



College of Business and Economics
**School of Consumer Intelligence
and Information Systems**
Department of Applied Information Systems

Dr Barnabas Ndlovu Gatsheni

PhD in Computational Intelligence (Edinburgh), MSc (Nottingham)

Head of Department: Department of Applied Information Systems

Barnabas's research interests are in computational intelligence, machine learning, probabilistic reasoning & learning, image analysis and probabilistic databases. Barnabas obtained a PhD in Computational Intelligence from the University of Edinburgh in the UK and an MSc in Electronic Engineering from the University of Nottingham in the UK. He then worked at the University of Essex in England as a Postdoctoral Research Fellow between 2001 and 2004. Barnabas then worked as a Quality Assessor at Delphi Energy and Chassis Systems in South East England. Barnabas spent January 2016 at the Neural Computing Research Group (NCRG) at Aston University in the UK. In 2017 Barnabas visited Guy Van den Broeck of the University of California, Los Angeles (UCLA) and established collaboration with him. Barnabas supervises Masters and doctoral students. He enjoys applying computational intelligence tools to solving real world problems. Barnabas is the head of the Computational Intelligence Research Group.

Google scholar profile: <http://scholar.google.com/citations?hl=en&user=8uMV4EIAAAAJ>

Tel: +27 11 559 1506

Email: bgatsheni@uj.ac.za

Office: G Purple 4 (Bunting Road Campus)

Publications

Journals

Emma Makaba; Barnabas Ndlovu Gatsheni; The Design of a Vehicle Traffic Flow Prediction Model for a Gauteng Freeway Based on an Ensemble of MLP. International Journal of Computer, Electrical, Automation, Control and Information Engineering Vol:10, No:1, 2016

BN Gatsheni, Farhad Aghdasi, The application of Radio Frequency Identification (RFID) in speeding up the flow of materials in an industrial manufacturing process Authors; Interim: Interdisciplinary Journal; Volume 6 Issue 1, pp.16-23 Publisher Sabinet Online - Interim: Interdisciplinary Journal, 2007

Conferences

B.N. Gatsheni, R.B. Kuriakose and F. Aghdasi, (*IEEE International Conference on Mechatronics ICM2007*, Kumamoto, Japan), Automating a student class attendance register using radio frequency identification in South Africa, May 2007

Vector amplification for color-dependent image filtering, T. Ell, B.N. Gatsheni, S.J. Sangwine (*International Conference on Image processing (ICIP) 2003*, Barcelona, Spain))

Linear Colour-Dependent Image filtering based on Vector Decomposition: S.J. Sangwine, B.N. Gatsheni, T. Ell, *European Signal Processing Conference (EUSIPCO) 2002*, and paper No. 543.

Color-dependent linear vector image filtering, Todd A. Ell, Stephen J. Sangwine, Barnabas N. Gatsheni, *EUSIPCO 2004*, Austria, Vienna.

Gatsheni, Barnabas; Katambwa, Olga: The Design of Predictive Model for the Academic Performance of Students at University Based on Machine Learning, The 19th International Conference on Artificial Intelligence (ICAI'17: July 17-20, 2017, Las Vegas, USA)

Nkosi, Z; Gatsheni, B: The Design of a Bayesian Network Vehicle Traffic Flow Prediction Model for Johannesburg; The 18th International Conference on Artificial Intelligence (ICAI'16: July 25-28, 2016, Las Vegas, USA)

Theko Marie; Barnabas Gatsheni; “ Intelligent Highway vehicle traffic flow monitoring and control system”; ICAI'15-The 17th International Conference on Artificial Intelligence (ICAI'15); Las Vegas, Nevada, USA, July 27—30; 2015

TC. Mpala; PT Chiloane; A. Drotskie, B Gatsheni; The role of IT in a decentralised vs Centralised operating model within a financial services organisation; *8th International Business Conference, Swakopmund, Namibia. 19th – 21st August 2014*

Barnabas Ndlovu Gatsheni, Ike Sikakana, Jethro Mangane: The design for a Johannesburg commuter rail of an incidence response system based on web services and UML; *2013 Proceedings of the 14th Annual Conference on World Wide Web Applications, Johannesburg*

Barnabas Gatsheni, Ike Sikakana, Jethro Mangane: Design of an integrated real-time information sharing model for a train incidence response between related departments at WitsMetrorail in South Africa ; *2011 Proceedings of the 13th Annual Conference on World Wide Web Applications, Johannesburg*

The design of a “Global View” web interface for Sasol’s global operations management, 2009; *Proceedings of the 11th Annual Conference on World Wide Web Applications, Port Elizabeth*

