



Photo: Pia Nürnberger

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TUM.Africa Newsletter

Latest news on TUM.Africa

► TUM delegation visit to KNUST in Kumasi, Ghana

A TUM delegation led by Senior Vice President Prof. Juliane Winkelmann visited the partner university Kwame Nkrumah University of Science and Technology (KNUST) in December 2019.

A meeting was held with the Vice-Chancellor Prof. Kwasi Obiri-Danso to advance the strategic KNUST-TUM Partnership for Innovation and Sustainable Development. The delegation also visited the campus in view of upcoming projects.



Senior VP Juliane Winkelmann with Rexford Assasie Oppong and Kwasi Obiri-Danso. Photo: Dr. Harald Oik / TUM

► New TUM Global Incentive Fund projects with KNUST

Four project proposals were approved for the second call 2019 of the TUM Global Incentive Fund with KNUST in Ghana:

- Research network on responsible AI (Prof. Lütge)
- Sustainable management of e-waste (Prof. Fröhling)
- Blockchain land registration innovation (Prof. de Vries)
- Mathematical model for malaria life cycle induced by floods (Prof. Disse)

Ongoing TGIF projects from the first call 2019 together with KNUST include:

- Smart solutions for independent living and social participation for older persons (Prof. Bock)
- Design-build project: multi-functional space (Prof. Kéré)

- Development of sterilizer for medical facilities in rural areas (Chair of Medical Materials and Implants)
- Urban-water-energy-food Nexus: case study in Kumasi for joint research and teaching purposes (Prof. Drewes)
- Women's health and cervical cancer prevention (Prof. Klug)

► **Successful DAAD proposal *Center for Sustainable Energies and Entrepreneurship in the Global South***

The TUM proposal for the DAAD program Higher Education Excellence in Development Cooperation – Exceed was approved in December 2019. The project entitled *Center for Sustainable Energies and Entrepreneurship in the Global South* will start in January 2020 and will involve multiple chairs and departments of TUM and a network of several universities in Asia, Latin America – and Africa, including KNUST.

Contact: Prof. Dr. Frank-Martin Belz, frank.belz@tum.de

Recent TUM activities in Africa

► **Training on Geo-informatics applications for resource management conducted in Addis Ababa, Ethiopia**

From September 30 to October 4, 2019, experts from TUM School of Life Sciences Weihenstephan, Dr. Thomas Schneider, Dr. Mengistie Kindu, and Dr. Martin Döllerer, conducted the first training on Geo-informatics applications for resource management in cooperation with the Institute of Forest Management (IFM). The training was hosted by the Ethiopian Environment and Forest Research Institute (EEFRI) in Addis Ababa.

Participants were research staff members of EEFRI from seven centers across the country: two in Addis Ababa, Mekele, Bahir Dar, Jimma, Hawassa, and Dire Dawa. There were also two participants from other institutes.

The course included

- Introduction to physical background of remote sensing
- ArcGIS environment
- Basic concept of image analysis
- Practical image classification using ArcGIS
- GIS techniques for change detection, sampling and erosion risk modelling
- Map layout



The participants of the first training on Geo-informatics applications for resource in Addis Ababa. Photo: Mengistie Kindu / TUM

The training is part of Church Forest Project funded by the Bavarian State Chancellery. Experts also made a field visit for selecting project case study sites. [Read more about the project on the WZW website](#)

► **Contribution to eLearning Africa: 14th International Conference & Exhibition on ICT for Education, Training & Skills Development in Abidjan, Côte d'Ivoire**

Dr. Pamela Duran of the Master's Programme and Doctoral Studies Land Management and Land Tenure at the TUM Department of Civil, Geo and Environmental Engineering participated in the 14th International Conference & Exhibition on ICT for Education, Training & Skills Development in Abidjan, which took place from October 23 to 26, 2019. Her talk on eLearning Packages in Smart and Responsible Land Management was part of the MoodleMoot Africa workshop. Dr. Duran also got to network with other participants to seek further collaboration opportunities in eLearning in francophone Africa.

