

KUMASI CONFERENCE ENCOURAGES COLLABORATION IN THE SCIENCES

The second University of Michigan conference on Science, Technology, Engineering and Mathematics (STEM) in Africa was held in June 2012 at Kwame Nkrumah University of Science and Technology in Kumasi, Ghana. The conference grew out of long-established collaborations joining U-M scientists with collaborators in Africa's leading

The conference was attended by a large group of University of Michigan scientists, mathematicians, and engineers, and by over one hundred colleagues from African academic institutions. Sessions covered major areas of research, including the biomedical sciences, the mathematical sciences, the environmental sciences, sustainable energy and design, public health, and manufacturing. There were in addition practice-oriented sessions on science education in Africa and on funding schemes that support collaborative scientific research in Africa. A final session considered the role that African scientists working in universities in the global north could play in advancing scientific research in African universities.

Peter Donkor, the Pro-Vice Chancellor of KNUST, delivered the opening keynote. Prof. Donkor—a surgeon by training—reminded the gathering that collaborations between KNUST and the University of Michigan were launched some twenty years ago, when a group of Ghanaian gynaecologists and obstetricians began to organize student and faculty exchanges with U-M colleagues. This early and enduring collaboration has born much fruit, making it possible for KNUST to retain its most accomplished staff and offer a very high level of training for student gynaecologists. Prof. Donkor



Participants at the Kumasi STEM conference.

universities. The conveners aimed to highlight some of the most exciting and relevant avenues in current scientific research, to foster and extend research collaborations with African partners, and to illuminate the broader political and educational contexts for African scientific research.





FROM THE ACTING DIRECTOR

Greetings from Ann Arbor to all Wolverines (or Wolverines in spirit) with an interest in Africa.

As this weighty newsletter demonstrates, 2012 was a busy and productive year for the African Studies Center. Now in our fifth year of life, the ASC plays an increasingly important role in encouraging the research and teaching of the hundreds of U-M scholars and students whose work engages Africa. In this volume you will learn something of the range of activity in which the ASC is involved. There is a report on the quantitative analysis course that our social scientists offer every year at the University of the Cape Coast in Ghana (p. 17). There is a report from a group of students involved in an ASC-sponsored effort to rescue and preserve the National Archives of Southern Sudan (p. 13). There is an article concerning the U-M based Central African Forests Initiative, which involves natural scientists in an ongoing effort to analyze the environmental effects of large-scale logging in central Africa's forests (p. 12). There are several articles in which fellows involved in our U-M African Presidential Scholars program describe their research. And there is a report on a new grant from the US Department of State that will send students of color from the U-M College of Engineering to Kwame Nkrumah University of Science and Technology, where they will spend several weeks working alongside Ghanaian undergraduates in research and learning (p. 16).

It is a tremendous encouragement to be able to report that, in December 2012, U-M President Mary Sue Coleman elected to renew the \$1.8 million programming budget of the African Studies Center. With this new support we will be able to develop and solidify the many projects in which we're already engaged. Our humanities scholars will have funds with which to engage U-M and African students in the shared work of preserving historical records in African

archives. Our social scientists will have resources with which to develop and expand the training programs they offer to African colleagues. Our engineers, mathematicians and chemists can develop plans to engage the "African Scientific Diaspora" in the work of reinforcing science research in African universities. And U-M undergraduates will have new opportunities to work directly with our visiting African scholars through a collaboration between the ASC and the Undergraduate Research Opportunity Program. We are tremendously grateful to President Coleman for her support for our work. We also thank the South African Initiatives Office and the Office of the Vice Provost, which have likewise renewed their commitments to support our work.

In August 2012 we welcomed our new cohort of University of Michigan African Presidential Scholars to Ann Arbor. As in previous years the scholars are drawn from our university partners in Ghana, Liberia, South Africa and Uganda. Their work covers a tremendously wide range of subjects, from Ugandan drama to medical waste in Ghana, from opera in South Africa to breast cancer. Their biographies are given on pp. 5 and 7 in this newsletter. The visiting scholars had occasion to present their work to the campus community at two research forums organized by the ASC, the first held in December 2012, the second in February 2013. It is a remarkable fact that, for the first time with the 2012-13 cohort, the balance between male and female scholars lies decisively in favor of the women.

We welcome the arrival of new faculty to the U-M African Studies community. Among them is **Gary Harper**, appointed in the Department of Health Behavior of the School of Public Health, whose research concerns culturally and developmentally appropriate HIV prevention programs for youth in the United States and in Kenya; and **Geoff Emberling**, appointed as Research Scientist in the Kelsey Museum of Archaeology. As I write Dr. Emberling is in Sudan, leading the University of Michigan Nubia Expedition in an excavation of a royal city of the ancient kingdom of Kush. His blog is very much worth reading; it can be found at http://www.lsa.umich.edu/kelsey/fieldwork/currentfieldwork/elkurusudan/2013sudanblog_ci.

This space is ordinarily occupied by my colleague Kelly Askew, the Director of African Studies. Kelly is however on sabbatical this academic year; in her absence I have been dragooned into action as the ASC's acting director. Over the course of her absence it has become clear to me just how much work Kelly puts into the African Studies Center, for which we all owe her a tremendous debt of gratitude. I must also thank the dedicated staff of the Center, especially ASC Administrator Devon Keen, Thaya Rowe, Sandie Schulze, Shannon Nitchie, and Anneeth Kaur Hundle.

Please join us at our upcoming events and avail yourself of the many Africa-related resources and opportunities under way in 2013. Here are some things to watch for.

* The **STEM-Africa** committee plans to convene a small-scale workshop concerning scientific collaborations with Africa in late April 2013. The workshop will feature Dr. John Boright, Executive Director of the Office of Global Affairs at the United States National Academies of Science, and Dr. Jean Pierre Ezin, African Union Commissioner for Human Resources, Science and Technology.

* The **African Social Research Initiative** committee plans to hold its third international conference in Ann Arbor in October 2013. The conference will draw together social scientists working in Africa with scholars working in urban Detroit, opening up fruitful possibilities for comparison.

* The **African Heritage Initiative** will convene its third international conference in Ann Arbor in January 2014. It will bring scholars of museum studies, history, anthropology, ethnomusicology and public policy together with librarians and curators to discuss the ways in which African history and art are made, authenticated and marketed.

Further details about these and other upcoming events can be found on our website, <http://www.ii.umich.edu/asc/>. We thank you for your continued support of the African Studies Center.

Derek R. Peterson, February 2013

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noted U-M's growing collaborations with KNUST: in engineering, for example, the university will soon play host to an annual inflow of U-M undergraduates, who will pursue research alongside Ghanaian students (*see p.18*). In this and in other areas, Prof. Donkor said, KNUST is working with U-M to address the pressing shortage of qualified staff for African universities in the scientific and medical fields.

The first session, on biomedical science, was chaired by the U-M environmental scientist Prof. Jerome Nriagu. It featured a series of three papers from scholars based at universities in South Africa and Cameroon. The discussion revolved around the strengths and limits of the existing infrastructure for biomedical research in Africa. Nceba Gqaleni, of the University of KwaZulu-Natal in South Africa, outlined the role that major research networks—like the “African Drugs and Diagnostics

Initiative”—play in organizing, funding and authenticating African scholars' research in biomedicine. He highlighted the need for a similar continental network to sustain research in “traditional medicine,” a field, he said, in which national governments carefully guard research findings in order to secure trademark rights over new pharmaceutical products.

The Mathematical Sciences session, chaired by U-M's Prof. Daniel Burns, featured presentations from scholars based in Botswana, Cameroon, Ghana, and Kenya. The first paper—from Prof. Edward Lungu of the University of Botswana—sketched the history of mathematical training in African universities, and highlighted the role that regional centers of expertise—such

as the African Institute of Mathematical Sciences in South Africa—have played in training African mathematicians up to the highest standards in their field. Jacques Tagoudjeu, of the University of Yaoundé, similarly focused on deficits in the infrastructure for mathematical training. In his field—which is computational mathematics—there is a shortfall both in physical infrastructure (i.e. keyboards and hard drives) and in human expertise. In the past twenty years, his university—the leading research institution in Cameroon—has produced less than ten doctorates

principle that “good science anywhere is good for science everywhere.” She highlighted the role that African scientists working in American universities can play in attracting funding for collaborative research projects involving African universities as partners. Another presentation was offered by Prof. E.T. Agbenyega of KNUST, who described the itinerary that African scientists must follow in securing funding for their research. Ghanaian researchers have to be extraordinarily entrepreneurial about securing research funds, scouring newspaper advertisements, cultivating relationships with powerful and wealthy patrons, and sometimes dipping into personal funds to support lab work.

The second day of the conference opened with a panel on Environmental Science, chaired by U-M architect Dr. Jim Chaffers. One of the two papers came from Dr. Jesse Njoka of the University of Nairobi, a long-term collaborator with U-M scholars in the natural

sciences. He stressed the trans-national character of the environmental problems confronting Africa, for water supplies, ecosystems, and pollutants have no regard for political boundaries. There is a need for a new approach to environmental management, argued Dr. Njoka, one that does not regard environmentalism as a utopian project but as a pragmatic element in economic development strategies. The following panel—which concerned “Sustainable Energy and Design”—was likewise about the interdisciplinary demands of environmental research in Africa. One of the presentations—from Dr. Moses Musaaazi of Makerere University in Uganda, another long-term collaborator with U-M scientists—described how he and his collaborators identify, design, and test useful products for Africans to



Drs. Rebecca Hardin, Anne Peterson, and Christine Feak at the KNUST radio station, where they were interviewed about science education in Africa. *Courtesy of Rebecca Hardin.*

in computational mathematics. He highlighted the need for a properly-equipped, well-staffed regional center where Cameroonian students could learn the field from accomplished scholars.

