering pipeline prior to performance evaluation. For the synthetic datasets and Iris, the QLIF kernel typically achieves better classification and clustering performance than pQK. However, on higher-dimensional datasets, such as a preprocessed version of the Sloan Digital Sky Survey, pQK performed better, indicating better relative performance compared to QLIF in higher-dimensional regimes.

[READ MORE](#)



Wisaarkhu: a global community

The Wisaarkhu community seeks to reveal the beauty and power of mathematics and the basic sciences, and how they provide a real edge in practical applications – from modelling ecosystems to applying physics, chemistry, and computer science to real-world challenges.

Join Wisaarkhu on this journey of discovery and unlock the possibilities of the basic sciences. By supporting and sharing the community, you help make science and mathematics accessible and inspiring for all.

[VISIT THE SITE](#)

'Dawn-Dusk' – Illustration by Neil Mellet:



International scholarships – various

View scholarship opportunities from China, Erasmus +, Intra-Africa, Ireland, France, Germany and the United Kingdom.

[MORE INFO](#)

IMU Breakout Graduate Fellowship Programme 2026

Application deadline: 30 May 2026

The International Mathematical Union (IMU), with support from the Breakthrough Prize in Mathematics laureates and the Friends of the IMU (FIMU), invites nominations for the 2026 IMU Breakout Graduate Fellowship Programme. The fellowship supports outstanding students from developing countries who wish to pursue a PhD in the mathematical sciences at a recognised institution in a developing country. Professional mathematicians may nominate talented students with strong academic records and a commitment to careers in mathematical research and teaching. Applicants must already have been accepted or pre-accepted into a doctoral programme and have a thesis supervisor and research project in place.

[MORE INFO](#)

Postdoctoral Fellowship in Paediatric Infection Imaging – Stellenbosch University Tygerberg Campus

Application deadline: 31 May 2026

Stellenbosch University's Division of Nuclear Medicine is offering a postdoctoral fellowship focused on paediatric infection imaging, particularly tuberculosis research. The fellow will contribute to internationally funded projects on childhood tuberculous meningitis and adolescent pulmonary tuberculosis, working with advanced imaging data in a multidisciplinary team. The two-year fellowship (with possible extension) is based at the Tygerberg Campus, Cape Town. Applicants should have a recent PhD and experience in medical imaging and quantitative analysis.

[MORE INFO](#)

PhD Opportunity in Experimental Optical Quantum Computing – Stellenbosch University

Application deadline: 31 May 2026 (the deadline for the upcoming intake, as applications are considered on a rolling basis)

Applications are open for a PhD position in Experimental Optical Quantum Computing at Stellenbosch University. The successful candidate will join an international, industry-linked research collaboration investigating photonics-based quantum computing using optical systems. The project is suited to students with an MSc in Physics and experience in optics laboratories, programming and hands-on experimental work. A full bursary is available for the first year and may be renewed for up to two more years.

[MORE INFO](#)

Queen Elizabeth Commonwealth Scholarships (QECS)

Application deadline: 3 June 2026

The fully funded scholarships support students from across the Commonwealth to pursue a two-year master's degree in a low- or middle-income Commonwealth country. International students from Commonwealth countries may apply to study eligible programmes in South Africa, including the MSc in Machine Learning and Artificial Intelligence at Stellenbosch University and the Master of Computing in Computer Science at Tshwane University of Technology. Scholarships are also available for South African students to study a Masters degree at the Papua New Guinea University of Technology. The scholarship covers tuition fees, living expenses, return flights, and additional support grants. Please note that

[MORE INFO](#) | [FAQ](#)

3 x CoE-MaSS Postdoctoral Fellowships: Call Re-opened

Application deadline: 30 June 2026

CoE-MaSS has re-opened applications for three postdoctoral fellowships at participating South African public research institutions.

The fellowships are open to South African citizens whose research aligns with the CoE-MaSS focus areas. Applicants must have obtained their PhD within the past five years and may not apply to work with the same supervisor or within the same department where they completed their doctorate. Successful applicants expected to begin their fellowships by 1 July 2026 where possible.

[MORE INFO](#)

Postdoctoral Fellowship Opportunity – University of the Free State (UFS)

Application deadline: 1 August 2026

The UFS invites applications for a postdoctoral fellowship in Mathematics and Applied Mathematics, with a focus on areas such as functional analysis and evolution equations. The fellowship is awarded for one year (renewable up to three years) and supports early-career researchers in developing their research and publication profile. The fellowship is valued at R270,000 per year, with an extra R30,000 for research expenses, and the successful candidate will commence on 1 October 2026.

[MORE INFO](#)

Marie Skłodowska-Curie Actions (MSCA) Postdoctoral Fellowships 2026 – CERN opportunity

Application deadline: 9 September 2026

CERN's Theoretical Physics Department invites applications for MSCA European Postdoctoral Fellowships 2026, with CERN as host. A limited number of positions are available, with preselection based on research profile. Please note that CERN does not host Global Fellowships under this scheme. Interested researchers should apply for CERN as the host institution – read the details for the [CERN OPPORTUNITY](#).

The MSCA Postdoctoral Fellowships support researchers with a PhD to advance their careers through international mobility, interdisciplinary research, and skills development. Open to applicants of any nationality, the programme includes both European and Global Fellowships across academic and non-academic sectors.

[MORE INFO](#)

To share opportunities with the NITheCS community, [CLICK to upload your content](#).



Grants/Funding

External funding

External funding is available for research, conferences, travel, collaborative grants and postdoctoral fellowships.