Contact: Dr. Pamela Duran, pamela.duran@tum.de

► **Center for Global Health at TUM (Department of Neurology and Institute of Medical Microbiology, Immunology and Hygiene) – CYSTINET-Africa project**

CYSTINET-Africa (Prof. Andrea Winkler and Prof. Clarissa Prazeres da Costa, both are PIs from TUM), a multidisciplinary health network on the foodborne parasite *Taenia solium* cysticercosis/taeniosis, held its first international conference at the end of 2019 in Arusha, Tanzania (26.-28.11.2019). More than 100 participants (researchers, implementers and politicians) from all around the world attended this conference and made it a very successful event. The conference was equally attended by high-level politicians, such as the Tanzanian Deputy Minister of Health, who at the end of the conference was handed over a 10-point recommendation paper, which fostered discussions around research translation into policy and practice. [Read more on the CYSTINET-Africa website](#)



Group picture of the conference participants of the first CYSTINET-Africa conference. Photo: Prof. Andrea Winkler / TUM

► Center for Global Health at TUM (Department of Neurology) – The Lancet One Health Commission

In October 2019, the Lancet One Health Commission, co-directed by Dr. John Amuasi (Kumasi Centre for Collaborative Research in Tropical Medicine at the Kwame Nkrumah University of Science and Technology, Ghana) and Prof. Andrea Winkler (Center for Global Health at TUM and Centre for Global Health at the University of Oslo), sparked a series of successful events in Berlin.

Both co-directors chaired two panels with high-ranking officials and politicians from the World Health Organisation, Germany, Norway, and Ghana regarding the One Health concept at the World Health Summit, which took place from October 27 to 29, 2019. They contributed to the Berlin Principles on One Health during the One Planet, One Health, One Future meeting organized by the German Federal Foreign Office to explore climate change and health implications, and led a panel on One Health at the 6th German-African Healthcare forum to discuss the implication of One Health for healthcare business with the Deputy President of Liberia, among others.



The Lancet One Health commission team (Germany, Norway and Ghana) at the One Planet, One Health, One Future meeting organized by the German Federal Foreign Office. Photo: Prof. Andrea Winkler / TUM

Another highlight was the meeting of the Women in Global Health Network that promotes women in leadership positions in Global Health. The output of the various events will feed directly into the Lancet One Health commission report, which is planned to be published in 2021. [Read more on the Lancet One Health Commission website](#)

► Podcast Series by "Africast" of the TUM Young Academy

The TUM Young Academy team "Africast" is developing a podcast series on both academic and practical KNUST projects in Ghana. These podcasts are aimed to be spread out at the TUM to help the Africa Initiative gain attention, so that more TU students and KNUST students are informed. The fifth podcast [Infrastructure and Mobility in Ghana](#) presents Dr. Samuel Doodoo, who has a PhD in Physics from the TU Berlin and an MBA in Finance from the KNUST. The sixth episode [Land Management and TUM.Africa](#) presents Prof. Dr. Walter Timo de Vries, who leads the chair of land management at TUM, talking about land use in Africa and which problems occur.

► Dr. Uchendu Eugene Chigbu delivers keynote address to the 3rd Conference on Land Policy in Africa

The third edition of the Conference on Land Policy in Africa took place from November 25 to 29, 2019 in Abidjan. The conference, which is organised under the auspices of the African Land Policy Centre – a joint initiative of the African Union Commission, the United Nations Economic Commission for Africa, and the African Development Bank – is the most important land and natural resource event in Africa. It is a pan-African forum for discussing and strategizing how Africa can manage its land for improved socioeconomic and environmental well-being. [Read more on the TUM Department of Aerospace and Geodesy website](#)

Contact: Dr. Uchendu Eugene Chigbu, ue.chigbu@tum.de

► Exploring contemporary art and modern architecture in the megacity Lagos

In December 2019, the Chair of Theory and History of Architecture, Art and Design organized a field trip to Nigeria. Dr. Sarah Hegenbart, Professor Dr. Dietrich Erben, and a group of students from TUM travelled to Lagos, where they were welcomed by Nigerian-born and Leipzig-based architect Oluwaseun Joko, a Nigerian architect, who was also a guest professor at TUM in summer term 2019.

The research trip aimed to provide insights into the topic of modern contemporary Nigerian art and on the other side in gaining an idea about the modern architecture in the megacity, Lagos. Prior to the field trip, the seminar discussions in Munich centred on the contemporary art scene on the African continent.

Furthermore, discussions touched on issues such as restitution of colonial cultural assets. Central questions were also the following: What is Nigerian Architecture? What kind of challenges does the African continent, Nigeria in particular, face in terms of the raising population in the future? And how can architectural solutions be developed to meet the demands elicited by drastic population boost?

In addition, the awareness that the curricula in the Global North primarily focus on architectural solutions in the Global North increased our desire to engage with the art and architecture of the Global South. The aim was to explore Nigeria in all its nuances to gain a deeper understanding of its art and architecture.