The late afternoon session on the opening day of the conference was dedicated to a practical discussion about the infrastructure for funding scientific research in Africa. The panel—which was chaired by Prof. Kwasi Obiri-Danso of KNUST—was launched by Dr. Anne Peterson of U-M's Center for Human Growth and Development. She stressed the fact that funding agencies such as the National Science Foundation are increasingly promoting research outside the national borders of the United States, on the



use. His particular example concerned “MakaPads,” which are women’s sanitary pads made from the papyrus plant. The pads can be made for a very low price, allowing impoverished schoolgirls to benefit from them.

The afternoon panel on the conference’s second day concerned “Public Health.” It featured, among others, U-M’s Dr. Jerome Nriagu, who highlighted the environmental health concerns that arise with the growing urban development in many parts of Africa. Dr. Nriagu maintained that environmental health — not simply disease transmission — should concern African officials, for the environmental threats pose an increasing threat to the well-being of urban-dwelling Africans.

The third day’s work commenced with a panel on “Manufacturing and Innovation,” co-chaired by Dr. George Obeng of KNUST and U-M engineer (and STEM-Africa co-coordinator) Prof. Elijah Kannatey-Asibu. The first paper, from Anthony Okafor of the Missouri University of Science and Technology, described the use of a new technology — “Virtual Computer Numerical Control” — in modeling the manufacturing process. Using this web-based technology, engineers can establish an optimal manufacturing process, speeding up the work of design. A further paper, from Prof. Elijah Kannatey-Asibu, discussed the potential for a regional manufacturing institute, where students and scholars could together develop techniques that would benefit African industries. Such an institute, he suggested, might also act as an incubator for African-owned technology businesses.

The final two panels in the conference concerned the academic and political environment in which scientific knowledge is generated. The first panel — about “STEM Education in Africa” — highlighted the challenges and opportunities for the teaching of science. One paper — from Yark Kolwa of the University of Liberia — discussed the “Excellence in Higher Education for

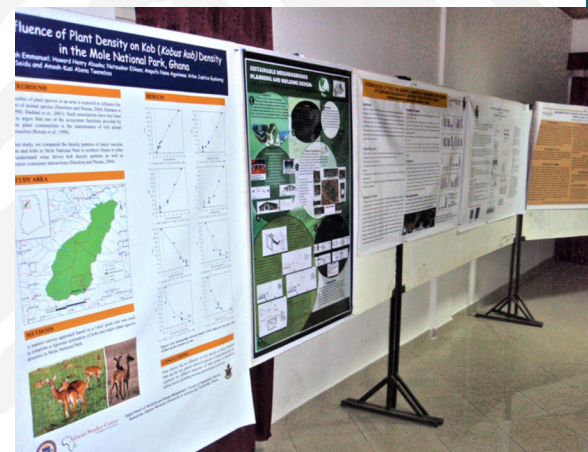
Liberian Development” program. The EHELD program is a collaboration — funded by the US Agency for International Development — between U-M and Rutgers University; the aim is to rebuild the University of Liberia’s departments of Engineering and Agriculture. Mr. Kolwa described the genesis of the project and documented its earliest fruits. A further paper on the panel came from U-M’s Joe Trumpey, who described the “eco-explorers” course at U-M. The course takes natural science students to field sites around the world — including, in 2013, Madagascar and Tanzania — where they undertake an analysis of local ecology, social order, and environment.

The final panel in the conference, chaired by Dr. Nkem Khumbah of the U-M Comprehensive Studies Program, was about the role that African scientists working outside Africa could play in the growth of scientific research in Africa. The lead paper, from Joseph Massaquoi of the UNESCO Regional Bureau for Science in Africa, highlighted the difficult conditions in which many African science departments operate, and called for increased collaborative research between African scholars working in and outside the continent. Dr. Tessema Guebre, of the Ethiopian Physics Society of North America, discussed the work that his society had done to open up opportunities for young students in Ethiopian universities. The ensuing discussion highlighted the need for a coordinating structure that could link African scholars with potential mentors and collaborators in the global North.

What emerged from the Kumasi conference was a real sense of opportunity and a plan for forward action. In virtually every panel African scholars called for more substantial, more meaningful engagement between their home universities and overseas collaborators at Michigan and elsewhere. Participants were particularly struck by the opportunities occasioned by the new availability of funding from international scientific agencies, and by the reservoir

of human capital represented by African scientists working in American and European universities. To meet these opportunities the U-M STEM-Africa plans to develop a database where subject specialists interested in collaborations with African colleagues can register their interests. And there are plans afoot for a large-scale consultation, to be held within the coming year, that will develop a mechanism by which to engage the “African Scientific Diaspora” in the work of scientific teaching and research in Africa.

The U-M African Studies Center wishes to thank the staff and administration of Kwame Nkrumah University of Science and Technology for their generous support for the conference. We are particularly grateful to Dr. Kwasi Obiri-Danso, Dean of the International Programmes Office at KNUST, who was the local host. We are equally grateful to Dr. Nkem Khumbah, who organized the conference program, and to Mr. Kofi Gyan of the U-M Medical School, who coordinated the logistics of the occasion. ✨



The poster session at the Kumasi STEM conference. Courtesy of Rebecca Hardin.

MEET OUR VISITING FELLOWS

The U-M Presidential Scholars (UMAPS) program is a key initiative of the African Studies Center. UMAPS contributes to capacity building in the African academy by providing opportunities for early-career faculty based in Ghana, South Africa, Liberia or Uganda to spend up to six months in Ann Arbor. The program simultaneously promotes greater internationalization of U-M by bringing talented Africa-based faculty to campus, thus enriching U-M's seminars, classrooms, and laboratories. The program is generously supported by the Office of the President, the Office of the Vice Provost, and the South African Initiatives Office.

During their residencies at U-M, UMAPS scholars are paired with a faculty member and have full access to the University's resources to work on research proposals, academic degrees, and grant proposals. Scholars also participate in a practicum organized by the ASC and present their work at seminars and conferences in and around Ann Arbor.

The scholars in the 2012-2013 cohort are:

FRANCIS AITPILLAH

Francis Aitpillah is a fellow of the West African College of Surgeons. He is a general surgeon with a full-time commitment to research, teaching and clinical practice in general surgery. His primary research has focused on ethnicity-related variation in breast biology. His current research project is entitled: "Chemo-Resistance of Breast Cancer Stem Cells." The objective of this study is to test the hypothesis that breast cancer stem cells are relatively resistant to chemotherapy compared to the differentiated cells which form the bulk of the tumor, thus contributing to tumor resistance to chemotherapy and relapse following therapy. Francis is working with Lisa Newman, Professor of Surgery and Director, University of Michigan Breast Care Center.

VIVIAN ETSIAPA ARHIN-SAM

Vivian Etsiapa Arhin-Sam is an Assistant Lecturer in the Department of Pharmaceutics at Kwame Nkrumah University of Science and Technology (KNUST). She received her master's degree in Pharmaceutical Microbiology from KNUST in 2009. Her research interests include environmental microbiology and quality assurance of natural products and antibiotic resistance. Vivian will spend six months at U-M expanding her research on the mechanism of resistance and transfer of resistant genes of *E. coli* and *S. aureus* isolated from humans and poultry. She will also write a review paper on susceptibility patterns and mecha-



The 2012-13 UMAPS cohort. Standing, from left: Francis Bwambale; Eve Nabulya; Justin Munyakazi; Branda Mhlambi; Riashna Sithaldeen; Emilia Udofia; Mercy Badu; and visiting Fulbright scholar Roland Kouassi (University of Cocody-Abidjan). Kneeling: Karfalah Johnson. Not pictured: Francis Aitpillah; Vivian Arhin-Sam; and Edna Johnny.

nisms of antibiotic resistance of *Escherichia coli*, *Pseudomonas aeruginosa*, *Salmonella typhi*, and *Staphylococcus aureus* isolates from poultry litter and farm hands in the Ashanti and Greater Accra regions of Ghana. Vivian is working with Betsy Foxman, Department of Epidemiology.

MERCY BADU

Mercy Badu is a Lecturer in the Department of Chemistry at Kwame Nkrumah University of Science and Technology (KNUST). She received her master's degree in Organic Chemistry, Bioanalytical and Biomaterials from KNUST in 2006. Her research interests include characterization and quantification of fatty acids from selected plant oils. She will use her time at U-M to write a review paper on the characterization of fatty acids using spectroscopic and chromatographic methods and rubber biosynthetic pathways. Mercy is working with Philip Andrews, Department of Biochemistry and Kristina Hakansson, Department of Chemistry.

FRANCIS MULEKYA BWAMBALE

Francis Bwambale is a lecturer at Makerere University School of Public Health, Regional Centre for Quality of Health Care located in Kampala, Uganda. He also provides leadership in monitoring and evaluation to regional capacity building programs in quality of care in Africa at the School's Regional Centre for Quality of Care. Francis received his master's degree in Clinical Epidemiology and Biostatistics from Makerere in 2005. During his six month UMAPS fellowship,

he will be working with mentors Jody Lori and Cheryl Moyer to design a collaborative research project on health care provider abuse and disrespect in childbirth in rural facilities in Uganda.

EDNA G. JOHNNY

Edna G. Johnny is a Lecturer in the Department of Economics at University of Liberia in Monrovia. She received her master's degree in Economic Policy Management from Makerere in 2009. Her research interests involve developing village level vulnerability indexes for Liberia's different subpopulations and identifying indicators that cause vulnerability to poverty. Edna will spend four months at U-M enhancing her research skills. She will also write a review paper on poverty along gender and generational lines in Liberia. She is working with Rachel Snow, School of Public Health.

D. KARFALAH JOHNSON

D. Karfalah Johnson is an Assistant Professor at the University of Liberia, where he received his master's degree in Regional Planning in 1988. D. Karfalah's research interests include manpower development and assessing, analyzing, and using mathematical models in the area of seismology. D. Karfalah plans to spend his six-month stay at U-M finalizing his Ph.D. proposal on mathematical models of seismic data analysis. D. Karfalah is working with Professor Divakar Viswanath, Department of Mathematics.

