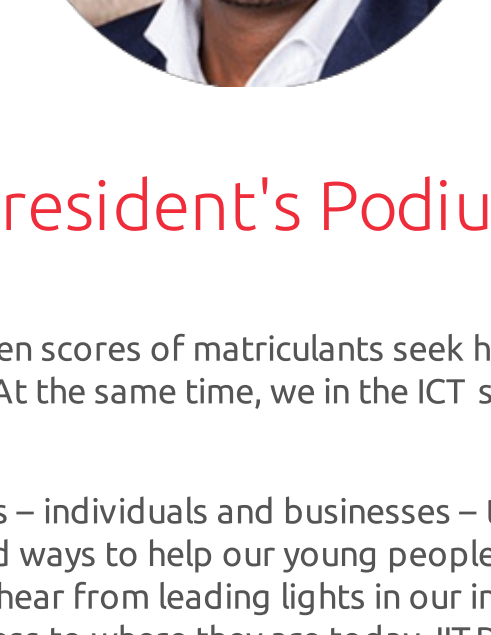


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ROLLING UP OUR SLEEVES TO UPLIFT ICT



President's Podium

It's that time of year again – when scores of matriculants seek help with tertiary tuition fees, and graduates set out to find jobs. At the same time, we in the ICT sector bemoan the lack of suitable skills to grow our businesses.

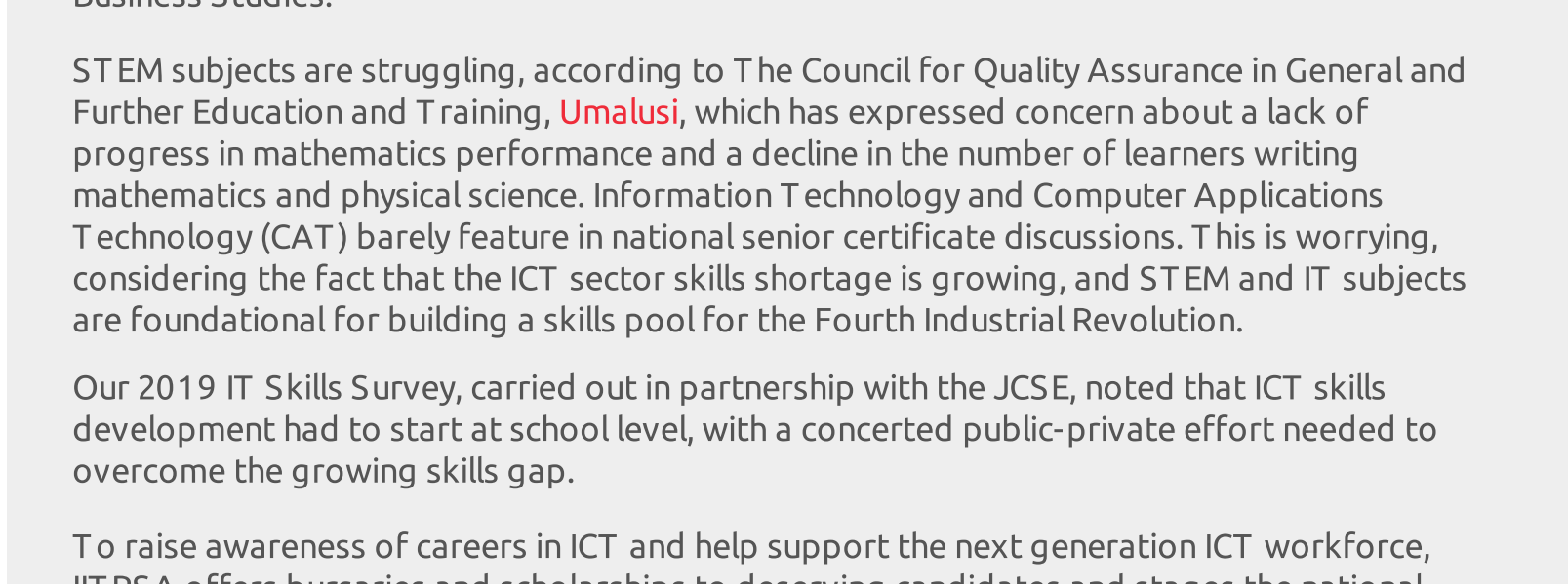
This year, we urge our members – individuals and businesses – to take a closer look at your budgets and resources, and find ways to help our young people study and gain experience in the ICT sector. Time and again, we hear from leading lights in our industry about how early support and mentorship helped them progress to where they are today. IITPSA's 2019 IT Personality of the Year, Tiyani Nghonyama, for example, has widely acknowledged the inspiration and encouragement he has received from industry veterans as playing a role in his success.

