3 February 2026

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Shaping the Future of Finance

How AI, Quantum and emerging technologies will shape the future of finance.

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In the Footsteps of Legends

We build on the legacies of great Witsies who laid the foundation of a world–class university over more than a century. Wits is the home of change makers who impact on our world, For Good. Our students walk in the footsteps of luminaries like Wendy Appelbaum, Koos Bekker, Robbie Brozin, Dr Judy Dlamini, Ruth First, Bruce Fordyce, Kenny Fihla, Neal Froneman, Adrian Gore, Donald Gordon, Ivan Glasenberg, Gail Kelly, Brian Joffe, William Kentridge, Mervyn King, Sibongile Khumalo, Michael Katz, Natie Kirsh, Stephen Koseff, Wendy Lucas–Bull, Thuli Mandonsela, Patrice Motsepe, Maria Ramos, Robert Sobukwe, Duncan Wanblad, Stanley Bergman, Charles Goldstuck, Rodney Sacks, Hersch Klaff, Hilton Schlosberg, Patrick Soon-Shiong, Fani Titi, Mary Vilakazi and Mpumi Zikalala, and generations of others who have left a legacy in society.

Did You Know Wits is Home to Four Nobel Prize Winners?

Sydney Brenner (Medicine)
Nadine Gordimer (Literature)
Aaron Klug (Chemistry)
Nelson Mandela (Peace)

Professor Zeblon Vilakazi FRS, Vice–Chancellor and Principal

Our Moonshot Moments

We live through a historic period characterised by change, where we are confronted with a myriad of complex universal problems including global change and inequality, energy and water insecurity, crime and corruption, lack of governance and ethics, the intersection of communicable and non–communicable diseases, pandemics, and so on. Yet, this is a fortuitous moment for Wits – an opportunity to envision our 'moonshot moments' that could dramatically change society for good.

We can chart a course that can propel us into a new world of discovery and innovation, knowledge–creation and generation, teaching and learning, advancement and social justice, for the good of our generation and the next. But we cannot do it alone. There are three core areas that Wits will bolster in the next 100 years: developing excellent graduates who impact on society; conducting world–class research and fostering innovation; and using our location in the economic heartland of Africa to lead from the Global South.

Wits Anglo American Digital Dome

About Wits

Did you know?
The Wits Global Centenary Campaign has raised **R4,2 billion** for the University from around the world to date.

400+ buildings

7 campuses (including the Wits Rural Campus)

12 libraries

18 residences

2 commercial companies (Wits Health Consortium & Wits Enterprise)

1 short course company WitsPlus Pty (Ltd)

The Home of Talented Scholars

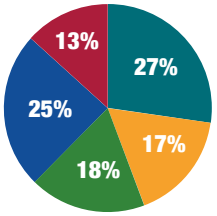
25 835 Undergraduates 2025

15 867 Postgraduates 2025

5 Faculties
33 Schools
+3 000 Programmes

Student enrolment by Faculty

- Commerce, Law and Management
- Engineering and the Built Environment
- Health Sciences
- Humanities
- Science



Did you know?
Wits disburses **R1.5 billion** in financial aid, scholarships and bursaries annually and offers a range of support for students. **Read more at www.wits.ac.za/students.**

Shaping the Future of Finance

How AI, Quantum and emerging technologies will shape the future of finance

Discover the pivotal role that Wits University plays in advancing and interrogating cutting-edge technologies, including artificial intelligence, quantum computing, blockchain, digital currencies and data analytics, and their growing influence on the financial sector.

Wits celebrates innovation across diverse disciplines, showcasing how expertise in Economics, Finance, Actuarial Science, Quantum Physics, and Machine Intelligence and Neural Discovery is driving real-world impact and shaping the future you will experience.

Facilitator:

Professor Solomon Assefa

Professor Solomon Assefa is a senior advisor to the Vice-Chancellor of the University of the Witwatersrand and a distinguished leader in science and technology, driving groundbreaking research and transformative business initiatives. As the founder of Viridian Partners, he collaborates with scientist-entrepreneurs to turn pioneering ideas into scalable solutions and successful market ventures.