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THE ANTECEDENTS OF BLACK OPERA IN SOUTH AFRICA

INNOCENTIA JABULISILE MHLAMBI

Post-1994 black opera is an intricate mix of European classical music with indigenous and contemporary black performance cultures. This syncretism is both old and new. On one hand, it is modeled after a European fashion, with mounted theatrical singing displays. On the other hand, opera scores have been standard repertory for a long time in black choral music. These independent classical scores were layered onto an earlier vibrant performative tradition; *ingoma*. *Ingoma* is an antiquated folk performative form practiced across many societies in Africa. It comprises drumming, singing, song, dance, ritual and enactment. The fusion of *ingoma* with European performative traditions has over time led to a strong black choral tradition in South Africa. By the late 1980s, black choralism and its activities had laid fertile ground for opera. The collaboration between black choral and white art music composers encouraged experimentation with orchestra-accompanied massed choirs which had scores for soloists. The post-1994 upsurge in black opera can be traced to this particular time of black choralism. Other black township performative cultures conspicuous in post-1994 black opera include township theatre, black urban couture culture, musicals and choreography.

This emergent black opera is playing a socially cohesive role with regard to issues of national identity in South Africa. It has inherited marketing networks among black audiences that were established by earlier performative cultures. In addition to drawing from these African audiences, opera also brought into the scene traditional opera audiences, constituted mainly by local and international white patrons. Some of these financially established patrons, together with local and international business, have been covering the operational costs of mounting opera productions since 1994.

Post-1994 South African operatic activities are managed by three mainstream companies and a few independent ones. They are: the Black Tie Ensemble VO1SS (BTE VO1SS), Opera Africa and the Cape Town Opera Company. Independent companies are Isango Ensemble, Vundowil Company and the Young Blood Company. These companies follow closely guidelines by the Department of Arts and Culture's (DAC) policies on post-apartheid Culture Industries in South Africa. These policies require that the post-1994

Culture Industries have broader business agendas, with interlinks with local and international corporate industries and the entire South African commercial market. The commercial emphasis fits into the government's broader aims of tangible transformation. Therefore the arts, including opera, are expected to transform artists into strong local and international marketable brands that are national assets for tourism and export markets. The activities of all these opera production houses conform to these policy requirements. Currently the South Africa's operatic scene is a hive of activity

international exposure lies in the manifestos of the different opera companies. Some like the Opera Africa and Isango Ensemble have been conceived with a travelling itinerary in mind, while others are focusing on growing local talent, new networks of patrons and extending opera to new audiences. Opera is yet to create a massive non-middle class loyal audience with adequate disposable income to spend on entertainment. In spite of these challenges, which are perhaps the case with this tradition elsewhere, it is surprisingly doing well with its programme for both choristers' and soloists' vocal training.



The author with composer Prof. Mzilikazi James Khumalo, Johannesburg, April 2011. Courtesy of Naomi Andre.

with carefully laid out networks of local and international opera programmes. These opera seasons see local and international prima donnas shuttling between South Africa and traditional European and American opera home destinations to perform.

Although there is a growing demand for black virtuosi internationally, the mounting of locally-composed operas in these operatic stages is not common, even when they are premiered to a warm reception locally. Currently, it is Prof. Mzilikazi James Khumalo's *Princess Magogo kaDinizulu* produced by Opera Africa and Isango Ensembles' productions that have toured extensively internationally. Perhaps the unevenness with

The Cape Town Opera Company has produced and mounted operas that included black community choirs since 1992. Its programme for training opera singers began in 1994. This opera company mounts standard western repertoires. It has also mounted productions which were adapted to reflect African cultural values and idioms, its latest being Gershwin's *Porgy and Bess*'. It also leads in the composition of a number of local productions, mainly by Michael Williams and Roelof Temmingh. Its latest feat is the Scottish-derived opera project celebrating the centenary of the South African College of Music. The essence of the project lies in its engagement with the post-apartheid narrative.

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The Pretoria-based Black Tie Ensemble Vo1SS also boasts a varied opera-focused programme. Its incubator scheme is aimed at creating opportunities for non-trained talented artists to study, perform and gain stage experience. The BET VO1SS is yet to mount a locally composed opera. Its activities are closely directed by a mission to preserve and extend the operatic tradition. Perhaps it is because of this vision that the company concerns itself narrowly with classical repertoires as well as finding new supporters and audiences for the performances. The highlight of the BTE VO1SS's incubator scheme is the spectacular rise of one of its trainees, a youth, Mthetho Maphoyi, who debuted to an admiring NYC audience in 2011. The youngster shot to fame after a teen life clouded by township gangsterism.

The Durban-based Opera Africa is aimed at repositioning opera within the changing performing arts scene in South Africa. It is currently the only accredited touring opera company to have successfully mounted a vast repertoire of classics and two locally composed black operas. Opera Africa also boasts of a Development, Training and Mentoring Programme, which has a section dedicated to the training of soloists and another for the choristers. Four internationally travelled soloists—Kelebogile Boikanyo, Zandile Gwebityala, Thembisile Thwala and Thando Zwane—are the latest testimony to the success of its programme. Opera Africa is also known for training community choirs from townships around Durban. Some of these choirs have been featured in their remounted celebrated classics.

Opera's ability to intervene in the question of marginalised youths, and its intermeshing with existing performative traditions, centralise it in black contemporary performance culture. Its magnetic pull of natural talent and the transformative opportunities it offers to the black youths will sustain it for a foreseeable future.

Dr. Brenda Mhlambi, a lecturer in the University of the Witwatersrand, is one of the Visiting Fellows present in Ann Arbor for the 2012-2013 academic year (see p. 7).



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INNOCENTIA JABULISILE MHLAMBI

SAIO Moody Fellow

Innocentia Jabulisile Mhlambi is a Senior Lecturer at the University of the Witwatersrand in South Africa. She received her Ph.D. in IsiZulu Literature from Wits in 2008. Her research interests include popular culture, African-language literature and Black-themed African films. She will spend six months researching and writing articles on two operas, Mzilikazi Khumalo's Princess Magogo kaDinizulu and Vundla, Ndodana-Breen and Willensky's Winnie the Opera. She will also be finalizing an article on the use of izithakazelo (honorific names) and the internet in post-apartheid South Africa. Finally, she will write a review paper on black opera in South Africa. She is working with Prof. Naomi Andre of the Residential College and Women's Studies.

JUSTIN B. MUNYAKAZI

SAIO Moody Fellow

Justin B. Munyakazi is a Lecturer at the University of the Western Cape (UWC) in South Africa. He received his Ph.D. from UWC in 2009. His interests include numerical methods for differential equations, singular perturbation problems, applications of mathematics in biology, and computational mathematics. Justin will spend four months at U-M developing novel numerical methods to solve singularly perturbed convection-diffusion problems and writing a review paper on the same topic. Also, he will learn how mathematics is taught to first-year students in order to adapt and bring innovation to his teaching strategies. Justin is working with Dr. Robert Krasny, Department of Mathematics.

EVE NABULYA

SAIO Moody Fellow

Eve Nabulya is an Assistant Lecturer in the Department of Literature at Makerere University in Uganda. She received her master's degree in Literature from Makerere in 2008. Her research interests involve the relationship between the natural environment and human behavior in drama and performance. Eve will spend six months at U-M reviewing literature for her PhD thesis and expanding her research in ecocriticism and dramatic communication theory. She is working with Dr. Jennifer Wenzel, Department of English.

RIASHNA SITHALDEEN

SAIO Moody Fellow

Riashna Sithaldeen is a Lecturer in the Department of Archaeology at the University of Cape Town, South Africa. She received her Ph.D. in Archaeology in 2011. Her research interests include mammal phylogeography, baboon population histories, phylogenetics, palaeoenvironments, and climatically-driven habitat change. Riashna will spend four months in Michigan preparing manuscripts based on her Ph.D. research which investigated the role of climate and landscape change in shaping diversity in southern African chacma baboon. She will also use this time to develop a research program that will begin in 2013. Finally, she will work on a review paper on modeling mammal response to climate and landscape change using phylogenetic and phylogeographic techniques. Riashna is working with Dr. Lacey Knowles, Ecology and Evolutionary Biology.

EMILIA UDOFIA

Emilia Asuquo Udofia is a Lecturer in the Department of Community Health at the University of Ghana Medical School, Korle Bu in Ghana. She graduated from the University of Nigeria, Nsukka with a degree in Medicine and Surgery in 1994. Emilia is now a Fellow of the Faculty of Public Health in the National Postgraduate Medical College of Nigeria. Her professional experience includes HIV/AIDS care, treatment and support. Her research interests involve maternity care services and environmental health. During her UMAPS fellowship she plans to enhance her research skills and develop her Ph.D. project on the quantification, characterization, composition and management of medical waste in district hospitals and communities in Southern Ghana. She will also write a review paper on medical waste management in Africa. Emilia is working with Professor Jerome Nriagu, School of Public Health Epidemiology.

THE STATE OF MATHEMATICS IN AFRICA: AN OVERVIEW

JUSTIN MUNYAKAZI

It could be argued that mathematics began in the form of counting with the Kalahari !Kung people. In their language, they expressed ten as “two and two and two and two and two”. The Lebombo cave counting stick in South Africa (35000 BC), the Ishango tally stick in East Africa (20000 BC), and counting by clay tokens in Sudan and Egypt (7000 BC) are other evidences of the early history of mathematics.

Despite this lead, Africa has lagged behind in mathematics for many centuries. In most African countries, the mathematics actors (teachers, professors and researchers) cannot meet the demand for mathematicians. Moreover, the lack of collaboration and partnerships among the few existing mathematicians, the inadequacy of infrastructure in institutions of higher learning, the discouragement of talented students to pursue a career in mathematics, the scarcity of computing facilities and resourceful libraries are, among others, factors that block the development of mathematics. It is widely believed that academic engagement with mathematics leads to teaching jobs, which, in turn, are regarded as unrewarding.

