THE NEW CENTRE OF EXCELLENCE IN ICT FOR EAST AFRICA (CENIT@EA) AT THE NELSON MANDELA AFRICAN INSTITUTION OF SCIENCE AND TECHNOLOGY (NM-AIST)

Information for the general public / industry

Rationale of CENIT@EA

With about 80% of the people in the East African community being 35 years or younger, the broad majority of the population is considered to be Digital Natives. Additionally, the EAC region is considered to be one of the poorest in Africa with an average general literacy rate (reading, writing, basic maths) of 70%, a number that is strongly desired to increase. All of those factors have to be added in when the attempt is made to cater education to the special requirements of the local and regional industry. As it is in the whole of Africa, mobile networks collectively have emerged as the platform of choice for creating, distributing and using innovative digital solutions and services in the EAC region, imposing the necessity of urgent industrial transformations which require intervention on skills development and improved employment opportunities.

While Embedded and Mobile systems (EMoS) are gaining popularity as a convenient example for the need of innovative digital solutions to help solve urgent issues, the skills on them are still underrepresented in the educational landscape of East Africa. For example, there are mobile applications for recording sales for small and medium enterprises and healthcare information management, however both lack real-time tracking. Other applications of Embedded and Mobile Systems in our daily life include: Consumer Electronics, Household Appliances, Health-Care Equipment, Automobiles, Industrial Applications, Aerospace Communications, and Early Warming Systems.

Therefore, EMoS are of growing relevance in our current and future generations in which automating will become even more important. Additionally, industry representatives have expressed great demand to re-train the existing professional engineering work force and increase their specialist skills.

The political partners; the East African Community (EAC), the German Federal Ministry for Economic Cooperation and Development (BMZ) agreed to establish a Centre of Excellence in the field of Information and Communication Technology (ICT) in the EAC. Funded by BMZ, the so-called CENIT@EA is implemented by IUCEA, GIZ and DAAD.

CENIT@EA is establishing a state-of-the-art Master's Programme in Embedded and Mobile Systems (EMoS) at the Nelson Mandela African Institution of Science and Technology (NM-AIST), which incorporates applied-oriented training modules and linkage to industry, as well as a strong focus on technology, innovation and entrepreneurship.

This Master's programme is established as a multilateral cooperation between NM-AIST, the Carl von Ossietzky University of Oldenburg (UOL), Germany, the German Aerospace Center (DLR), Brunswick, Germany, the Hochschule für Technik und Wirtschaft (HTW), Berlin, Germany, and the Hochschule Mannheim (HSM), Mannheim, Germany. The community is expected to highly benefit from the visibility currently carried by the mobile platform, which is acknowledged to potentially contribute to innovations and economic growth within the EAC, and Africa in general. Hence, resulting into job creation through new innovative products, services solutions.

The main aim of this project is to strengthen teaching and research in Embedded and Mobile Systems to the East African partner institutions. A high industrial relevance will be ensured by the Excellence Centre and thereby strengthen the employability of graduates. By cooperating closely with partners straight from the East African industry, new opportunities will be offered to graduates, as their skills are directly matched to the region's needs.

All of the above will be realized by aiming for the following three targets:
1. Research and teaching: two distinctive research topics and cross-cutting themes are addressed, building on preexisting collaborations and profit off the expertise from all partnering institutions
2. Advancing practical capacities in local contexts that benefit communities by carefully approaching practical solutions in close exchange with local and regional stakeholders
3. Capacity building in higher education for innovative ICT solutions, e.g. through distance-learning arrangements

Target group
The project mainly aims at graduates with consideration of females with a first academic degree in Science, Technology, Engineering and Mathematics (STEM) as well as professionals working in academia, industry, or the public sector. The project especially aims to increase enrolment and promotion of women since they are still underrepresented in STEM-related fields and the ICT sector.

Information for prospect students

In the following text you will learn more about the requirements to participate in this state-of-the-art Master's Programme, get a deeper insight into the specific contents and structure, as well as receive information about scholarships.

Structure

The EMoS program is structured in modules which prepare the students for their professional life by including distinctive and integrative courses with high educational and practical content that address the local and regional development needs and challenges. The program includes a variety of courses. The four major topics are all highly relevant for current industrial issues: Mobile Computing, Embedded Systems, Soft Skills and Basic Skills.

Scholarships

CENIT@EA will cover scholarships in order to study the proposed EMoS master's programme. The scholarships awarded by CENIT@EA will cover a monthly allowance, rent assistance (for in-region students), financial assistance for studies and research, writing and printing costs, but also the tuition fees applied at NM-AIST. CENIT@EA has established clear rules for a transparent, fair and equal scholarship recipient's admission and selection process. Since for this project a limited number of scholarships are available, the concept "first come, first served" applies. CENIT@EA also seeks to ensure that women have access to all resources on an equal basis as men.

Who can apply for the scholarships?

Applications will be open to all nationals of Tanzania (in-country) and nationals of the East African Community (Kenya, Uganda, Rwanda, Burundi and South Sudan / in-region) who are able to present an admission letter or a proof of application for admission to the EMoS program issued by NM-AIST. Furthermore, you need to have a Bachelor's degree or equivalent in computer science, information technology, electronics, electrical engineering, telecommunications engineering or other related fields. More detailed guidelines and requirements regarding the Bachelor's degree, GPA etc. are available on our webpage cenit-ea.org.

How to apply

If you are interested in applying for a scholarship, please consider the following points:

1. -You must apply to the Master programme in Embedded and Mobile systems through NM-AIST website (https://www.nm-aist.ac.tz/index.php)
2. -For a scholarship in this Master programme you must submit all required documents through CENIT@EA online form at https://cenit-ea.org.
3. -You need a valid email address and a stable internet connection. Use your own email   address, as it is the main mean of communication.
4. -Fill out the forms in English language. All documents not in English must come with a respective notarized English translation.
5. -Application forms cannot be saved for later completion.
6. -Only complete, correct and submitted applications will be considered in the selection.

CENIT@EA Partners

Stay in touch with us

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