With a B.S., M.Sc., and Ph.D. from MIT, he brings over two decades of expertise in corporate R&D, executive leadership, and strategic innovation. His work empowers companies, research institutions, and startups to develop cutting-edge technologies that shape the future of industries. His expertise spans emerging technologies, innovation ecosystems, and cross-sector partnerships, bridging scientific discovery with real-world impact. Committed to harnessing technology for societal advancement, he champions initiatives that drive sustainable progress and economic growth.

As Vice President at IBM Research, Professor Assefa led global R&D initiatives, overseeing hundreds of research scientists and advancing breakthrough technologies from concept to market. He played a pivotal role in shaping IBM's strategic direction, spearheading innovation-driven collaborations with universities, corporations, governments, multilateral agencies, and nonprofits. Additionally, he led IBM's Africa labs in Kenya and South Africa, fostering local innovation ecosystems and developing technology solutions for emerging markets in financial services, healthcare, agriculture, and the public sector.

Professor Assefa has authored over 150 peer-reviewed articles, holds more than 70 patents, and has been named a Young Global Leader by the World Economic Forum. The Africa America Institute has honoured him for his significant impact on science, technology, and innovation. He is a Fellow of Optica and IEEE.

Expert Panel:

Professor Andrew Forbes

Professor Andrew Forbes is a Distinguished Professor in the School of Physics at the University of the Witwatersrand, where he leads the Structured Light Laboratory. He is internationally recognised as a leading expert in structured light and quantum photonics, with research spanning quantum entanglement, digital holography, and the orbital angular momentum of light.

In 2015, Professor Forbes founded the Structured Light Laboratory at Wits, pioneering new ways of visualising and understanding quantum phenomena through what he describes as "quantum mechanics with pictures". His work has positioned South Africa at the forefront of global research in photonics and quantum science.

In November 2025, he was appointed Editor-in-Chief of APL Photonics, becoming the first scholar based in Africa to lead a journal published by AIP Publishing. His contributions to science have been widely recognised, including the award of the Harry Oppenheimer Fellowship and the NSTF Award in 2025 for his impact on quantum science.

Professor Forbes serves as Director of the South African Quantum Technology Initiative and is a founding member of the Photonics Initiative of South Africa. He is a Fellow of Optica, SPIE, and the South African Institute of Physics, and a member of the Academy of Science of South Africa.

Before joining Wits University, he held senior roles at the CSIR National Laser Centre. Beyond his research, he is deeply committed to advancing photonics across the continent, leading training workshops and introducing the field to previously disadvantaged institutions, with a strong focus on skills development and inclusive scientific growth.

Professor Chimwemwe Chipeta

Professor Chimwemwe Chipeta is a Professor of Corporate Finance, Head of the Finance Division in the School of Economics and Finance, and Director of the Wits Fintech Hub at the University of the Witwatersrand. He holds a PhD in Financial Management Sciences from the University of Pretoria.

As Director of the Wits Fintech Hub, Professor Chimwemwe has pioneered innovative teaching and research

programmes in Financial Technology and the incubation of Tech-enabled initiatives. Previously, he served as a Visiting Scholar at the J. Mack Robinson College of Business at Georgia State University in the US, and as a Research Fellow of the South African Reserve Bank on Fintech and Climate Change issues. He also serves on the board of the Centre of Excellence in Financial Services, whose role is to identify systemic challenges and "friction points" within the financial sector and initiate collaborative research.

Professor Chimwemwe is the founder and co-chair for the Wits Global Fintech and Wits Global Climate Finance Conferences. His research interests are in the areas of Corporate Finance, Climate Finance and Financial Technology. He is NRF-rated (C2) and has published his work in high-impact journals such as Finance Research Letters, Emerging Markets Review and Journal of International Financial Markets, Institutions and Money. Professor Chimwemwe is a recipient of several awards, including the Research Excellence Award, and has served as Principal Investigator for several externally funded research projects, including the AFRETEC grant.

Associate Professor Rendani Mbuvha

Professor Rendani Mbuvha is an Associate Professor of Actuarial Science at the University of the Witwatersrand. He was previously Associate Professor of Actuarial Science at the University of Manchester and a Google DeepMind Academic Fellow in Machine Learning at the Queen Mary University of London.