South Africa, being the leading economy on the continent, could serve as a platform to trigger the renaissance of mathematics. It is well known that many of the South African higher education institutions lead on the African continent in terms of research, especially in mathematics. However, the Review of Mathematical Sciences Research at South African Higher Education Institutions, organized by the Department of Science and Technology in 2008, revealed that “nationally, the cohort of active researchers is mainly in the 55+ age-group.” It also pointed out that the expertise of these researchers is spread over all the mathematical sciences and produces research outputs of international standing. However, they constitute a small base of researchers and are not fairly distributed among the institutions. The disparity among these institutions is regarded as a result of the recent history of the country. Apartheid policies bipolarized the whole educational system into a small cluster of elitist universities and a large number of institutions for the education of masses. The latter are less equipped and recruit students from disadvantaged backgrounds.

At the University of the Western Cape (UWC), where I am employed, there is a steady rise in the number of enrolled students which, unfortunately, is followed by little, if any, increase in adequate resources. The Department of Mathematics and Applied Mathematics at UWC, with its dozen of academic and support staff, is called to put its expertise at the disposal of the entire campus community. This is a huge task, not only because of the under-preparedness of students, but also due to large numbers of students per class. It is not unusual for a UWC lecturer in mathematics to have 200 to 250 students in a classroom. Such conditions obviously hamper the teaching and learning mechanisms of mathematics. Fortunately, the department makes efforts to support learning by providing platforms for tutorial sessions and extra-classes when needed. Furthermore, the university's directorate for teaching and learning organizes different workshops to enhance pedagogical skills among staff.

Despite the heavy teaching loads, the department strives to produce good research outputs. We have a wide range of research specializations which include algebra, discrete mathematics, topology, numerical analysis, stochastic calculus and financial modeling, biomathematics and mathematics education. Members of the department understand that the productivity of research would increase if the barriers explained above did not exist. It is understood that the productivity of the research within the department would have been different if barriers explained earlier did not exist. In order to raise the level of mathematics in Africa, strong foundations should be built within primary and secondary schools to train and support qualified teachers. Capacity development strategies should be established to develop postgraduate students and young researchers. An interdisciplinary approach to research also needs to be encouraged. Moreover, the youth should be educated on the place of mathematics in science, innovation and technology.

There exist a number of initiatives which seek to make a contribution towards achieving these goals. The African Institute for Mathematical Sciences (AIMS) with its different centres, and the Science, Technology, Engineering and Mathematics



Justin Munyakazi, on the right, marking examinations with a colleague. *Courtesy of Justin Munyakazi.*

(STEM-Africa) of the African Studies Center at the University of Michigan are examples of such initiatives.

As a former teacher in several high schools in the African Great Lakes region and lecturer in the Department of Mathematics at UWC, I am acquainted with the challenges described above. AIMS awoke the research interests and aptitudes that were dormant in me during my previous training (I am one of the 412 AIMS graduates and was part of the first cohort of 30 students at the launch of the institute nine years ago). The access to computing facilities and the outstanding professors motivated my decision of change of direction. I completed my graduate training at UWC in Numerical Analysis.

My participation in the University of Michigan African Presidential Scholars (UMAPS) program has been beneficial in many respects. Firstly I am a privileged witness of classroom situations in some first year mathematics modules. This is an opportunity to grasp the processes involved in the teaching and learning mechanisms of mathematics in one of the best universities worldwide. Understanding the level of interaction between students and lecturers in mathematics will help reshape my strategies and adapt them to South Africa's context. Secondly, I am able to discuss common research interests with academic staff of the Department of Mathematics in order to establish a network for future research collaboration. In the meantime, I am working on a small research project on numerical methods for singularly perturbed problems. With this exposure, I am hopeful to attract more postgraduate students.

Dr. Justin Munyakazi is one of the UM African Presidential Scholars present in Ann Arbor for the 2012-2013 academic year (see p. 7).



MEDICAL WASTE IN AFRICA: A FORGOTTEN PUBLIC HEALTH HAZARD

EMILIA ASUQUO UDOFIA

I first came to think about the problem of medical waste while listening to students from the Department of Community Health at the University of Ghana's Medical School report on their research findings. I was particularly struck by the problem of medical waste found outside health facilities. Since most hospitals have incinerators that are functional, where was this waste coming from? This quickly gave rise to another question: what happens to the part of medical waste discarded at home?

The World Health Organization defines medical waste as any solid or liquid waste that is generated from treatment of human beings in a hospital or clinic, from clinical diagnosis, pathological testing and medical research. It includes but is not limited to: blood and body fluids, soiled or blood soaked bandages, culture dishes and other glassware, non-sharps, surgically removed body tissues, chemicals, pharmaceuticals, medical devices, culture stocks and swabs used to inoculate cultures and radioactive materials. Medical waste represents a comparably small share of the total municipal waste in most developing countries, yet it has gained increasing attention because of its potential risks to public health and the environment.

In Ghana and other parts of Africa, dumpsites are places of human habitation and labor. Scavengers often sort waste, searching for saleable devices like syringes, saline bags, plastic materials, cans, and metals. These are collected, washed, repacked and resold to the unsuspecting public. Intravenous drug users reuse needles and syringes found in open refuse dumps or bins containing medical waste. Stray animals, rodents and disease vectors have access to such dumps and can transmit disease causing organisms from these sites. Exposure to chemicals found in medical wastes may cause irritation of the eyes and nose, dizziness, difficulty in concentration and

breathing. Children also play around refuse dumps and may be at risk of needle pricks, cuts, bruises or other injury due to sharp objects encountered at the waste dumps. Evidence exists that Hepatitis B, C and HIV survive outside the body for several weeks. Studies have shown that an infective dose of Hepatitis B or C can survive for up to a week in a blood droplet within a hypodermic needle and HIV can survive for 3-7 days at ambient temperature. Critics have argued that the risk of infection from needle pricks is small (3 in 1000). Even if the risk is seemingly small, an established

infection with HIV requires life-long care and has no cure at this time. Therefore a single infection represents a lifetime disease burden and in most cases premature mortality.

Advanced countries such as USA, Canada and Sweden have stringent regulations regarding the handling and safe disposal of medical waste to minimize risks to human health and environment. In Africa, most countries have developed a regulatory framework often entrenched within a matrix of environmental health laws. These regulations provide guidance for health facilities and health care providers. However, the regulations often exclude residential premises from the requirements. Medical wastes discarded in homes are often left to the discretion of the householder and mostly ends up in household refuse bins. Children in the household who have access to refuse bins where medications are discarded may be at risk of accidental poisoning. Needle pricks are also a potential risk when hypodermic needles are not discarded in tamper proof and puncture proof sharp containers. Municipal workers who collect household refuse may also be at risk of injuries. In Ghana, unused, left over and expired drugs in households are often discarded in household refuse bins and end up in municipal landfills or flushed down toilets where they join the general sewerage system. Reports exist of medical

wastes found on beaches and in non-hospital environment.

The Ministry of Health in Ghana has made considerable strides training health professionals and promoting public-private collaboration in medical waste management in line with policy. However, the trickles of medical wastes appearing signal the need to reassess our strategies and health goals. Appropriate and effective management of medical



On-site incinerator at a public hospital in Ghana: problem or solution for medical waste?
Courtesy of Emilia Udofoia.

waste is essential from source to final disposal. It should include residential premises and any other sources not previously considered in order to promote a sustainable environment as a legacy to our future.

Emilia Asuquo Udofoia is a Lecturer and Community Health Physician at the Department of Community Health, University of Ghana Medical School. She is one of the 2012-2013 cohort of University of Michigan African Presidential Scholars (see p. 7). ✨



A CONVERSATION WITH DR. BILAL BUTT

SCHOOL OF NATURAL RESOURCES AND ENVIRONMENT



Bilal Butt with a volunteer tourist conducting citizen science in Kenya's Maasai Mara National Reserve. *Courtesy of Bilal Butt.*

Can you tell me about the two projects that you worked on during summer 2012? How did these projects come into being, and how has your research evolved?

I have a long history of working in East Africa. I was also born and brought up in Kenya. I used to spend my entire childhood in national parks. When it came time to go to graduate school, I started considering what to do. I liked being in the field and I liked being in the national parks. At that time I was probably very apolitical and I might have gone down the route of arguing that parks need to be protected no matter what. But to get to the park, you travel through these incredible landscapes. I didn't see any significant difference between the landscapes that people occupied and the protected areas.

A few friends had a campsite in the Mara, I would go there, and I would stay there. It would be so interesting to listen to these stories about the park. This time the park was not an apolitical thing, but something that had a history, a politics to it, an institution that was dynamic, something that was growing, that was being contested.

I wanted to do research there because I felt there was a story that needed to be told. I saw

discrepancies between the dominant narrative that was out there and what I was observing on the ground. At that time I was interested in GIS geo-spatial technologies, and cows in the parks. Tourists would complain about the cows grazing outside of the parks. But when I got to graduate school I read about the social construction of nature, that there is nothing essential or fixed about our interaction with wildlife. Nonetheless, ecologists often promoted the idea that cows were responsible for environmental degradation. That seemed to fit very nicely with these dominant but apolitical narratives surrounding national parks.

This was the idea that national parks must be protected at all costs?

Yes. And I said, well that's fine...but whose cows? Where are they coming from? Where are they going? How frequently are they going into protected areas? What was the frequency of these incursions into protected areas?

My research involved strapping GPS units to the cows in order to understand a cow's mobility. It's like putting GIS on a person, it reveals some incredibly interesting patterns. Power relations become apparent in that spatial representation, resource utilization areas,

etc. So my Masters thesis became a study of the politics and ecology of cattle movement in and around protected areas. It incorporated some really interesting environmental history and political economic history. I found that cattle movement into protected areas was neither new nor resulting in environmental degradation. This propelled me further into the Marxian political economy of cattle herding. I also started to understand things like environmental variability. The Mara is essentially a semi-arid landscape. I became interested in non-equilibrium ecology which suggests that environmental changes are less a function of what is grazing on them than stochastic events like droughts and floods that you have very little control of... my dissertation involved more of this kind of empirical and theoretical work.

The research this summer continues to unpack the dominant narrative that livestock and wildlife are incompatible. The idea was to demonstrate that the notion of competition itself needed more clarity. So how could we empirically try to demonstrate this while at the same time recognizing the labor and production practices of Masai herders and the way that those are a function of changes in politics, economics? That's how it started off. Beginning with these very dominant and apolitical narratives, or narratives that did not take into consideration the reality of African pastoral systems.

