

EAST AFRICA TECHNOMATHEMATICS

Coordinator: Lappeenranta University of Technology, Finland

Partners: University of Dar es Salaam, Tanzania; Kigali Institute of Science and Technology, Rwanda; National University of Rwanda, Rwanda; Tampere University of Technology, Finland

Study areas: Mathematics, Informatics



Conference in Dar es Salaam. Photo by Professor Matti Heliö.

What are the main aims of your network?

The main objectives of the network cooperation are to introduce techno-mathematics in the East Africa region and to promote the development and use of mathematical tools in development activities in the region. The project attempts to build capacity for mathematics research in East African Institutions and to create an environment where mathematicians can collaborate in Industrial Mathematics Research within the region and beyond. All partners in the network benefit from the exchange of the course materials and curriculum development.

What kind of activities are there in your network?

The collaboration started in 2002 through contacts of the University of Dar es Salaam and Lappeenranta University of Technology. The main focus of the network is organising intensive courses and realising teacher and student exchanges between participating institutions. Two network meetings are going to be organised during the project.



The first intensive course was organised in October 2007 in the University of Dar es Salaam. The topic of the first course was "Remote sensing and environmental models, Models in bio-mathematics and epidemiology". During the autumn 2007 2 teachers from the Lappeenranta University of Technology visited Tanzania and 2 teachers from the University of Dar es Salaam visited Finland. Visiting professors from Tanzania gave lectures on their field of specialization.

First 3 exchange students from Tanzania arrived in Finland at the end of October 2007 and in the beginning of January 2008. The students study 5–9 months in Finland and they will finish their MS degree in Tanzania later in 2008. Encouraged by the network collaboration, the Mathematics Department at University of Dar es Salaam has approached Tanzania Commission for Science and Technology (COSTECH) and introduced the ideas and potential of Technomathematics. Curriculum development towards MSc degree in Mathematical Modelling is under way.

What sort of successes and challenges have you encountered during your project?

The staff visits have helped to promote the local contacts with the industry and national organisations such as Tanzania Meteorological Institute, Energy sector, COSTECH, the Mathematical Association of Tanzania, and the university links between Kigali and Dar es Salaam. The intensive courses and lectures of visiting scientists have been well received. The MS studies of the exchange students are going well and their MS thesis work is of excellent quality. Together we have identified important areas for future collaboration with substantial expected impact. One plan is to develop teacher's training programme.

Project administration, money transfer and travel arrangements have presented some difficulties. Actual costs have only been found out during the course of the work, which has caused problems with budget plan written a year ago. Advance planning over several months has been difficult, operative planning often takes place on site.

Your advice to forthcoming networks

Personal trust between partners is crucial.