Professor Mbuvha's research interests lie at the intersection of machine learning, climate risk, weather forecasting, and actuarial science, with a focus on decision-making under uncertainty in data-scarce environments. He is the Principal Investigator on a US $1.8 million Bezos Earth Fund AI for Climate and Nature Grand Challenge project at Wits University. Professor Mbuvha led the development of the Actuarial Society of South Africa's Climate Index, a national framework for monitoring climate extremes and risk for the actuarial profession.

Professor Mbuvha is a co-founder of AfriClimate AI, a pan-African research community advancing AI for climate resilience, including the Google.org-funded Forecast4Africa initiative on locally relevant AI weather forecasting. He is a Fellow of the Actuarial Society of South Africa and the Institute and Faculty of Actuaries, and holds the Chartered Enterprise Risk Actuary (CERA) designation. He serves as a Trustee of the Discovery Health Medical Scheme, where he is Chairperson of the Product Committee.

Professor Benjamin Rosman

Professor Benjamin Rosman is one of South Africa's leading voices in artificial intelligence and a recognised thought leader shaping the future of AI on the African continent.

He is a Professor of Computer Science in Machine Learning and Robotics at the University of the Witwatersrand, where he directs the Machine Intelligence and Neural Discovery (MIND) Institute. The Institute focuses on fundamental research into intelligence across machines, humans, and animals, with the aim of ensuring that Africa is not merely a consumer of AI developed elsewhere, but an active contributor to its advancement.

Professor Rosman also leads the Robotics, Autonomous Intelligence and Learning (RAIL) Lab, one of the most research-active AI laboratories in the country, conducting cutting-edge work across machine learning, robotics, and autonomous systems. His research spans applications in technology, healthcare, and business, alongside contributions to AI policy through advisory roles.

He is a co-founder of the Deep Learning Indaba, a pan African initiative that has grown into the largest AI summer school globally, with a network of more than 10,000 Africans working in AI across the continent. He is also a co-founder of Lelapa AI, a startup focused on building AI solutions by Africans, for Africans.

Internationally, Professor Rosman has been recognised as a fellow of the Canadian Institute for Advanced Research in Learning in Machines and Brains and was named by Time magazine as one of the 100 most influential minds in artificial intelligence in 2025. His work is driven by a strong commitment to long term value creation, skills development, and responsible innovation, with a consistent focus on how artificial intelligence can support sustainable economic growth and societal benefit.

DID YOU KNOW?

Three Witsies, Pelenomi Moiloa, Shakir Mohamed and Professor Benji Rosman, were mentioned amongst TIME Magazine's Top 100 Most Influential People in AI for 2023 and 2025

Deepening Our Understanding of Intelligence and Catalysing Innovation

Universities develop the high level, critical skills, at scale, that drive job creation and economic growth. It is at universities where the best minds from different disciplines can be brought to bear to address some of the key challenges facing society today.

The study of human, animal and machine intelligence, learning and innovation is at the core of Wits University's strategic plan, and talented researchers are working with young talent and industry partners, to establish a research-led ecosystem that will include the Wits Machine Intelligence and Neural Discovery (MIND) Institute, the Wits Innovation Centre (WIC) and other health tech and fintech nodes, city laboratories and sustainability hubs, and governance, inequality and employability programmes to address the critical issues facing society today.

Wits Machine Intelligence and Neural Discovery (MIND) Institute

The Wits MIND Institute (launched in November 2024), promotes breakthrough scientific research and advanced technology innovation in artificial intelligence. The Institute brings together global interdisciplinary teams in computer and mathematical science, neuroscience, psychology, archaeology, anthropology, philosophy, and policy science to push the frontiers of the scientific understanding of natural and artificial intelligence, while promoting the incubation and commercialisation of innovative technologies through industry partnerships. Collaboration with key industries to create high–value and novel technologies, such as large–scale AI models that are relevant for material science, drug design, astronomy, business intelligence and the like, forms part of defining strategic areas to ensure a collaborative culture that promotes science and innovation. Key industry partners that are partnering with the Wits MIND Institute include Investec, IBM, Google, Apple, and Wits Alumnus and current Wits PhD Student Charles Goldstuck.