The project this summer began to provide empirical evidence for the nature of livestock and wildlife competition. And that was very hard to do... what do you do if rains continue, what do you do if livestock is forcefully moved out of the area, what do you do if the roads get flooded and you can't access those areas anymore? And so it still is a really tough sort of set of conditions to work in and work around.

What I find interesting about your research on cattle-wildlife interaction is that it reveals much about social relations at large. How do you fit your research within the broader context of land politics among pastoral groups in Kenya and East Africa in general?

It's a great question. In the past 5 to 7 years a lot of land outside of protected areas became privatized. This is a very South African system. Land that was communally owned gets sub-

divided because of the failures of community management systems. And what you see is that common property regimes fail because people do not embrace common property theory. So now, for example, each Maasai has access to 150 acres of land. Private tour operators are coming in and they are leasing these 150 acres from Maasai and essentially forming a private community in exchange for a set amount of money. And Maasai cannot graze their cows in the conservancies because of the way we have socially constructed nature, that nature is something that is that without cattle, nature must be presented as pristine. But the cows have no option but to graze inside the park. So Maasai have to resort to leasing their land, but in the process of doing this, they get stuck between a rock and a hard place.

When it comes to these broader pictures, I think one of the big things is the story about the continuing dispossession of people through the establishment of private national parks. There was this old story about how people were evicted in the 1950s, 60s, and 70s to form national parks. But one of the things I believe is interesting is that dispossession is continuing in a slightly different form.

Could you tell me about your cell phone technology project? It seems to be different from, but related to, the cattle project. How did you conceive this project?

In the park these days you have more female herders and that is very interesting. When we were in the field, we met one of these female herders. When we started talking to her, her cell phone rang. Someone on the phone was asking her about where the location of foraging water was. So this was interesting because it got me thinking, what role does technology play on the ground among people? Rather than the other narrative, which is that international organizations, development groups, etc., suggest that technology is beneficial. This narrative was always coming from some outside entity, some outside body.

And so one of the things we wanted to test out was, does the use of technologies usurp pre-existing social networks? This is what the IT folks have been interested in for a long time. And what we found, really, is that, only under certain conditions it does. Technology is interesting...it can tell us so much about our-

selves and our relationship with others. What struck me was how everyone saw technology in rural Africa as almost a form of technological determinism, so, if you have technology, it will be better. One of the interesting things we go out of our study is that only in certain instances was the correct information among herders being communicated. And those instances were where herders were close friends growing up together and there was a bond of trust that was necessarily kinship based. So it was an interesting start to how we think about technology and dismissing the apolitical technological deterministic narratives.

How exactly were you able to carry out this study?

This was a lot of participant-observation work. It was much more ethnographic in terms of, just hanging around and herding with the guys. Listening to what are people saying. A lot of times people intentionally cut off others when they call. Which is totally valid there, because the excuse is, "I didn't have enough credit or I didn't have enough battery life." But if you go to the village centers there are solar panels in the Maasai houses. People have old car batteries and inverters that they are running. So, what are the contexts under which cutting off phone calls are happening? And that became the overarching research question: what are the contexts under which information-sharing is happening, and when is it not happening?

How has your biography and training influenced your research work?

Mom was a high school teacher, Dad worked at an assembly plant. The expectations at that time were that I would help the family. In Kenya at the time, tourism was big, and so tourism was likely going to be a sure thing if you get into the hotel business or safari business. I had been sent to Eastern Kentucky for a traveling tourism program. I had never been to America and on day one I walked into this professor's office who immediately recognized my name as coming from Kashmir. And he said, where are you from? I said, Kenya, and he was able to connect that story. We were in the geography department, he kind of led me to there. I had some excellent, excellent mentors along the way that pushed me, allowed me to be me. I really wanted to work with somebody

who does similar work in West Africa. And that led me to Wisconsin for my post-doc. I often think about my background and childhood when I go back to Kenya, about how my relationship to the national parks changed over time, because it can be very easy to be apolitical. It is very easy to not recognize the role of history. But for a lot of people, they buy into those apolitical and ahistorical narratives because we don't have enough information out there to provide some counter-narratives.

Your research doesn't seem to fit any well-defined disciplines. Is your research part of an emerging field? And how does it fit within an African Studies framework?

It's a tough one, because I am a bit of an odd bird. I trained in geography. And here I am at the SNRE, which is meant to be an interdisciplinary program. For me, this is not that big of a deal. My work has inherently been interdisciplinary. And the idea in terms of disciplinary contribution is that there are not very many people who understand both the social context and the ecological context in detail. It is very easy for a social scientist to dismiss this work, and it is very easy for an ecologist as well, because they don't understand both perspectives. And what I like to think is that I do understand them both quite well. Both approaches are coming from where they are because they have different epistemologies and ontologies. What I like about my discipline and my subfield is that it gives me the sort of intellectual creativity and freedom to craft these questions, while at the same time having them theoretically, empirically, and methodologically grounded in broader issues.

Dr. Bilal Butt was appointed to U-M's School of Natural Resources and Environment in 2011. He was interviewed by Anneeth Kaur Hundle, doctoral candidate in Anthropology.



THE CENTRAL AFRICAN FORESTS AND INSTITUTIONS RESEARCH INITIATIVE

JODI BRANDT AND ARUN AGRAWAL

The Congo Basin possesses some of the most valuable and threatened rainforest outside the Amazon Basin. It is home to over 10,000 plant species (about 3,000 of which are endemic) and more than 1,000 bird and 400 mammal species. The Basin's forest ecosystems remain remarkably intact relative to other world regions, but are undergoing rapidly intensifying exploitation.

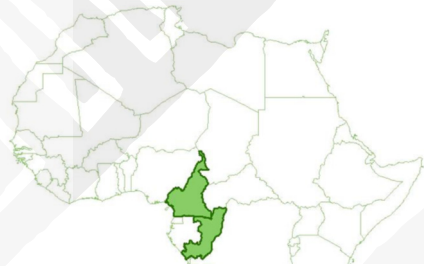
The Central African Forests and Institutions (CAFI) research initiative focuses on the Congo Basin as a unique research opportunity for three reasons: 1) its importance to global forest cover and terrestrial biodiversity; 2) the availability of large amounts of data that can be supplemented with new research to construct databases of general relevance; 3) the significant variation in new governance arrangements, logging practices, and forest cover change.

The main objective of the CAFI project is to gain better understanding of the critical juncture between environmental governance and forest change in the western Congo Basin, specifically in the border region of Cameroon and the Republic of Congo, chosen for their contrasting governance arrangements and forest management regimes. The research focuses on forest change since 1990 in this cross-border region, and will show whether different forms of environmental governance make a difference in forested landscapes.

The main research questions upon which our research focuses is: "How do variations in partnerships among country governments, logging companies, and third parties (e.g., NGOs, donors, local actors) affect the content of concession agreements, their subsequent implementation and the environmental outcomes related to logging concessions?"

The CAFI project investigates deforestation and forest fragmentation in the border region of Cameroon (top green) and Republic of Congo (bottom green).

The CAFI project uses field data, satellite imagery, and state-of-the-art modeling



approaches to untangle complex relationships between governance and forest change in the study area. CAFI has contributed funding to over 10 MS and PhD theses since the project began in 2008, and has supported French, Cameroonian, and US students. The interdisciplinary project has supported a wide variety of research approaches, ranging from household surveys to understand economic implications of logging for local people, to the use of satellite imagery to analyze the spatial pattern of logging road construction and their adherence to international sustainable logging guidelines. Some research has led to surprising insights about interactions between policy, enforcement, forest change, and biodiversity. For example, Andrew Bell, a recently graduated PhD student at UM, used



A Central African forest. *Courtesy of Craig R. Sholley.*

agent-based modeling to show that improved enforcement of logging regulations may actually lead to trade-offs in terms of environmental outcomes. He and his co-authors demonstrated that although illegal logging may decrease, improved enforcement may also force logging companies to push further into the forest frontier – which would likely lead to increased habitat fragmentation and hunting in previously intact and undisturbed forests.

The extensive data collected during the course of the project will be consolidated into a publicly-available repository, including information on the array of governance arrangements, characteristics of logging concessions and concessionaries, the evolving role of NGOs, the nature of monitoring processes, and ongoing forest cover and changes and other indicators of environmental changes. The databases in the repository will help researchers and policymakers better understand the complex governance institutions that shape environmental outcomes at a general level. The research will also illuminate the specific roles of different actors in processes of sustainable forest management and deforestation, including the little understood contributions of NGOs.

The research and educational activities associated with this project will lead to a capstone workshop on Governance and Logging in September 2013. The research undertaken through the project will have the added value of developing a baseline for future study of governance and forests in the countries of the region.

The faculty investigators associated with the project are Arun Agrawal, Kathleen Bergen, Daniel Brown, Rebecca Hardin, Thomas Lyon, and John Vandermeer. Jodi Brandt is the current postdoctoral fellow doing research on this project, and Christoph Nolte and Silvia Cordero-Sancho are the two graduate students assisting with data analysis and related research. ❧

Logging. *Courtesy of Jodi Brandt.*

ARCHIVING IN SOUTH SUDAN

MOLLY KELLOGG, CHRISTOPHER TOUNSEL AND NICKI KINDERSLEY

In summer 2012 we were invited to participate in an archive preservation project in the capital city of the world's newest country—Juba, in South Sudan. The archives were housed in a storage tent originally constructed with funds from USAID. It is a very rich collection. Before Sudan's second civil war erupted in 1983 some 5,000 provincial and administrative documents from Greater Upper Nile and Greater Equatoria had been gathered in Juba by staff of the Southern Regional Government.

After the war began, that staff was forced to abandon the records in the capital, as well as those in other district and provincial offices across the South. The remnants of the collected records, which now comprise the bulk of archive's holdings, contain original written historical records of the diverse people, events and history of the region which document earlier borders, trade and migration routes, development projects, political and administrative institutions, negotiations of key peace agreements, and significant leaders and actors in the history of South Sudan.

