

# **Masamu Department Heads, Chair, and Senior Research Scientists Workshop December 1, 2011**

The Departmental Chairs or Heads of Departments and Senior Research Scientists discussed a number of issues including challenges, opportunities, and experiences in teaching and research in the United States of America and Africa. Participants discussed bureaucratic processes which usually hinder or complicate access to opportunities for collaboration. It was noted in the workshop that the notion or perception that Mathematics is difficult has cut away a number of students in disadvantaged groups from realizing their potential, and they advocated for encouraging students and the community in general in realizing that Mathematics is the gateway to a large number of careers.

The following were some of the specific items that were discussed:

## **1. How do we get passionate mathematics students or teachers into our programs or universities?**

- Combined teaching and research can enhance teaching.
- Passion alone would not make much impact, but equipping and mentoring programs will ensure excellence.
- Patriotism should be encouraged (individuals be encouraged to give back to the societies or communities).
- Performance rewards or recognition can improve morale and consequently sustain passion for excellent performance.
- Highly motivated primary and secondary school teachers are a platform to generate passion for careers in mathematics.
- Career guidance and wide knowledge of careers in the mathematics field can generate passion for the subject.

## **2. What programs exist in African and US universities for sabbatical opportunities?**

- Most Universities have provisions for sabbatical programs, but they can only be accessed when there is cost sharing.

## **3. How has student assessment of staff contributed to improved teaching?**

Participants discussed the credibility, objectivity, and reliability of the student assessment system and came out with following:

- There was a general agreement that the current use of student assessment does not serve its intended purpose.
- They felt that if there was a way, student assessment should not be used for promotion and renewal of contract purposes, but purely for improvement of teaching.
- Some contributions included suggestions to change the format to allow for open ended questions, some of which account for the impact or influence in the students career paths, and evaluation of learning outcomes.

- Participants generally felt that student assessment is a complex system, requiring a lot of resources and expertise to achieve its intended purpose.
- Lecturers should be evaluated by the customer, which is not the student, but rather the society. They should not be evaluated by the student, which is the product.
- Participants discussion revealed that most colleges in the US and Southern Africa use similar instruments for students to evaluate faculty. They expressed their concerns and reservations about the evaluation instruments that are currently in use.

**4. What mechanisms are in place or could be put in place to sustain collaborations between African, American, and UK scholars/researchers?**

- Establish collaborative links with other research Institutes such as ITCP, AIMS, and Centers of Excellence for student recruitment and research collaborations.
- Ensure continued communication and information sharing among Masamu programs (through Africa Math Wiki, group emails, conference meetings, Skype).
- Promote collaboration between pure mathematicians and applied mathematicians.
- Recruitment of students and researchers from established forums like Masamu with established or substantial outputs.
- Participation in research programs such as research visits, Postdocs, and Sabbaticals.
- Intensive fundraising programs to support conferences, research meetings, research visits, Postdoc programs, and inter-continental schools or institutes
- Participants noted that all groups (African, US, and UK) have similar problems and issues. They noted that they would like to have a forum to continue such discussions and that such a forum may foster future collaborations.