Wits Innovation Centre

The Wits Innovation Centre, home of the prestigious $3 million endowed Angela and David Fine Chair in Innovation, serves as a hub for the coordination of innovation activities and drives inspired entrepreneurial and innovative thinking across the University. The Centre works nimbly across disciplines, schools, faculties, institutions and sectors to bring the best minds, resources, technology and infrastructure to bear to create new knowledge, products and services, and to solve real-world problems. The ecosystem includes Wits' wholly owned entities including Tshimologong (incubator and makers' space), Wits Commercial Enterprises (commercial research and business development), the Wits Health Consortium (contract medical research); and the Wits Entrepreneurship Hub (students) supported by the University's structures to safeguard intellectual property, secure patents, and ensure ethical business practices.

Wits Innovation Fund

The Wits Innovation Fund is poised to become a keystone in the realisation of market potential for innovative ideas emerging from Wits University.

Renowned for its leading-edge intellectual environment, Wits is fertile ground from which a wellspring of fresh ideas can emerge - from social upliftment innovation to advanced technology developments. The Wits Innovation Fund aims to propel these ideas from the conceptual stage into viable, market-ready entities, facilitating a smooth transition from ideation to impact.

The Wits Innovation Fund's mandate highlights a commitment to supporting ventures that are both impactful and sustainable, with a particular focus on ventures that contribute positively to society - such as those aimed at social entrepreneurship. While centred on advancing the interests of Wits' community, the Fund remains open to external ventures that align with its objectives. Key target sectors include healthcare technology, machine learning and artificial intelligence, education access, fintech, and community development.

The Wits Rhisotope Project is Saving our Rhinos

Wildlife crime is one of the four major black-market crimes. Professor James Larkin, a Wits scientist and his team have developed a novel way to save rhinos, using nuclear science.

By inserting measured quantities of radioisotopes into the horns of live rhinos, this non-lethal yet powerful solution, aims to radically reduce the demand from end-users and to save rhinos from the very real threat of extinction. Making rhino horns radioactive, reduces their desirability as a commodity. Radioactively treated horns are also more likely to be detected at international borders, making it more likely that smuggling syndicates are exposed, prosecuted and convicted under anti-terrorism laws.

Some of the key projects in the pharmaceutical and biotechnology spaces include:

Resorbable Wound Dressing – An innovative wound dressing designed to revolutionise the healing process for both humans and animals. Ideal for a variety of wound types, this dressing is a leap forward in targeted, responsive wound care technology.

Oral Delivery of Peptides – The future of medication delivery is envisioned in this state-of-the-art oral pharmaceutical dosage form. Enhanced with an optional external coating, this dosage offers a pioneering approach to safe, efficient drug release tailored to the human or animal body's needs.

WaferMat – Introducing a breakthrough in pharmaceutical delivery – this new dosage form features carbamoyl glycinated chitosan in a unique lyophilized wafer. Perfect for those who need their medication to act quickly, this dosage form sets a new standard in pharmaceutical convenience and effectiveness.

INNOVATION. FOR GOOD

The Wits Innovation Centre plays a key role in encouraging, facilitating, and supporting the connection between research and innovation. It actively engages in strengthening research impact, external engagement, commercialisation, and entrepreneurship.

Wits is a leader in digital business and governance, big data, artificial intelligence, robotics, supercomputing, and quantum computing.

It is also home to WitsQ - the Wits Quantum Initiative, an African first, which seeks to advance quantum technologies through research, innovation, business, education, outreach, and ethics.

The Wits DigiMine is a 'mock mine' that tests the latest digital technologies underground.

The Machine Intelligence and Neural Discovery Institute is a world-leading interdisciplinary research and training institute with a focus on innovation in data science and machine intelligence.

Wits' Tshimologong Digital Innovation Precinct facilitates the incubation of start-ups, the commercialisation of research, and the development of high-level digital skills for students, working professionals, entrepreneurs, and youth.