The richness of the archive made the preservation project all the more urgent. Exposed to the elements, there was a real worry that—following over 40 years of recurring war—the critical historical records of the largest country in Africa would be damaged, destroyed, and lost to the people of South Sudan. Under the collective leadership of the Rift Valley Institute, the Ministry of Culture, Youth and Sports of South Sudan, and the African Heritage Initiative of UM, we aimed to make the archives more accessible to the people of South Sudan and the international community of scholars.

Working alongside government archive staff, we worked for six weeks to rehouse, organize, catalogue and digitize this important collection. The project was a roaring success. All district files that could be identified in the tent were sorted, boxed, and catalogued on paper handlists. The completed catalogue sheets for Equatoria Province, Torit District, and Upper Nile Province were typed up to



The tent where the National Archives of South Sudan had formerly been stored, and where some records continue to be held.

create a digital copy. Many important files dealing with ethnic conflicts, political parties, internal and international borders, chiefs and the justice system have been scanned. Scanning is an ongoing process and many more documents have been identified for future scanning, with the scanning staff trained in identifying documents according to these priorities. A digital catalogue, alongside the metadata, has been created for all scanned files which will be continued. All identifiable district and regional files found in the tent have been relocated to a nearby government building to avoid further destruction. The tent has been organized to help preserve any loose papers that are still in a readable state but could not be identified as belonging to any given file at the moment. These papers are temporarily being stored in metal filing cabinets in the tent.

The papers that we moved to the nearby government building—called Muniki House—have been organized: catalogued boxes have been stacked and stored, paper catalogues have been organized in ring binders and stored, loose papers have been filed in folders (and where possible, identified by district or province), miscellaneous files have been inserted into the appropriate boxes and catalogued, and a list of important files to be scanned has been created. There remains a large body of uncatalogued, unorganized material that is stored in the tent. We estimate that an effort to rescue and rehabilitate the majority of the files, publications and record books in the tent will require a further six months of work from a large team.



Cataloguing the collection.

FINDING A VOCATION IN SOUTHERN SUDAN

MOLLY KELLOGG



Some of the beads available through Bulu Mango. *Courtesy of Molly Kellogg.*

I met Ketty during my semester abroad in Uganda in the winter of 2011. Ketty had been abducted by the LRA (Lord's Resistance Army) and had spent two years in the bush before escaping and moving to Kampala. When we met, she was homeless, having been kicked out of her house after failing to pay rent for four consecutive months. She was living in a community allocated to internally displaced people from the north. She was HIV positive and had two children.

I noticed that Ketty was rolling beautiful beads from colored paper and I asked her if I could visit the place where she stayed so I could see her collection of beaded jewelry. She graciously agreed and soon enough I was on my way to the Acholi Quarter, a slum located on top of one of Kampala's rolling hills. When I reached the room Ketty was staying in she had beaded jewelry hanging from every corner and more piled on the floor. I had an idea about how to use this jewelry to connect Ketty's world with my world; I started selling her beads informally through my blog as a way to explain history through Ketty's eyes and raise money for her to get back on her feet.

Ketty and I grew to become close friends over the course of my semester in Uganda and during my senior year at the University of Michigan we stayed in touch through expensive, long distance phone calls. She had become part of how I grew to understand the history of northern Uganda.

During my senior year in Ann Arbor I was awarded an opportunity through the University to do a post-graduate internship in Juba, South Sudan, participating in a project to preserve, sort, and digitize the South Sudan

National Archives. Apart from being excited for the chance to spend six weeks rustling through old, dusty national treasures, I was thrilled with the prospect of experiencing life from the other side of the Uganda-South Sudan border.

I arrived in Juba exactly one month after graduation. I was greeted by two Ph.D. students who were far more knowledgeable about the history of South Sudan than I was. Right away the three of us were brought to the archive storage tent. After thirty plus hours of traveling, I was shocked at the state of the archive. Piles upon piles of deteriorating papers covered with dust, rat droppings, and termites all stacked inside a tent in which a human being could only last about five minutes before passing out from heat. This is what I signed up for? These are the national archives? Didn't most other countries have big, white marble buildings with shiny lettering that said "National Archive" on the outside?

Over the next six weeks I came to know those dusty papers better than I could have ever imagined. We relocated the files from the tent to a building on the other side of town that is rented by the Ministry of Culture to provide temporary space for the documents until a proper home is built. There, we sorted, boxed, read, and catalogued each and every file. Working alongside the local South Sudanese staff, I came to learn how important a national archive is to building a nation, to understanding one's own national identity. This was a history I could literally hold: a letter from a schoolboy questioning gender roles in his community, discussions about traditional ways of conflict resolution, maps, political constitutions, reports from missionaries, and records of national budgets.

My interest in living in South Sudan spread beyond the archives. I was excited to experience life in the world's newest country, learn about South Sudan from the inside, and return to a region that I had come to love. The first chance I got, I took the bus from Juba to Kampala, a twelve hour ride that I came to know far too well over the next six months. I went straight to the Acholi Quarter to see my dear friend Ketty, who had been waiting for my visit since I told her I arrived in South Sudan. Ketty was smiling as she led me to her new home. She now spoke perfect English having put herself in school and she opened a tailoring shop in her community.

This resilient woman impressed me, although I was not surprised. At my graduation from the University of Michigan Dr. Sanjay Gupta reminded my graduating class that "hopes, dreams, and aspirations are evenly distributed throughout the world" but what is not is "justice, opportunity, and working systems." Ketty embodies this statement and as soon as she was offered "opportunity" she worked towards fulfilling her "hopes, dreams and aspirations" of becoming an educated, community leader.

Ketty and I have decided to join hands in a project to "tip the scales in favor of hopes, dreams, and aspirations," in the words Dr. Gupta. Together we are embarking on a journey to begin a fair trade social enterprise called Bulu Mango that will award groups of committed, talented women artisans around the world with opportunity and will connect women beyond borders in an effort to promote regional and global peace through communication and education. Ketty is now the leader of a group of ten women in the Acholi Quarter who are producing Bulu

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Continued from p. 14

Mango's first product line, jewelry made from hand rolled paper beads.

Until I reached university, African history was a subject that was glanced over in history textbooks, pushed to the margins, or complied into some vague generalization about the continent of Africa and the eighteenth century slave trade. The University of Michigan changed the way I understood the world by offering the histories of the colonized instead of the colonizers, women instead of men, lay people instead of intellectuals. I learned history first hand from people who lived it and from documents that hadn't been touched. Bulu Mango is my effort to make our world smaller so more people can have the opportunities to learn directly from one another and experience history the way I have.

For more information about Bulu Mango follow me at www.bulumango.blogspot.com or contact me at bulumango@gmail.com.



The Kampala artists who have produced Bulu Mango's first product line. *Courtesy of Molly Kellogg.*

Molly Kellogg—a 2012 graduate of UM—spent a semester studying in Uganda in 2011. In summer 2012 she was one of the team of students involved in the cataloguing of the National Archives of Southern Sudan (see p. 13).



DIGITIZING MUSICAL AND PERFORMANCE MATERIALS

KWASI AMPENE



The U-M group with Nana Kwadwo Nyantakyi, a ranking chief of the palace and local program coordinator. *Courtesy of Kwasi Ampene.*

A group of sixteen U-M students spent several weeks in summer 2012 at the Manhyia Palace in Kumasi, the ancient capital of the Asante Kingdom, where they were responsible for digitizing a very extensive archive of video films depicting festivals, rituals, and court ceremonies. The project was designed and led by Prof. Kwasi Ampene (DAAS) with Nana Kwadwo Nyantakyi III, a ranking chief in the palace, as the local coordinator. Tom Bray (Duderstadt Center) offered invaluable technical support.

The video archive was established in 1999 by the Asante king, Otumfuo Osei Tutu II. It consists of a large collection of VHS analog tapes and a small but growing number of DVDs. In 2011 Prof. Ampene visited the archive together with a group of U-M colleagues, and their initial meeting led to a mutually beneficial collaboration between U-M and the kingdom to transfer original collection of VHS tapes to digital format. With funding from the African Studies Center—which financed the purchase of equipment—and travel funds from the Department of Afro-American and African Studies, the U-M students went to Kumasi in June 2012 as part of the Global Intercultural Experience for Undergraduates (GIEU) program. When we arrived in Kumasi, Tom Bray set up four workstations with four students manning each station. The students worked with and trained two people from the palace in the technology, ensuring that the project would continue after we departed.

The U-M students stayed with host families in order to engage with Asante and Ghanaian culture at a personal level. On most weekends we traveled to historical sites, including the castle dungeons at Elmina, Canopy Walk at Kakum Rain Forest, kente weaving and adinkra making villages, schools, and hospitals. We also enjoyed guest lectures in aspects of Ghanaian culture by professors from the Kwame Nkrumah University of Science and Technology and local experts in Ghanaian art and crafts, traditional religion, micro-finance, and an interactive performance with Agya Koo Nimo, the legendary palmwine musicians and folk singer. At the end of our four weeks in Kumasi we were able to digitize and create a database for forty-two VHS tapes.

When the project is complete, the video archive will be transformed into a repository of cultural history, and will be used in the same way that a community views a video archive of City Council meetings. The archive will be available for educational researchers, students of history and culture, and the general public. We, together with our Asante colleagues, helped to transform a valuable collection of unusable material into a collection that can now be of benefit to the Asante people.

Dr. Kwasi Ampene teaches in the Department of Afro-American and African Studies, and is Director of the Center for World Performance Studies.



A STUDY ABROAD PROGRAM FOR U-M ENGINEERS IN GHANA



The University of Michigan's College of Engineering (CoE) and the African Studies Center are working together with US State Department support on a new program for engineering students from U-M and Kwame Nkrumah University of Science & Technology (KNUST). This project launches an innovative study abroad program for U-M engineering students in Kumasi, Ghana. Through this partnership 20 or more U-M students each year will explore Ghanaian culture and discover how engineering challenges and technical solutions are shaped by local traditions, infrastructure and available resources. Students will spend six weeks in Kumasi during May and June and will take two classes that will be co-taught by U-M and KNUST faculty.