Our young people may have the potential to innovate and grow the ICT industry, but without an opportunity and the right level of support, this potential might not develop. For many, all that is required is hands-on experience, which costs organisations little more than time and the willingness to make space for newcomers. The pay-off for this investment could be huge – we stand to gain fresh insights and new enthusiasm within our organisations; we can potentially find our future ICT leaders among the ranks of interns entering our workplaces.

In order to innovate in the 4IR, we should look closer to home and consider whether we can grow these skills instead of only importing them.

Best wishes for a productive and impactful 2020.

Thabo Mashegoane



CEO's Communiqué

According to the Department of Basic Education's report on the 2019 National Senior Certificate exams, CAT still does not feature among the 11 most popular subjects at senior high school level. Indeed, the subjects most popular for NSC candidates last year were English First Additional Language, Life Sciences, Mathematical Literacy, Geography, Mathematics and Business Studies.

STEM subjects are struggling, according to The Council for Quality Assurance in General and Further Education and Training, **Umalusi**, which has expressed concern about a lack of progress in mathematics performance and a decline in the number of learners writing mathematics and physical science. Information Technology and Computer Applications Technology (CAT) barely feature in national senior certificate discussions. This is worrying, considering the fact that the ICT sector skills shortage is growing, and STEM and IT subjects are foundational for building a skills pool for the Fourth Industrial Revolution.

Our 2019 IT Skills Survey, carried out in partnership with the JCSE, noted that ICT skills development had to start at school level, with a concerted public-private effort needed to overcome the growing skills gap.

To raise awareness of careers in ICT and help support the next generation ICT workforce, IITPSA offers bursaries and scholarships to deserving candidates and stages the national Computer Olympiads, which have successfully encouraged learner interest in ICT's for decades.

This year, we urge our members, affiliates and broader industry stakeholders to take similar steps to support STEM and IT progress in education.

Best regards

Tony



In The News

SA ICT alive and well, but skills shortages threaten 4IR progress

South Africa's ICT sector is on par with global counterparts, but skills shortages remain the biggest challenge in 2020, say IITPSA Board members.

Reflecting on the biggest challenges and opportunities for the SA ICT sector in 2020, Board members of the Institute of Information Technology Professionals South Africa (IITPSA) point to skills shortages as the single biggest challenge facing the sector in the next ten years.

Seizing 4IR business opportunities

The opportunities for South Africa's ICT sector outweigh most of its challenges, says Pearl Pasi, IITPSA non-executive director and Chairperson of IITPSA's Western Cape Chapter. The emerging 4IR is bringing a range of new business and career opportunities, she says. "One of the key benefits is that the 4IR is seeing previously manual work being automated and completed in a fraction of a second. Initially, this did not sit well with employees who feared job losses, but this challenge has been resolved by reskilling and upskilling of most employees to keep pace. Furthermore, new careers that didn't exist in that last decade have been created, for example in the app development and programming spaces. This has also brought more women into the IT fraternity, thereby improving gender equality."

Pasi points to improved internet speeds and lower data costs as factors helping to fast-track sector growth. "It has become easier for IT start-ups to get big contracts without the need for huge capital investment. Affordable internet connections make it easier for businesses, and improved mobile connectivity now means more people can easily work from home."

Facing up to challenges

Moir de Roche, IITPSA non-executive director and IFIP IP3 Chair, echoes the view that South Africa's ICT sector is 'alive and well'. "We see a lot of innovators and entrepreneurs around 4IR technologies, and it is encouraging that some schools are now teaching subjects like robotics. Overall, the sector is in good shape," she says. "However, we do need to do more to nurture talent and keep it in the country. ICT professionals are leaving South Africa, and one reason they do so is crime. There is little the sector can do to change that, but organisations do need to be conscious of employees' needs to develop their skills and not get left behind; and they need to reward them appropriately."

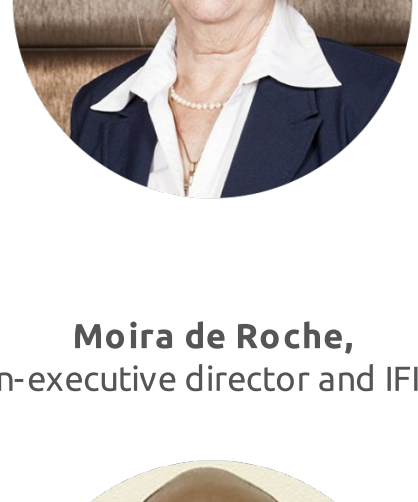
Admire Gwanzura, IITPSA Vice-President and non-executive director, says 4IR technologies are bringing a wealth of opportunities for job creation and business growth in South Africa. "We're already seeing the cloud creating jobs here, and innovators finding opportunities in areas like AI, IoT and blockchain. With the proper regulatory environment and training in place, the 2020s could bring significant opportunities for the ICT sector," he says. "The opportunities are here, and South Africans have the aptitude to take advantage of them. But skills development is a critical challenge – even more so as the 4IR threatens traditional jobs."