Some of Wits' spinout companies include:

Button Optics – Prolific physics pioneer Professor Andrew Forbes has numerous patents and publications in the field of structured light. His early-stage spinout, Button Optics, is launching a novel communication platform to market which will leverage some of Wits' groundbreaking intellectual property around the generation and diagnosis of structures light, a pivotal frontier in physics. His team has also developed trailblazing and effective ways of transporting data and images through light, and how to take photos and images in the dark.

SmartSpotQ – A global spinout business from Wits based on incredible innovations by Professors Bavesh Kana and Lesley Scott. Since the onset of widescale molecular testing for tuberculosis (TB) in 2010, SmartSpot has been developing controls to meet the quality needs of TB molecular laboratories across the globe. In ten years, SmartSpot has developed a global footprint in 51 countries, providing health ministries, clinical trial units and private laboratories with diagnostic quality control solutions. SmartSpot is the largest commercial supplier of ISO/IEC 17043:2010 accredited molecular TB controls and provides an accredited companion diagnostic for qualifying the accuracy of molecular diagnostic tests including TB, HIV, SARS-CoV-2, as well as soon to be accredited quality control programmes for influenza, RSV, HCV, HBV, HPV and MRSA. An improved BCG vaccine is also on the cards.

PecoPower – This Wits innovation, led by Professor Willie Cronje is set to light up lives across Africa. This home-grown solar-powered, off-grid solution is radically changing the lives of people who have no access to electricity in local communities. Born out of the School of Electrical and Information Engineering, this personal consumer grid innovation is a solar-powered home electrical grid solution, which easily integrates renewable energy sources along with batteries and appliances, for the electrification of households in Africa. It is a plug and play modular system that is expandable, to ensure that as a household can afford more solar panels, batteries or 12V appliances, these components are easily added to the system, with no need for a trained person to install them.

The Peco Powerbrick

Significant Wits100 Centenary Campaign Donations and Sponsorships to Date

- **Three major Mastercard Foundation** projects totalling R500 million
- R200 million for the development of the **Wits Brian and Dorothy Zylstra Sports Complex**
- $10 million to rename the School of Accountancy in honour of former head **Professor Margo Steele**
- $10 million endowment to support postgraduate students in need **Natie Kirsh**
- R100m Donation for the Jack Ginsberg Centre for the Book Arts **Jack Ginsberg**
- R87.5 million towards Wits 100 AngloGold Ashanti Legacy Scholarships **AngloGold Ashanti**
- R70 million towards the development of the Wits Roy McAlpine Burns Unit at the Chris Hani Baragwanath Hospital **Roy McAlpine Foundation**
- R55 million to repurpose the Wits Planetarium into the multidisciplinary **Wits Anglo American Digital Dome**
- R50 million to establish an endowed Chair in Innovation to drive researcher–led innovation **Angela and David Fine Chair in Innovation**
- R50 million for the Wits Southern Centre for Inequality Studies **Ford Foundation**
- R50 million student support endowment to rename the Wits Sibanye–Stillwater Innovation Bridge **Sibanye–Stillwater**
- R40 million for the Wits Bushveld Geology and Metallogeny Research Chair (BUGEMET Research Chair) **African Rainbow Minerals, Dwarsrivier Chrome Mine, Northam Platinum, Rustenburg Platinum, and Sibanye–Stillwater Platinum Mines**
- R35 million for the **Wits Machine Intelligence and Neural Development IBM Industry Solutions Laboratory**
- R22 million for the Advanced Surgical Skills Lab to train specialists and sub–specialists in the health sciences **Philips, Netcare, Medtronic and Karl Storz**
- R20 million to support strategic postdoctoral studies in the Faculty of Engineering and the Built Environment **African Rainbow Minerals**
- R20 million to support the Future Ecosystems in Africa programme **Oppenheimer Generations Trust**
- R16 million from the **Lamberti Endowment Fund**
- R15 million for the Zola Dental Clinic in Soweto **Bergman family**
- R15 million for the Claude Leon Chairs in Water and the Environment **Claude Leon Foundation**
- R14,5 million to purchase state–of–the–art analysis equipment in Geosciences **Anonymous donation**
- R12.5 million endowment to support students in Architecture and Planning **Reinheimer Foundation**
- R12 million endowment to support law and animal, plant and environmental studies **Tellus Foundation**
- R10 million endowment to support top 'sportspeople studying science' **Smollan Foundation**
- A R10 million bequest for palaeosciences **Anonymous donation**
- R6 million bequest to support top history students and cricketers **Professor Bruce Murray**
- R5 million supporting the Vice–Chancellor's Student Hardship Fund **27Four Investment Managers**
- R4.3 million supporting student bursaries and scholarships **Roger and Julia Hogarth**
- R3 million supporting the Wits BioHub **Jireh Foundation**
- R1,5 million gift to support students in need **former SRC President Rex Heinke**
- R1 million gift to Female Academic Leaders Fellowship Endowment Fund **Wits Chancellor, Dr Judy Dlamini**
- Significant donation for the Wits Chris Seabrooke Music Hall **Chris Seabrooke**
- Significant support from international philanthropic foundations **Mastercard Foundation, Ford, Carnegie, Gates, Kresge, Open Society and the Bezos Earth Fund**
- Support from South African based philanthropic foundations **Raith, Bertha and Albert Wessels**

