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and Isaac K. Dontwi, KNUST, Kumasi, Ghana**

Kumasi is located in southern central Ghana and has a population of 1,517,000. It is the historic and cultural centre of the Ashanti Kingdom and the second largest city after Accra.

Kwame Nkrumah University of Science and Technology is a technical university founded as a college in 1951 affiliated to the University of London, and became independent in 1961. It is divided into 6 Colleges and 10 research centres, including the National Institute of Mathematical Sciences (NIMS) and is the second largest university in Ghana (after the University of Ghana, Accra) with 23,000 students.

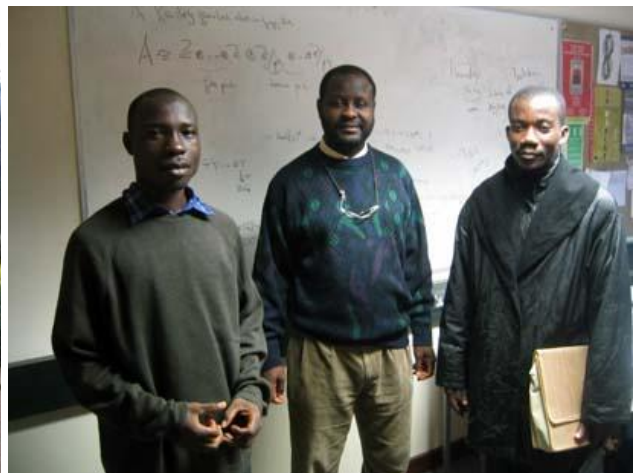
The Maths Department at KNUST has 25 academic staff and currently 750 undergraduate and 40 postgraduate students. The research areas can be divided into the following categories: Pure Mathematics, Applied Mathematics, Computational Mathematics, Operations Research, Statistics and Probability, Financial Mathematics and Actuarial Science.

The aims and objectives of our mentoring partnership are as follows:

1. Coordination of research interests for mentoring and collaboration.
2. Selection of suitable postgraduate students and researchers.
3. Improvement of local research environment.
4. Improvement of postgraduate education.
5. Dissemination and exchange of knowledge.
6. Establishment of permanent national and international research links.



Dr Frank Neumann, Prof Isaac Dontwi (KNUST) and their students at Leicester



Isaac Owusu-Mensah, Prof Isaac Dontwi and William Obeng-Denteh from KNUST at Leicester



KNUST campus, Kumasi, Ghana

The first visit of the mentor took place at KNUST in Kumasi from 2-14 March 2007. The mentor gave a series of lectures on "Algebraic Topology and its Applications" for master students and a more advanced course on a similar topics for PhD students and young researchers from Prof. Dontwi's research group. Through these lectures several master and PhD topics were identified for KNUST students and two students finished their master degree in topology as part of the MARM mentoring scheme. They are currently working on their PhD under joint supervision of the mentor.

Improvements of local research environment included a demonstration of free online resources (arxiv, Hopf Archive, NUMDAM, EMANI ...) and participation in the scheme [e-math for Africa](#). In addition several text books and sets of mathematical journals were donated to KNUST.

In order to strengthen links between partner departments, the mentor met the VC, Pro-VC, Dean of the Faculty of Science, HoD and the Director of the International Office of KNUST, and a Memorandum of Understanding was agreed.

There was a visit of a group from KNUST group to Leicester 3-9 December 2007, and a second visit of the mentor to KNUST took place from 11-17 December 2008. During his second trip the mentor also had a chance to visit other public universities like the University of Ghana in Accra and the University of Cape Coast.

Several specialised research workshops on "Modelling Complex System organised at KNUST in Kumasi in the summer and autumn of 2008 were sponsored partially also through the MARM scheme and brought together around 20 students and researchers from Ghana and neighbouring countries."

Perhaps the most significant achievement of this partnership has been its influence in the selection of KNUST as the location for the new [National Institute of Mathematical Sciences \(NIMS\)](#). The mentor was also involved as an organiser and speaker for the NIMS International Conference on Mathematics and Its Applications, which took place at the University of Ghana in Accra from 16-20 June, 2009. Besides mathematicians from universities in Ghana, also several Ghanaian mathematicians from the USA and neighboring Nigeria participated in this event.



Dr Frank Neumann speaking at the NIMS conference in Accra



Professor Daniel Bentil speaking at the NIMS conference in Accra