

# **International Conference on Emerging Trends in Networks and Computer Communications ETNCC 2015, Windhoek, Namibia, 17-20 May 2015**

## **The Internet of Things in Agriculture for Sustainable Rural Development**

Nomusa Dlodlo  
Council for Scientific and Industrial Research  
Meraka Institute  
Pretoria, South Africa  
Email: [ndlodlo@csir.co.za](mailto:ndlodlo@csir.co.za)

Josephat Kalezhi  
Copperbelt University  
Department of Computer Science  
Kitwe, Zambia  
Email: [kalezhi@cbu.ac.zm](mailto:kalezhi@cbu.ac.zm)

### **Abstract**

Rural areas in South Africa and Zambia face a number of similar issues in the domains of agriculture, connectivity, water, transport, health and education etc., which calls for potentially similar solutions to be directed towards solving these issues. The intention of this research is to investigate the potential contributions of internet of things technologies (IoT) towards poverty reduction in these rural areas, in line with the needs identified in these communities and with emphasis on agriculture. The paper identifies examples of IoTs to mitigate the agricultural needs of these communities for the domains of crop farming, weather forecasting, wildlife management, forestry, livestock farming, market identification and rural financing.