More than R500 million in funding was received for Wits Research Centres, Institutes and Chairs from 2018 to date; of which approximately 30% contributes to bursaries and scholarships for undergraduate and postgraduate students, and postdoctoral fellowships, within each project

- Centre for Applied Legal Studies (CALS) – R93 million
- Centre on African Philanthropy and Social Investment (CAPSI) – R60 million
- Wits Donald Gordon Medical Centre – R42 million
- Sibanye–Stillwater Digital Mining Laboratory (DigiMine) – R37 million
- Southern Centre for Inequality Studies – R30 million
- Wits Donald Gordon Medical Institute - R27 million
- African Energy Leadership Centre (AELC) – R14 million

- **Roche** Chair for Precision Medicine and Genomics in Africa – R31 million
- **Investec** Chair in Artificial Intelligence and Sustainable Business Transformation - R30 million
- **BCX** Chair in Digital Business – R21 million
- **Nedbank** Chair in Climate Modelling – R20 million
- **Standard Bank** Chair in Africa Trust Infrastructures – R15 million
- **Exxaro** Chair in Global Change and Sustainability – R10 million
- **FirstRand Foundation** Chair in Financial Data Science – R10 million
- **Absa** Chair in Future Energy – R6 million
- **INSETA** Chair in Insurance Education (catalytic project) – R6 million
- **Sappi** Research Chair in Climate Change and Plantation Sustainability – R5 million
- **Hatch Africa** Chair in Mechanical Engineering – R5 million
- **PPS** Chair in Health Economics – R5 million
- **Shell** Centre for Reflection Seismology – R5 million
- **ASP** Isotopes Chair in Optics - R5 million
- **Caxton** Chair of Journalism – R3 million

The **Wits Health Consortium**, is a wholly–owned company of the University of the Witwatersrand, which conducts world–leading research, manages donor–funded activities, pursues entrepreneurial innovation in health and supports clinical trials, to the value of more than **R3 billion** in annual turnover. More than 80% of this funding is from major US–based Foundations, Grant Agencies and Medical Research Entities, underpinning the global confidence of major investors in the University and its entities.

How can you invest in Wits and the Future of Finance?

Technologies like artificial intelligence, quantum computing, blockchain, digital currencies and data analytics are transforming the global financial sector. These changes bring opportunity and responsibility requiring strong partnerships between industry and universities. Wits University is at the forefront of research and innovation of transformative technologies, providing solutions to real-world challenges that are redefining the future of our world.

Should you be interested in establishing a meaningful partnership to:

- Co-develop solutions to real-world challenges through industry-focused laboratories and research chairs
- Develop critical human capacity through targeted Postgraduate Scholarship Programmes
- Create essential academic capacity through early-career Researcher Programmes
- Invest in spinouts and the Wits innovation ecosystem
- Support blue-sky research into frontier science from South Africa for the world

PLEASE CONTACT:

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Together, we can design and refine the next generation of financial technology solutions. For Good.