Pan-Atlantic University-Ya-Yemisi Shyllon Museum
Photo: Pia Nürnberger / TUM



Yoruba Culture Center, Lagos: building site inspection
Photo: Pia Nürnberger / TUM

► Charity concert in Munich to support health center in Uganda

On November 14, 2019, Baulärm – a band connected to the Chair of concrete structures of the BGU department – played a charity concert in the Eine-Welt-Haus for the renovation of a health center in Uganda. It was part of an activity of the local Munich group Ingenieure ohne Grenzen (engineers without borders), in which many TUM students and alumni are involved. The aim of the project is to give the region's residents access to medical care again.

Upcoming TUM activities in Africa

► Final presentations of the student project Renewable Energy Concept Ghana at TUM Campus Garching

Three interdisciplinary teams of TUM students have been working on all aspects of the Renewable Energy Concept from site assessment and system design to business and financial analysis as well as community involvement and stakeholder management. The event on February 4, 2020, from 9 am to 1 pm, will include elevator pitches, presentations, and Q&A sessions.

Contact: Johannes Winklmaier, Johannes.Winklmaier@tum.de

► International conference on State of the Art in Ethiopian Church Forests and Restoration Options

The conference will be held from February 12 to 14, 2020 in Addis Ababa, Ethiopia. Prospected authors, and in particular PhD students, are encouraged to submit new research papers addressing church forests and restoration options, and share the valuable experiences with the scholars around the world. The conference is organized by the Institute of Forest Management (IFM), TUM School of Life Sciences Weihenstephan, Technical University of Munich (TUM), together with local partners, the Ethiopian Environment and Forest Research Institute (EEFRI) and the Ethiopian Environment and Forest Research Institute (EEFRI) and Organization for Rehabilitation and Development in Amhara (ORDA).

A book, based on chapters of selected paper contributions, is expected to be published in one of the internationally known publishers, potentially in Springer.

Contact: Mengistie Kindu, mengistie@tum.de

Recent TUM publications on Africa

- Dagnenet Fenta Mekonnen, D.F., Duan, Z., Rientjes T., Disse, M. (2018) [Analysis of combined and isolated effects of land-use and land-cover changes and climate change on the upper Blue Nile River basin's streamflow](#) in Hydrol. Earth Syst. Sci., 22, 6187-6207, 2018.
- Dagnenet Fenta Mekonnen, Markus Disse (2018) [Analyzing the future climate change of Upper Blue Nile River basin using statistical downscaling techniques](#) in Hydrological and Earth System Sciences, 22, 2391–2408.
- Girma, Y.; Terefe, H.; Pauleit, S.; Kindu, M. (2019): [Urban green spaces supply in rapidly urbanizing countries: The case of Sebeta Town, Ethiopia](#) in Remote Sensing Applications: Society and Environment 13: 138-149.
- Demissie, F.; Yeshitela, K.; Rouleau, M.; Flaspohler, D.; Kindu, M. (2019): [Socio-economic importance of forest resources and their conservation measures in Ethiopia: the case of area closure in South Gonder of Ethiopia](#) in Environmental Monitoring and Assessment 191: 437.
- Maduekwe, Ebelechukwu; de Vries, Walter Timo: [Random Spatial and Systematic Random Sampling Approach to Development Survey Data: Evidence from Field Application in Malawi](#) in Sustainability 11 (24), 2019, 6899.

Calls for proposals related to Africa

► Partnerships for sustainable solutions with Sub-Saharan Africa: Promoting research activities and integrated postgraduate education and training – Deadline: April 2

Cooperation between German universities, non-university research institutions and companies and African partners is funded in order to help solve global challenges, create sustainable scientific cooperation structures, strengthen regional and continental cooperation, promote innovation potential and open up markets.

The program consists of two modules: module 1 – research (DLR / BMBF) and module 2 – postgraduate education and training (DAAD). Proposals have to consider and combine the two modules.

Priority topics are:

- Circular economy
- Food processing
- Logistics and traffic

For further details, please consult the [BMBF website](#) and the [DAAD website](#).

► Teaching and Training opportunities outside of Europe+

New call for proposals for Erasmus+ worldwide including **Egypt, Ghana, and South Africa**: The TUM Global & Alumni Office and Erasmus+ give lecturers, scientists, and administrative staff of TUM the opportunity to go abroad to teach in non-European countries.

The “International Dimension” of the program offers funding for stays at one of the participating partner universities worldwide.

Please check the G&A Office’s websites for further information on [teaching](#) and [training mobility opportunities](#) for TUM staff. Application deadline is January 20, 2020.

Contact: Sarah Huber, sarah.huber@tum.de



Dominik Beisser, Head of TUM G&A Office's Faculty & Staff Mobility team, with Michael Asiedu-Adjei from KNUST. Photo: Dominik Beisser / TUM

Contact

If you would like to contribute to this newsletter, please [send an e-mail to Prof. de Vries](#).
Deadline for the next issue: March 31, 2020