Another challenge in the new 4IR era is getting to grips with the plethora of new solutions now coming to market, Pasi says. "New technology advances rapidly and shows up in media on all sides. This can also mean that users, managers at all levels, and even competitors pressure IT staff to implement new technology, simply because it is new and works better. It could prove challenging to decide which of these new technologies will work to the best interests of advancing the organisation, and which are better to avoid for now. Organisations are different, and the value of each new technology will vary depending on organisational goals," she says.

Ethics and soft skills overlooked

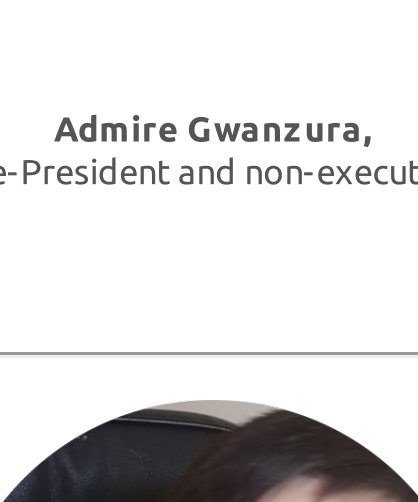
De Roche notes that certain attributes and soft skills which are crucial for the 4IR tend to be overlooked in ICT skills development discussions: "We need to look beyond technical skills development – we also need to look at skills that will differentiate people from robots." Pointing to creativity, innovation, ethics and professionalism, de Roche says teaching these skills will be more challenging than teaching technical skills. "These skills aren't easy to teach – they should be embedded in every subject and adopted throughout the culture of every organisation and the country as a whole."

"These skills are crucial in allowing us to use our fantastic innovation capabilities to harness the power of the technology we have in an appropriate and ethical way," she says.



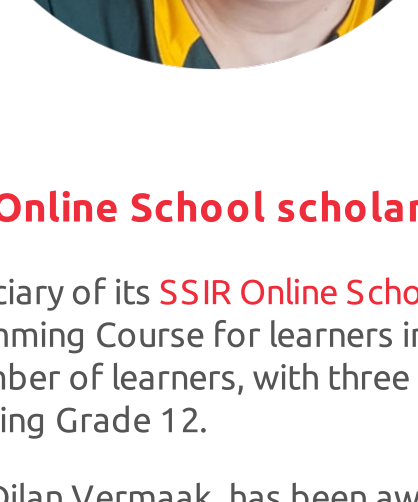
Pearl Pasi,

IITPSA non-executive director and Chairperson of IITPSA's Western Cape Chapter



Moira de Roche,

IITPSA non-executive director and IFIP IP3 Chair



Admire Gwanzura,

IITPSA Vice-President and non-executive director

IITPSA announces new SSIR Online School scholarship recipient

IITPSA has announced a new beneficiary of its **SSIR Online School** scholarship, which has covered the costs of the online Java Programming Course for learners in Grade 10, 11 and 12 since 2017. The scholarship has benefited a number of learners, with three girls now in Grade 12, four in Grade 11, and a new beneficiary now entering Grade 12.

The latest beneficiary, 17-year-old Dilan Vermaak, has been awarded a bursary to complete his computing studies via SSIR. He aims to go on to study a BSc Computer Science and hopes to work as a software engineer in future.

Based in Centurion, Dilan studies online, and excels at STEM subjects and IT, having achieved 89% for mathematics, 81% for physics, and 97% overall for IT last year.

As a disabled learner, Dilan says his interest in IT emerged at an early age, when he began tinkering with computers since he was unable to go outside and play like other children. He explains: "My passion for IT began at the age of two when my grandma bought me a toy laptop. I was utterly fascinated by it. Due to my interest in that laptop, my Mom bought me a real laptop for my 4th birthday. Unlike most other children, I cannot go outside and kick a ball; therefore I sought entertainment indoors which is where my interest and passion developed. Not only regarding entertainment, but, more importantly, the opportunity to learn and communicate through assistive technologies. And I believe many others in my position feel the same. I can't imagine what I would have done without technology and a way to stimulate my brain. The world would not have been what it is had it not been for technology. Plus, the life of disabled people would have been ten times harder."

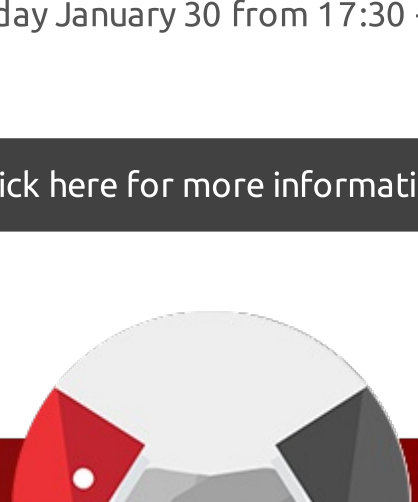
With Elon Musk as an innovative role model, Dilan is particularly interested in developing embedded software and corresponding software higher up in the hierarchy, with a focus on fields such as astronomy and renewable energy. "I find the impact of IT on astronomy exceptionally intriguing," he says. "For example, how we are able to build images and theories based on radio waves converted to information using computers. I would really enjoy specialising in this too, if possible."