[MORE INFO](#)

FWO–NRF Joint Call for Collaborative Research Projects (2027–2029)

Application deadline: 26 May 2026 (17:00 SAST)

NRF institutional deadline: 1 June 2026

The Research Foundation – Flanders (FWO) in Belgium and South Africa's National Research Foundation (NRF) invite applications for joint research projects across all scientific disciplines. Up to six three-year projects (2027–2029) will be funded, each led by principal investigators from Flanders and South Africa.

[MORE INFO](#)

The Institut des Hautes Études Scientifiques (IHES), France – Visitor Grants

Application deadline: 30 May 2026

The IHES invites applications from mathematicians and theoretical physicists worldwide to participate in its research invitation programme. Each year, approximately 200 researchers are selected based on excellence to pursue research projects, collaborate with international peers, and engage in Institute activities. IHES provides accommodation, office space, and financial support for invited researchers, with additional support available for researchers from Africa.

[MORE INFO](#)

2026 South African Women in Science Awards

Application deadline: 31 May 2026

The Department of Science, Technology and Innovation (DSTI) calls for applications for the 2026 South African Women in Science Awards to recognise and reward exceptional women scientists and researchers, and profile them as role models for younger women.

[MORE INFO](#)

Local AIMday Grants (SASUF+)

Application deadline: 10 June 2026

Applications are open for Local AIMday Grants, supporting collaboration between academia and external stakeholders within the SASUF network. An AIMday is a structured dialogue format that brings researchers together with industry, government, and civil society to address real-world challenges. Grants of up to SEK 45,000 (approximately R71 000) are available per project, with activities to be implemented during 2025–2028, typically within six months of approval.

[MORE INFO](#)

ICIAM Conference Support for Developing Countries

Application deadline: 31 October

The International Council for Industrial and Applied Mathematics (ICIAM) offers limited funding to support participation from developing countries at conferences, workshops, and research schools in applied and industrial mathematics. Up to USD 3,500 per event is available to provide fellowships for selected participants. Organisers may submit applications at least a year in advance of the event.

[MORE INFO](#)

NGA(MaSS) Early Career Mathematical Scientists' Mobility Grants

NGA(MaSS) invites applications from early career mathematical sciences who plan to either attend thematic and focus programmes organised by mathematical sciences research institutes or plan to undertake short-term research sabbaticals.

[MORE INFO](#)

IMSA: Call for Applications for Grant Funding

The IMSA, an initiative of CoE-MaSS and NGA(MaSS), invites applications for grant funding to support research collaborations among early career and next generation mathematical scientists at its member institutions. Up to 20 research collaborations can be supported.

Types of grants available:

- 1) Research-in-Teams offers up to R15,000 per participant for short, focused research meetings, ideally held alongside major conferences. [APPLY](#)
- (2) Joint Research and Postgraduate Training Programmes provide up to R200,000 over three years for collaborative research, training activities, and academic exchanges. [APPLY](#)
- (3) International Research Collaborations - Existing collaboration networks are encouraged to explore international collaborations with research groups, or established researchers elsewhere, that share the same interests. To apply, submit a Letter of Intent to Emeritus Prof Loyiso G. Nongxa at loyiso.nongxa@wits.ac.za and mathsci.imsa@wits.ac.za

AI Research Foundations for Higher Education

Empowering Universities to
Lead Africa's AI Future

Expert-led

Purpose-built

Hands-on Learning

Freely available

with support from
Google.org

AI Research Foundations for Higher Education

Through funding from Google.org, AIMS South Africa is supporting ten South African Higher Education Institutions (HEIs) to strengthen AI teaching at university level.

The initiative draws on Google DeepMind's AI Research Foundations curriculum and provides:

- Grants of up to \$57,300 per institution (up to \$11,460 per lecturer, for a maximum of five lecturers)
- Fully funded week-long training workshops for lecturers and teaching assistants
- Blended-learning toolkits developed by University College London
- An adaptable curriculum suitable for applied mathematics, data science, engineering, statistics and other senior STEM courses

The programme also supports HEIs in Nigeria, Kenya and Ghana.

Institutions interested in introducing or refreshing AI courses can find nomination details in the full programme document.

[MORE INFO](#)

Calls



Call for papers: Special Issue of Advances in Computational Physics and Mathematical Physics

Submission deadline: 20 July 2026

Contributions can be provided for a Special Issue of Advances in Computational Physics and Mathematical Physics. The issue, guest edited by Prof Michael Tsampanlis and Dr Aniekan Magnus Ukpog, focuses on partial differential equations (PDEs) as powerful tools for modeling physical systems.

Submissions are invited on topics such as fluid dynamics, scattering problems, wave interactions, cosmology, plasma physics, and AI-assisted methods, with a particular emphasis on approaches that integrate analytical insights into computational techniques. Both original research and review articles are welcome.

[**SUBMISSIONS**](#)

Careers



Lecturer/Senior Lecturer in Pure Mathematics – University of Cape Town (UCT)

Submission deadline: 22 May 2026

UCT invites applications for a Lecturer or Senior Lecturer in Pure Mathematics. Candidates should hold a PhD, demonstrate strong research potential, and have experience teaching at undergraduate level (with additional experience required for Senior Lecturer level).

[**MORE INFO**](#)

Foreign nationals with visa issues

Do you know of foreign nationals in the theoretical and computational sciences who are struggling to get a South African visa?

We will try to help expedite the visa process for foreign nationals who:

- have been appointed to fill critical positions in the theoretical and computational sciences in South Africa, or
- have accepted a postdoctoral position at a South African university in the abovementioned scarce skills fields.

Please encourage them to [share their details with us here](#).

NITheCS CONTACT DETAILS:

info@nithecs.ac.za

