

Contents

Exploiting IEEE802.11n MIMO Technology for Cost-Effective Broadband Back-Hauling	1
<i>Michael Rademacher, Mathias Kretschmer, and Karl Jonas</i>	
Review of Power Line Communications Standards in Africa	12
<i>A.R. Ndjiongue, A.J. Snyders, Hendrick C. Ferreira, and Suvendi Rimer</i>	
Simulation of Wireless Sensor Node Transmission Over a Multiple Access Channel	22
<i>Katleho Kanyane, Babu Sean Paul, Suvendi Rimer, and Khmaies Ouahada</i>	
Communication Costs and Trade in Sub Saharan Africa: A Gravity Approach . . .	27
<i>Evans Mupela and Adam Szirmai</i>	
On Software-Defined Networking for Rural Areas: Controlling Wireless Networks with OpenFlow	39
<i>Sami Ruponen</i>	
Thought Leadership in e-Governance, e-Infrastructure, and e-Business in Africa	49
<i>Gertjan van Stam</i>	
Towards Securing Communications in Infrastructure-Poor Areas	59
<i>Daouda Ahmat, Tegawendé F. Bissyandé, and Damien Magoni</i>	
A Pairing-Free Public Key Encryption with Keyword Searching for Cloud Storage Services	70
<i>Thokozani Felix Vallent and Hyunsung Kim</i>	
A Pairing Based Authentication and Key Establishment Scheme for Remote Patient Monitoring Systems.	79
<i>Kambombo Mtonga, Eun-Jun Yoon, and Hyunsung Kim</i>	
Security Analysis of Some Output of RC4 Cryptosystem.	90
<i>Kondwani Thangalimodzi, Gift Khangamwa, and Patrick Albert Chikumba</i>	
Sustainable ICT4D in Africa: Where Do We Go from Here?	95
<i>Tegawendé F. Bissyandé, Daouda Ahmat, Jonathan Ouoba, Gertjan van Stam, Jacques Klein, and Yves Le Traon</i>	

Improving Rural Emergency Services with Cognitive Radio Networks in Sub-Saharan Africa	104
<i>Dramane Ouattara, Francine Krief, Mohamed Aymen Chalouf, and Tegawendé F. Bissyandé</i>	
Unified Solution Towards Deployment of TV White Space in Africa	115
<i>Philipp Batroff, Osianoh G. Aliu, Eric Schütz, Mathias Kretschmer, Christian Niephaus, and Karl Jonas</i>	
Medicines Identification for African Illiterate Patients Using Near Field Communication	121
<i>Mahlaku Mareli, Suvendi Rimer, Babu Sean Paul, and Khmaies Ouahada</i>	
Spatial Analysis of Location of Mother's Choice for Delivery: A Case of Blantyre and Mwanza Districts in Malawi	130
<i>Priscilla Maliwichi and Patrick Albert Chikumba</i>	
Diabetes Advisor – A Medical Expert System for Diabetes Management . . .	140
<i>Audrey Mbogho, Joel Dave, and Kulani Makhubele</i>	
Assessing Spatial Distribution of Maternal Health Related Resources in Health Facilities in Malawi: Case of Skilled Birth Attendants in Zomba District	145
<i>Chipiliro Awali and Patrick Albert Chikumba</i>	
Reporting in the Health Systems: Case Study of Ghana.	153
<i>Ivy de-Souza</i>	
Real-Time Communication over Wireless Sensor Network – A Prototype for Disaster Areas	157
<i>Sarantorn Bisalbutra and Elisa Jimeno</i>	
Wireless Sensor Networks and Advanced Metering Infrastructure Deployment in Smart Grid.	167
<i>Omowunmi M. Longe, Khmaies Ouahada, Hendrick C. Ferreira, and Suvendi Rimer</i>	
Mobile Sink Wireless Underground Sensor Communication Monitor	172
<i>Cedrick S. Nomatungulula, K.G. Ngandu, Suvendi Rimer, Babu Sean Paul, Omowunmi M. Longe, and Khmaies Ouahada</i>	
Consumer Adoption of Mobile Payment Systems in Malawi: Case of Airtel Malawi ZAP in Blantyre City	178
<i>Menard Nyirenda and Patrick Albert Chikumba</i>	
Stakeholder Analysis and Sustainability of Telecenter Projects in Rural Malawi	188
<i>Christopher Banda and Patrick Albert Chikumba</i>	

The NOAH Project: Giving a Chance to Threatened Species in Africa with UAVs.	198
<i>Miguel A. Olivares-Mendez, Tegawendé F. Bissyandé, Kannan Somasundar, Jacques Klein, Holger Voos, and Yves Le Traon</i>	
Geographic Information System as a Tool for Enriching Drug Logistics Information at District Level in Malawi: Challenges on Data Quality	209
<i>Patrick Albert Chikumba</i>	
GrAPP&S, a Distributed Framework for E-learning Resources Sharing	219
<i>Thierno Ahmadou Diallo, Olivier Flauzac, Luiz Angelo Steffenel, Samba N'Diaye, and Youssou Dieng</i>	
Y Nut, a Phonetic-Based Learning System for Spoken Languages	229
<i>Omer L. Nguena Timo and Tegawendé F. Bissyandé</i>	
Modeling Diffusion of Blended Labs for Science Experiments Among Undergraduate Engineering Students	234
<i>Raghu Raman, Krishnashree Achuthan, Prema Nedungadi, and Maneesha Ramesh</i>	
The Impact of Internet Banking on Service Quality Provided by Commercial Banks	248
<i>Angeline Liza Ndachiphata Chima and Vanwyk Khobidi Chikasanda</i>	
Power Instability in Rural Zambia, Case Macha	260
<i>Consider Mudenda, David Johnson, Lisa Parks, and Gertjan van Stam</i>	
Considering Misconceptions in Automatic Essay Scoring with A-TEST - Amrita Test Evaluation and Scoring Tool	271
<i>Prema Nedungadi, Jyothi L, and Raghu Raman</i>	
E-education – Using the Simplest Technologies to Empower Local Communities for Development in Malawi.	282
<i>Alexander Mtembenuzeni and Chomora Mikeka</i>	
Author Index	287

e-Infrastructure and e-Services for Developing
Countries

5th International Conference, AFRICOMM 2013,
Blantyre, Malawi, November 25-27, 2013, Revised
Selected Papers

Bissyandé, T.F.; van Stam, G. (Eds.)

2014, XI, 287 p. 82 illus., Softcover

ISBN: 978-3-319-08367-4