Dilan is also working on developing innovative assistive technologies. One of his current projects is a free application to turn a keyboard Num pad into a mouse for users who lack the motor function to use a traditional mouse.

"I would like to thank IITPSA from the bottom of my heart [for the bursary]." Dilan says. "IT studies are particularly costly, he and mom Linda note, particularly when added to the costs involved in living with a disability."



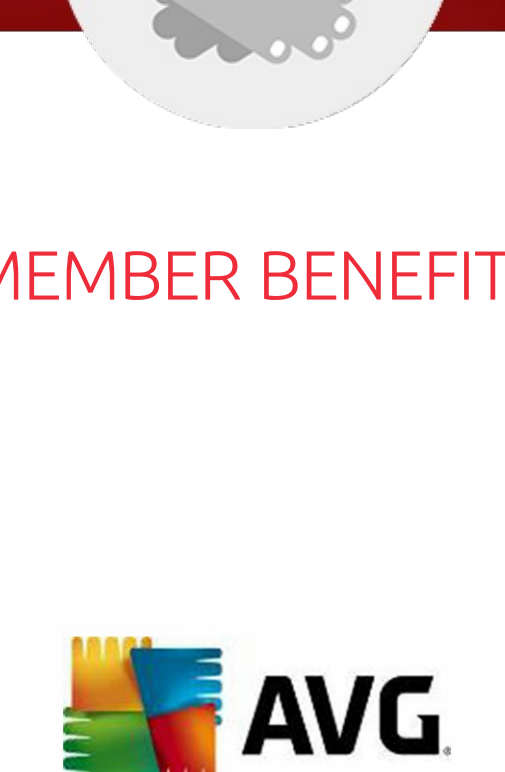
EVENTS AND ACTIVITIES



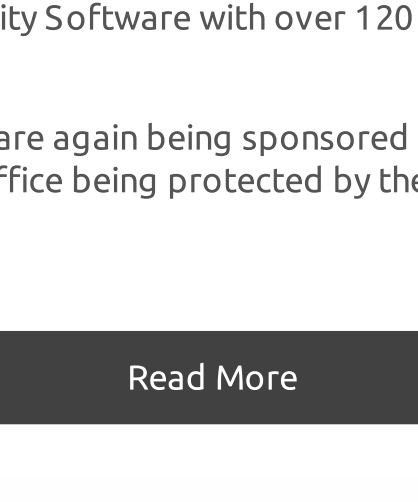
30 JANUARY IITPSA WESTERN CAPE CHAPTER AGM

IITPSA members based in the Western Cape are encouraged to attend the Western Cape chapter AGM, where the annual national and regional chapter reports will be presented, and the new Western Cape chapter committee for the year will be elected.

The meeting will be held on Thursday January 30 from 17:30 - 19:00 at the River Club, Observatory, Cape Town.



MEMBER BENEFITS

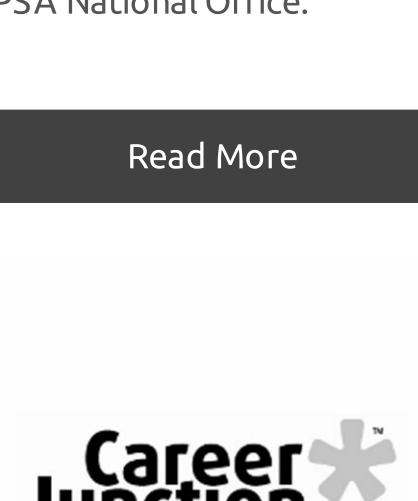


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AVG is a leading developer of Security Software with over 120 million home and business users around the world.

IITPSA is pleased to advise that we are again being sponsored by AVG South Africa, with the computers at the IITPSA National Office being protected by the AVG Internet Security Suite (Business Edition).

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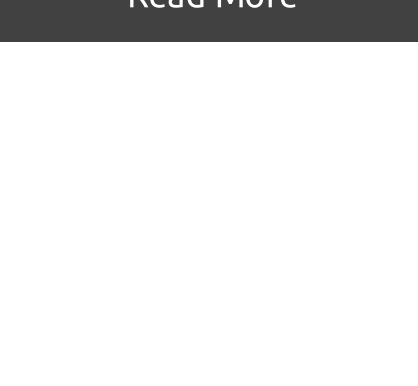


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