Dr. Amy Conger, Director of International Programs in Engineering is Principle Investigator on the Expanding Education Abroad Capacity grant from the US State Department. Describing the grant, Dr. Conger says "This exciting program will allow younger engineering students from both the US and Ghana to come together and discover ways to do needs assessment in a culturally sensitive way, and to develop some of the entrepreneurial skills needed to determine the value of a new engineered product or service that would address a local challenge. We are thrilled that the State Department selected the U-M as one of the schools to support."

The program targets three issues that were of importance to the State Department: creating new programs for groups of US students who seldom study abroad, reaching under-represented populations, and building capacity in non-traditional destinations. Nationwide only 3.5% of study abroad participants are engineering students. The College of Engineering has been increasing study abroad for over five years, but mostly in Europe and China. This new program in Ghana increases study abroad capacity for students who might not otherwise have the opportunity, and allows them to explore culture in a foreign destination that would not normally be available to them. "Our new program gives us new capacity, and in a part of the world that we believe many of our students will find interesting. And equally important, in a part of the world where their skills could have some lasting impact," Dr. Conger said. Nationally and at the U-M, minority students are less likely to study abroad. The program was also designed for students in the CoE's M-STEM academy, a program that supports underrepresented minority students in engineering. It is also aimed at students after the end of their first year because these younger engineering students can especially benefit from summer abroad opportunities. "Our upper level engineering students often have professional employment prospects in the summer, but for our first year students a summer abroad is a perfect opportunity," said James Holloway, Associate Dean for Undergraduate Education in the CoE.

Professor Holloway will co-teach a 3-week class called Engineering Appropriate Technologies: Needs, Design and Entrepreneurship, along with KNUST engineering professor Samuel Kwofie. In this class students will explore the development of engineered infrastructure and consumer products within Ghana. Students from U-M and KNUST will collaborate and compare choices in the engineering of such systems between Ghana

and the USA. They will learn an introduction to needs assessment, design processes and creative thinking, as well as some basic technical communications, and entrepreneurship skills. They will explore both engineering and business perspectives of a product, service, or infrastructure system, and ground their understanding within the product lifecycle and the business model canvas. The course will allow students to practice needs assessment—identifying and understanding the customer—and design requirements—determining how to create value for the customer—within the context of engineered infrastructure and products.

As part of this class teams of students – 2 students from the U-M and 2 students from KNUST – will do field work at the Kejetia market in Kumasi. This 11 hectare open-air market, the largest in West Africa, is home to some 10,000 shop and stall keepers who sell everything from jewelry, to food, to toiletries, to clothes, to beautiful fabrics, spices, and grains. The students will be assigned the task of doing a needs assessment and making a proposal for a product, service or infrastructure improvement that could bring value to any of the stakeholders in the market. The different cultural perspectives that the US and Ghanaian students will bring to this analysis will strongly inform the needs assessment, but more importantly will provide a huge learning opportunity for both groups of students to understand how culture plays into their identification and understanding of an opportunity or challenge.

Before embarking on this culturally-based needs assessment, students will develop some common understanding of Ghanaian culture and language. Kwasi Ampene, Associate Professor in the Department of Afro-American and African Studies, will co-teach a 3-week class on Ghanaian culture with Professor Okyere Darko from KNUST. The class will include an introduction to the Twi language spoken throughout the Asante region of Ghana. The class will bring together the U-M and KNUST students to explore their culture from both an emic and etic perspective. The bond created among the students during this class will be a strong foundation for their later exploration of needs within Kejetia. This class will also include visits to local cultural sites around Kumasi and in the Cape Coast region.

The first group of 20 CoE and 20 KNUST students are being selected now for this program. They will meet in Kumasi in May 2013.



Updates from the African Studies Working Groups

THE AFRICAN SOCIAL RESEARCH INITIATIVE (ASRI)

The African Social Research Initiative promotes advanced research, new collaborative networks, and research career development in the quantitative social sciences among University of Michigan faculty, and both academic and NGO research partners in South Africa and Ghana. ASRI's institutional partners include the INDEPTH Network, Kwame Nkrumah University of Science and Technology (KNUST), University of Cape Coast, University of Cape Town, University of Fort Hare, the Institute for Statistical, Social and Economic Research (ISSER) at the University of Ghana, University of Johannesburg, University of KwaZulu-Natal, and Witwatersrand University.

ASRI currently consists of three intersecting subgroups organized around research on democratic governance; income dynamics and poverty; and gender, health and development. With counterparts in South Africa and Ghana, each subgroup endeavors to sustain scholarly partnerships that rely on multi-method approaches to engage in data collection and analysis. These methods include, but are not limited to, longitudinal surveys; panel surveys; repeated cross-sectional surveys, fieldwork, and natural experiments.

Consistent with our multi-method approach, ASRI partners have worked together to provide short-term training courses in research methods and analysis. The first of these courses took place over a two week period in July 2012 at the University of Cape Coast in Ghana. It was coordinated and taught by Murray Leibbrandt, David Lam and Samuel Kobina Annim and directed by Kofi Awusabo-Asare. Graduate students from South Africa and the University of Michigan also assisted with the course. This is the second year in which this course has been taught and as in the previous year, it introduced participants to the statistical analysis of demographic, health, and economic data sets from Ghana and South Africa using the

STATA program. The course attracted around thirty students from all over Africa.

Another course was held at the Center for Democratic Development in Accra, Ghana. It focused on introducing quantitative methods to researchers working in the areas of governance and public policy. The four-day course was directed by Rod Alence in collaboration with Victor Brobbey, with the assistance of a graduate student from South Africa.

exclusive use of free, open-source statistical software (R and Rstudio) that participants installed on their own laptops. The software, along with several public-domain data sets, was loaded on USB drives that participants took home and have continued to use after the course.

ASRI is also preparing for its third bi-annual conference to be held in October 2013. Following conferences in Cape Town, South Africa and Accra, Ghana, the University of



Data analysis course at the University of Cape Coast, Ghana. *Courtesy of David Lam.*

The twenty-five participants included university lecturers, graduate students, and researchers based at non-governmental organizations. The emphasis in this year's course was on analyzing bivariate relationships in cross-national data, with presentations on topics such as government health spending, environmental sustainability, and corruption control. The course made

Michigan will be the host for this event. ASRI members intend to incorporate research on local demographic shifts, economic decline, health challenges, and governance in order to compare some of the characteristics of southeastern Michigan with those of South Africa and Ghana.

Anne Pitcher, coordinator

AFRICAN HERITAGE INITIATIVE

SEED GRANTS AWARDED

The Heritage Initiative awarded three seed grants to U-M faculty who are developing collaborative research projects with African colleagues. The first was awarded to Elisha Renne (Anthropology and DAAS) and Salihi Maiwada to support the creation of an archive and a display commemorating Kaduna Textiles Ltd., long the leading textile manufacturer in northern Nigeria. Kaduna Textiles was created by Ahmadu Bello, the ruler of the Sokoto Caliphate, in 1957, and operated for 45 years. Dr. Renne and her colleagues have used Heritage funding to organize and catalogue the archives of the textile firm, which have now been placed in the hands of Ahmadu Bello University. They have in addition created a public display—consisting of 12 panels—on which photographs, archival material and sample textiles are displayed for public viewing. The exhibition—held at Ahmadu Bello University—was opened in November 2012. It is hoped that the panels will be displayed in Ann Arbor at some future date.

A second seed grant was awarded to Judy Irvine (Anthropology) and Liz Gunner (University of the Witwatersrand) to undertake collaborative research. Their work will study gendered forms of language use among Zulu speakers in South Africa. A further seed grant was awarded to Kwasi Ampene (DAAS) and Godwin Adjei (University of Ghana) to support their ongoing effort to document and preserve the musical archives preserved at the palace of the Asante king in Kumasi, Ghana. The results of their collaborative work are described elsewhere in this number of the newsletter (*see p. 15*).

AFRICAN PRINT CULTURES

In December 2012 the Heritage Initiative convened the “African Print Cultures” workshop in the Rackham Assembly Hall. The workshop is an ongoing project, drawing together Michigan historians and anthropologists with colleagues in British and African universities. In the Ann Arbor meeting we made a particular effort to draw in scholars whose work concerned the circulation of print media between Africa and the Afro-American and Afro-Caribbean world. A whole day was spent on this subject, and at



The repository at the Uganda National Archives.
Courtesy of Andrea Stultiens.

the center of our discussions was the work of U-M graduate students (three of them gave papers at the workshop).

What emerged from all the papers was the centrality of newspaper editorship in the generation of trans-territorial political imaginations. We'd not previously known how far pan-African ideologies relied on the evidence that newspaper editors could generate. The editors of the Garveyite press, for instance, made a practice of excerpting bits of news from Ethiopian and other African newspapers; likewise, the editors of the Nigerian Eastern Mail clipped material from the Chicago Defender and other African-American newspapers. These practices of borrowing, plagiarism, and compilation helped to constitute a deterritorialized conception of black identity by providing readers with evidence of a shared racial condition.

Newspapers were likewise media wherein new literary forms were developed. Two of the papers at the workshop concerned the practice of obituary writing, showing how—in English and in Yoruba—death provided an occasion for literary experimentation. In the newspapers of the Gold Coast in the late 19th century, for instance, dead people were memorialized in acrostic poetry and in elaborate biography. Newspapermen were creating memorials that could be saved, archived, placed on shelves. They periodically recycled this biographical material, publishing heroic lives that populated newspapers' pages. In this way newspapers became something other than sources of information about current events. They were a fertile field of anachronisms, where the dead became a constituency that could be marshaled and represented to new reading publics.

The workshop's conveners have been invited to submit a full report to the *Journal of Social History*, where the proceedings of the workshop will be presented to a wider audience.

