

Mentoring mathematical research in sub-Saharan Africa

In 2005, I gave several lectures at the African Institute for Mathematical Science (AIMS). AIMS is located in a suburb of Cape Town and offers an intensive one-year course which brings young researchers from all over Africa to a level where they can start doctoral studies. The combination of enthusiasm and talent shown by the AIMS students was remarkable. Several of them, admittedly the best in their countries, compared well with some of our best Cambridge undergraduates, despite how little training they had received. Several years later I was offered a London Mathematical Society grant to act as a mentor to a mathematics department in sub-Saharan Africa. I accepted without knowing which country I would be allocated to.

I was assigned to the Mathematics Department in Accra, Ghana. During my first visit in 2010, I realised that the Department is facing a generation gap problem. There are retired faculty members with a considerable research record and a number of enthusiastic young people with no PhDs. The way forward seemed to be to work with the young. I made a second visit a year later, giving lecture courses and suggesting research projects on both occasions.

My own field is mathematical physics, and I was no expert in all areas of interests of the young Ghanaian researchers. I have instead attempted to put them in touch with my colleagues in Cambridge and elsewhere. In 2011, Eyran Schwinger visited Cambridge and Clare for one term. He worked successfully



Maciej (centre in white shirt) in Accra

with our Numerical Analysis group. This work should lead to Eyran submitting his PhD thesis in Ghana in the next year or so. Prince Ossei, another young Faculty member from Accra, has recently defended his PhD thesis, based on the work he has done during his visits to Edinburgh. I am expecting a visit from a third Ghanaian mathematician in Lent 2013.

In the long term, Ghana and other African countries would benefit from one or more centres of excellence within Africa. This would allow the African mathematicians to initiate collaborations and take research-leaves, without putting their departments at risk of more brain-drains from Africa. I learnt of one such initiative when I attended a conference

in Kenya in 2011. The idea is to create a Pan-African University in Nairobi, where African students can enrol for PhD programmes, while maintaining links with their home universities. Several African nations have agreed to contribute funds towards this initiative. Some of our road-tested Cambridge syllabus can be used to create a frame for taught courses. I hope that, with some international help, a project like that can be made to work.

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Clare Boat Club held a celebratory dinner in September to mark 40 years of friendship with Anne Brewin, whose name is synonymous with Clare at Henley.

Anne has hosted many of Clare's Henley crews as well as alumni who turn up to support.

She was presented with a celebratory oar to display in her home. Nigel Woodcock, President & Fellow, led the tributes to Anne as a generous donor Vice-President of the Club. Toasts were proposed by Richard Coxe (1971), Rod Croucher (1970, in absentia), Jenny Maud (2000) and Jeremy Hazzledine (1972).



Left to right David Pocock (1979) Derek Sweeting (1979) Anne Brewin, Hamish McCallum (1977) Jim Duncumb (1980)