SAMSA *e-bulletin*

Your newsletter promoting research and mentoring of academics in Southern Africa

SAMSA

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Message from the Editorial Board

Dear readers,

Welcome to our second publication of the SAMSA Newsletter in 2017. The purpose of our newsletter is to provide up-to-date information regarding relevant academic activities conducted by the SAMSA executive committee and SAMSA members. Preparations for the 36th annual SAMSA conference that will be hosted by the Department of Mathematics in the College of Natural and Applied Science at the University of Dar es Salaam from 20th to 23rd November 2017, are underway. Updates about this conference, as well as any other updated information will be communicated via the SAMSA website http://samsa-math.org and the association's Facebook page 'SAMSA'. In addition to the announcement of the 36th SAMSA conference, the current newsletter covers some highlights on progress regarding some items from the last SAMSA conference: research initiation and collaborations; STEM activities. We encourage members of SAMSA to support development of future Newsletters by contributing articles and news items through the said social media platform or write to the editorial team at ringan@biust.ac.bw

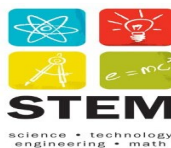### 2017 SAMSA Conference and Masamu Program - Tanzania

The 2017 annual SAMSA conference will be hosted by the Department of Mathematics in the College of Natural and Applied Science at the University of Dar es Salaam from 20th to 23rd November 2017, in Arusha Tanzania. For further information about this conference click http://samsa-math.org.

The 7th annual SAMSA Masamu Advanced Study Institute (MASI) and Research Workshops on Algebra, Analysis, Coding Theory, Graph Theory, Mathematical Modeling of Biological Systems, Mathematics of Finance, and Statistics will be held in Arusha, Tanzania on November 16-26, 2017. Masamu Workshops on STEM Education and High-Performance Computing will also be held during the SAMSA conference. For more information about MASI and the Workshops and how to register, please visit SAMSA http://samsa-math.org or click https://masamu.auburn.edu/pm/masamu2017.

Recent STEM Activities

The Mathematical Sciences cluster at the University of Pretoria, South Africa, hosted a general lecture on curriculum transformation with Dr. Overtoun Jenda, Professor of Mathematics at Auburn University, USA, as guest speaker on 20 March 2017, and the title of the lecture was Towards STEM Curriculum Transformation in African Universities. For more information, please click http://www.up.ac.za/en/mathematics-and-applied-mathematics/news/post_2458918-stem-curriculum-transformation-in-african-universities-a-mathematical-sciences-cluster-lecture

Professional and Academic Achievements

Dr. Suzanne Lenhart, Professor of Mathematics at University of Tennessee and a research faculty mentor for Masamu Advanced Studies Institute (MASI), received the prestigious 2017 Southeastern Conference (SEC) Faculty Achievement Award for her outstanding record in teaching and scholarship. Professor Lenhart is also well known for her passionate advocacy for women and other underrepresented groups in STEM fields. For more information about the award, please click http://tntoday.utk.edu/2017/03/31/lenhart-receives-2017-sec-faculty-achievement-award/?utm_source=newsletter&utm_medium=email&utm_content=Lenhart%20Receives%202017%20SEC%20Faculty%20Achievement%20Award&utm_campaign=tntoday .

Kat Perry, a 2016 SAMSA and MASI participant, has successfully completed her PhD in Mathematics at Auburn University and has accepted a post-doc position at the University of Denver. Her doctoral research focused on two problems, the first involving the existence of many edge-disjoint rainbow spanning trees in edge-colored complete graphs, and the second, creating a balanced sampling plan for a two-dimensional array, excluding contiguous units.

One of the award winners of Best Phd Presenters at the 2016 SAMSA conference, Gidey Hagos, from the University of Pretoria, South Africa, successfully completed his PhD in Mathematics on 21 April 2017 , under the supervision of Dr. Rao Appadu. His Co-supervisor was Prof. Djoko Jules from University of Pretoria. Currently he is a postdoctoral fellow at the Centre of Research for Computational Mechanics (CERECAM), at the University of Cape Town, where he is supervised by Prof. Daya Reddy)

Academic Development Opportunities

Undergraduate research programmes

Undergraduate Research Experiences in the summer are now common in USA and they are proving to be an excellent way of motivating undergraduate students to pursue graduate education in mathematics. The programs are typically for 9-10 weeks in the summer. Students are exposed to some area of mathematics and they work on a research project that they present at the end of the program. You can find more information on the REUs at the following website:
https://www.nsf.gov/crssprgm/reu/list_result.jsp?unitid=5044

PhD teaching assistantship or Fellowship

Most PhD programs in Mathematics in US Universities offer financial support via Teaching Assistantships or Fellowships. This support usually covers tuition and stipend.

Postdoc opportunities

New PhDs benefit from postdoc experiences that prepare them for academic careers in research universities. An example of such a postdoc opportunity is at the following website.
https://www.math.ncsu.edu/alliance/

Travel Grants

The Organizing Committee has launched the "Open Arms program", which offers 550 travel grants for mathematicians, young and senior, from developing countries to attend the Congress; 200 of those grants will be for mathematicians working in Latin-American countries other than Brazil. The program is sponsored by IMPA and the Brazilian Mathematical Society, alongside with a generous offer of 50 travel grants from the International Mathematical Union. Applications will be received until October 15, 2017. The list of grantees will be published by November 30, 2017.
For further information, please check http://www.icm2018.org/portal/en/travel-grants-program.

The International Congress of Mathematicians, ICM 2018, will take place in Rio de Janeiro, Brazil, from 1st to 9th August 2018. For more details please see www.icm2018.org. The ICM 2018 organizing committee has launched the "Open Arms program", which will offer travel grants to mathematicians from developing countries to attend the ICM 2018. This initiative is a key step in ensuring a significant representation from all regions of the world in the most important event in Mathematics. The SAMSA President will be on the panel that will help to evaluate the applications from Africa.

Research Exchange Programs

Active research faculty members are essential to excellent mathematics programs. There are a lot of opportunities in USA for faculty members to engage in research. Some of these opportunities are in workshops/conferences, visits to other Universities, Mathematics Institutes, Sabbatical leaves, Reconnect programs. An example of reconnect conference can be found at the following website. http://dimacs.rutgers.edu/reconnect/

Visiting Scholars

Professor Ash Abebe of Auburn University, USA, is serving as visiting professor at the Botswana International University of Science and Technology (BIUST). He is collaborating with BIUST faculty and graduate students on research projects and grant proposals. Moreover, he is assisting the Department of Mathematics and Statistical Sciences with curriculum reviews to strengthen BIUST's statistics program.

Hannah Correia, a 2014 and 2015 SAMSA and MASI participant, has received US National Science Foundation GROW funding to engage in research collaboration with the Norwegian Institute for Nature Research in Tromsø, Norway, from August 2017 – Feb 2018. She will be conducting research on Arctic animal population dynamics with Prof. Nigel G. Yoccoz, Prof. Audun Stien, and Prof. Torkild Tveraa.