ARCHIVE PRESERVATION PROJECTS

The Heritage Initiative organized two archive preservation projects in eastern Africa in summertime 2012. The first of these projects was directed toward the National Archives of South Sudan in Juba. The fruit of this work is described elsewhere in this newsletter (*see p. 13*). The second project—which involved U-M graduate students from History, Anthropology, and the School of Information, working with students from the School of Library and Information Science at Makerere University—aimed to complete the catalogue of the National Archives of Uganda in Entebbe. This important collection consists of several thousand boxes of material, with deposits from Uganda's Northern and Eastern provinces, the Ministry of Public Works, the Commissioner of Elections, and other sources. Until 2011 only a very small fraction of the collection had been catalogued. The study of Uganda's history was correspondingly impoverished, and scholars and citizens lacked the means by which to engage critically with the country's difficult past.

In summer 2011 the Heritage Initiative and Makerere University sent a joint team to Entebbe to begin the work of cataloguing this important archive. They organized the files into deposits, placed them in boxes, and began the work of cataloguing them. The 2012 team carried this labor forward. Their particular focus was on the “Secretariat” papers, a vast collection of files generated by the office of the British colonial governor of Uganda. The subject matter was very wide: there are papers on oil exploration, on railroads and transport, on law and litigation, and on an array of other subjects. The U-M/Makerere team went through the collection, file by file, listing the contents of each file and its covering dates in a spreadsheet. The fruit of their work was a 541-page hard-bound catalogue, which now sits in the search room



Justine Nalwoga, staff member at the Uganda National Archives. *Courtesy of Andrea Stultiens.*

of the archives. It is an invaluable tool that students, scholars and citizens can utilize as they engage in the study of the archive's contents.

The Heritage Initiative plans to organize three archive preservation projects in summer 2013: one will involve the archives in Kabale District, in Uganda's south; a second will involve the library of the National Archives, which remains uncatalogued; and a third will involve the papers of the Uganda Cancer Institute, in Mulago Hospital in Kampala.

AFRICAN ART AT U-M

The Heritage Initiative has given logistical and financial support to two new art exhibitions at U-M. The first, from the Ghanaian artist El Anatsui, will open at the University Art Museum in February 2013. El Anatsui uses found objects—bottle caps, driftwood—to create beautiful, meaningful art that reflects upon and shapes African aesthetics. The exhibition offers U-M students and teachers an opportunity to engage directly with the work of one of Africa's leading artists.

A second, smaller-scale exhibition will be launched in mid-2013 in Gallery DAAS, a new space recently established by the Department of Afro-American and African Studies in Haven Hall, on the University's Central Campus. With support from the Heritage Initiative, Gallery DAAS's organizing committee will prepare one exhibition of African art each year. The first exhibition is to feature the work of the Nigerian artist Wilfred Ukpogon, whose photography reflects the vexed politics of oil extraction in the Niger Delta.

Derek Peterson, coordinator

SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM)-AFRICA

A major focus of the STEM committee was the organizing of the conference "Advancing Africa STEM Research, Education and Collaboration," held at Kwame Nkrumah University of Science and Technology in Kumasi in June 2012. A full report on this conference is given elsewhere in this newsletter (pp. 1 and 3-4).

ENGINEERING CONNECTIONS WITH GHANA'S UNIVERSITIES

There has been further work on an ongoing, faculty-led project titled "Engineering Collaboration with Ghanaian Universities." The goal of this project is to capitalize on existing relations to establish long-term research and education collaboration with two institutions in Ghana, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, and University of Ghana (UG), Legon. The project was initiated with a four-day trip to Ghana by Elijah Kannatey-Asibu, Kathleen Sienko, and Nikos Chronis from August 7-9, 2011. They visited University of Ghana, where they met with the Dean of Engineering and faculty from the departments of Materials Science & Engineering, and Biomedical Engineering. The group also visited the Noguchi Memorial Institute for Medical Research, and then the School of Public Health. In Kumasi, they met with the Engineering Provost, with faculty from the Mechanical and Materials Engineering departments and the Energy Center at KNUST. A website has been developed for informing students and faculty about the project: <http://sitemaker.umich.edu/me-ghana/Home>.

In the past year, three U-M doctoral students each spent a period of one to two months at KNUST: Ibrahim Moheidas, who worked primarily on learning about the diagnosis of pre-eclampsia, a hypertensive pregnancy disorder, in rural areas of Ghana; Amir Sabet, who attempted to identify the similarities and differences in preference choices between and within stakeholder groups concerning the use and adoption of medical devices; and Serge Gregory, who investigated manufacturing research on wind energy units, and also laid the ground work for collaborative research in

vibratory residual stress relief. Another U-M faculty, Levi Thompson, also visited KNUST to initiate collaborative research activities in energy storage for solar units, and the potential for establishing algae fuel research, development, and industry in Ghana. During the fall semester 2012, Prof. Samuel Kwofie, chair of the Materials Engineering Department at KNUST, visited U-M for one month. As a result of that visit, an experimental testbed has been set up for collaborative research with Elijah Kannatey-Asibu on vibratory stress relief of welded joints.



U-M doctoral student Serge Gregory with KNUST students next to a modular wind turbine prototype.

THE US-AFRICA STEM LECTURE SERIES

The STEM-Africa initiative is pleased to announce the launching of an annual lecture series: the US-Africa Science, Technology, Engineering and Mathematics (STEM) Lecture Series. The series will bring experts of international repute from a broad spectrum of experiences to the U-M campus to engage faculty, students and the broader U-M community in conversations on themes at the intersection of African development and STEM fields.

The inaugural US-Africa STEM Lecture will be held on Friday, April 5, 2013. The inaugural Speakers will be Dr. John Boright, Executive Director of the Office of Global Affairs at the United States National Academies of Science, and Dr. Jean Pierre Ezin, African Union Commissioner for Human Resources, Science and Technology. Their talks will be complemented by two panel discussions by speakers from the US and Africa on the subject of "US-Africa Scientific Collaborations and the role of the African STEM Diasporas." More information on this lecture and the attendant seminar will be posted on the African Studies Center website.

Elijah Kannatey-Asibu and Nkem Khumbah, coordinators

SUPPORT THE AFRICAN STUDIES CENTER

Please consider **making a contribution** to the African Studies Center. Your help will enable us to expand our outreach capacity and activities, offer funds for faculty and student research and training, and enhance area study and language training at the U-M. There are four areas in which we seek financial backing:

First, the **African Presidential Scholars Program** (UMAPS) brings early career faculty members from Ghana, South Africa, Liberia, and Uganda to the University of Michigan for residencies lasting up to six months. The program addresses head-on what the *Chronicle of Higher Education* has identified as the current "crisis" in African higher education: namely, chronically underfunded universities with a shortage of PhD-holding faculty who are unable, for lack of resources, to train new cohorts of PhD scholars. The program goals are twofold: (1) to help integrate the next generation of African scholars into international academic networks and support the attainment of their doctoral degrees, thereby helping their home institutions build capacity, and (2) to promote greater internationalization of U-M by bringing talented Africa-based faculty to our campus to collaborate in research, scholarship and teaching. The UMAPS program aims to help retain and strengthen faculty in African institutions of higher education while simultaneously enriching U-M through the inclusion of African perspectives... a win-win scenario.

Second, the **African Heritage Initiative** (AHI) advances the critical study of heritage work in Africa. At the intersection of business, politics, and history, "African heritage" is being reconfigured and marshaled as a resource to be celebrated, commoditized, and deployed by corporations, by governments, and by commoners eager to gain revenue and political leverage. The African Heritage Initiative brings together scholars from Ghana, South Africa and U-M to query the many assumptions circulating about "heritage" and uses to which it is put. A long-term goal is to build a graduate program triangulated between U-M and our South African and Ghanaian partners (with the future option to expand into other regions of Africa), and to deepen our intellectual engagement with the vast domain of African heritage through research projects with African colleagues already deeply engaged in these issues.

Third, the **African Social Research Initiative** (ASRI) works to expand African social scientists' capacity to utilize quantitative data. African researchers and policy-makers are trapped: they must reluctantly depend on international consultants and institutions to (1) collect statistical data on demographic,

governance, health, education, social and economic concerns, (2) analyze this data, and (3) issue policy recommendations on how to address and overcome problems. African policy-makers cannot be expected to create sustainable programs without accurately knowing whom they seek to benefit and how those benefits can best be realized. The ASRI initiative seeks to expand the famed U-M Institute for Social Research training programs in survey data collection and analysis to Africa. Following on the success of a 12-year-long short course in statistical analysis in Cape Town, South Africa, U-M and South African faculty piloted a second short course in Cape Coast, Ghana in 2011. The chief object of the African Social Research Initiative is making knowledge accessible in order to enable better, more informed decisions.

And fourth, the **STEM-Africa Initiative** is unique in its engagement of science as a trans-Atlantic affair. When academics and policy makers think of "African studies," the default position is often to focus exclusively on African history, culture, language and arts. The natural or "hard" sciences are thought to lie beyond the mandate of African studies. Yet science thrives in Africa. In a continent unparalleled in its biodiversity, featuring more endemic species of flora and fauna than any other, and where the stakes of human/wildlife interactions are critical due to large predator populations, science is a life and death reality. Understanding particle physics, harnessing solar and wind power, engineering solutions to persistent water scarcity, and developing mathematical models for averting health crises are all concerns that drive African STEM scholars in their pursuit of innovation. STEM-Africa seeks to nurture emerging scholars on the continent and advance research collaborations in STEM disciplines between the U-M and partnering institutions in Africa.

The ASC seeks an endowment to support the continuation of the U-M African Presidential Scholars Program, as well as funding to advance the exciting collaborations of our African Heritage, African Social Research, and STEM-Africa initiatives. We hope that you will contribute generously to our effort to build the Center's financial security by sending your pledge or gift today. Please send your check to: African Studies Center, The University of Michigan, 1080 South University Ave., Suite 3603, Ann Arbor, MI 48109-1106. You can also make donations directly through the 'Giving' section of our website, at www.ii.umich.edu/asc. All donations to ASC are tax-deductible to the extent allowed by law and will be counted as part of the University of Michigan Capital Campaign. Thank you for your support.



Photograph by Raymond Silverman

Hadar Tsion celebration. Axum, Ethiopia. November 30, 2001.



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