

IEEE South Africa, SAIEE, NSTF, and UP present

Competition on Ideas, Designs and Applications for 5G and Beyond for Africa

The IEEE South Africa Section, South African Institute of Electrical Engineers (SAIEE), the National Science and Technology Forum (NSTF), and University of Pretoria (UP) invite undergraduate and graduate students to submit essays on the topic "5G and Beyond for South Africa and Africa". The submission must show how 5G is relevant to and can be used in South Africa, our continent, and serve its people's needs and needs to consider the availability of skills and other relevant factors.

NB! 5G is defined by the International Telecommunication Union (ITU). 5G is expected to offer much faster connectivity and be an enabler and accelerator for industry and Internet of Things applications.

There will be four categories of winners, i.e. for male/female graduate students and male/female undergraduate students. Based on the current sponsorship commitments pool, **we plan to award the winners and runners up with the prizes of R2 000 and R1 000, respectively.**

To be eligible, each applicant must:

- be an undergraduate (3-5 years program), Master's, or PhD student enrolled in electrical engineering or a related field at an accredited institution of higher learning, and
- have the endorsement of a university/college faculty member at the student's institution.

Selection criteria:

- Creativity, quality and feasibility/practicality of the proposed ideas for the technology and application(s) and discussions as well as the thoroughness with which these are described.
- Feasibility of the discussed concepts and their relevance specifically to African communities and markets.
- Quality of writing in the proposal, including spelling, grammar, word choice, organization, style, clarity of figures, etc.

Applications must be submitted by the deadline listed at the bottom of this page and must include:

- a cover sheet with the complete contact information for the student and the faculty (staff) advisor. The cover sheet must include a paragraph that describes the technical interests and skills of the student and how they relate to the subject of the competition.
- a complete curriculum vitae or resume that includes periods of attendance at all schools, expected and completed graduation dates, all already achieved degrees (if any), and a list of published and submitted journal and conference papers and popular science and news articles.
- an essay no more than three (3) pages long (including figures) with a font size of at least 11 points. The list of references may extend to a fourth page.
- an endorsement letter from the faculty member.

Submissions must include all four items listed above to be considered for review. All submission materials must be written in English and be integrated into a *single* PDF document. All submissions are assumed as open. The submissions must not plagiarise any publications/Internet articles. An advisor who does not wish to have the student view the recommendation letter should submit the application for the student. We reserve the right not to award a category, if quality of submissions is deemed insufficient.

Submit applications to the following two emails: alysko@csir.co.za **and** geyerg@saiee.org.za within the deadline (by 15 June 2021). We shall announce the winners within 3-4 months after this deadline.

For winners only: each winner will be required to submit a photo to be used in announcements and publications. Disbursement of award funds will be contingent on receipt of the photo and all the forms.

Questions should be directed to Prof. Albert Lysko (alysko@csir.co.za).

SUBMISSION DEADLINE: 15 JUNE 2021

Template of a cover sheet for the Competition on Ideas, Designs and Applications for 5G and Beyond for Africa (NB! please type; no handwriting, please)

(please feel free to replace with your own, as long as it fulfils the stated requirements: the complete contact information for the student and the faculty advisor. The cover sheet must include a paragraph that describes the technical interests and skills of the student and how they relate to the 5G).

NB! The organizers will keep the data in this template confidential. However, if you win, most details (except for the age, gender, student and phone numbers) may be used in publications about the competition (if you do not agree, please do not submit).

Student

First Name(s):	Title (e.g. Mr, Ms, Miss, Dr, ...):
Middle Name(s):	Email(s):
Last Name(s):	Phone number(s):
Current age (in years):	Are you a graduate (G) or undergraduate (U) student?
Gender identity (M/F/...):	
University student number:	University name:
University address:	University program (e.g. BSc EE, MSc CS, PhD ICT, ...):
	University Faculty (e.g. Engineering, Science, ...) and Department (for graduate students):
A paragraph that describes the technical interests and skills of the student and how they relate to the subject of the competition.	
<i>Date (as dd-mmm-yyyy):</i>	<i>Place:</i>
<i>Full Name (please type):</i>	<i>Signature:</i>

Faculty member supporting the submission (must be from the same university & Faculty as the student)

First Name(s):	Title (e.g. Mr, Ms, Miss, Dr, Prof, ...):
Middle Name(s):	Email(s):
Last Name(s):	Phone number(s):
Position (e.g. Lecturer, Senior Lecturer, Assoc. Professor, Dean...):	
University name:	University Faculty (e.g. Engineering, Science, ...):
<i>Date (as dd-mmm-yyyy):</i>	<i>Place:</i>
<i>Full Name (please type):</i>	<i>Signature:</i>

SUBMISSION DEADLINE: 15 JUNE 2021

Template of a resume for the student

(please feel free to replace with your own, as long as it fulfils the stated requirements: the resume must include periods of attendance at all schools, expected and completed graduation dates, all already achieved degrees (if any), and a list of published and submitted journal and conference papers and popular science and news articles)

NB! The organizers will keep the data in this template confidential. However, if you win, most details (except for the age, gender, student and phone numbers) may be used in publications about the competition (if you do not agree, please do not submit).

Attendance of all schools:

University/School name	Degree received or being pursued	Period of attendance incl. completed/expected graduation dates

List of published and submitted journal and conference papers and popular science and news articles:

1. ...
2. ...
3. ...
4. ...
5. ...
6. ...
7. ...

Other information you consider relevant:

...