

The IASTED International Conference on
MODELLING AND SIMULATION
~MS 2008~

Gaborone, Botswana
September 8-10, 2008

FINAL CONFERENCE PROGRAM



LOCATION
Gaborone International Convention Centre (GICC)
Bonnington Farm, Molepolole Road,
Gaborone, Botswana

MODELLING AND SIMULATION

~MS 2008~

SPONSORS

The International Association of Science and Technology for Development (IASTED)

- Technical Committee on Modelling and Simulation
 - Technical Committee on Optimization
- World Modelling and Simulation Forum (WMSF)

PLATINUM SPONSORS



LOCAL ARRANGEMENTS CHAIR

Prof. George O. Anderson – University of Botswana, Botswana

CONFERENCE CHAIR

Dr. Francis J. Ogwu – University of Botswana, Botswana

PES KEYNOTE SPEAKER

Prof. Bimal K. Bose – University of Tennessee, USA

MS KEYNOTE SPEAKER

Prof. Tshilidzi Marwala – University of Witwatersrand, South Africa

WRM KEYNOTE SPEAKER

Prof. David Stephenson – University of Botswana, Botswana

INVITED SPEAKER

Prof. A.B. Ngowi – University of Botswana, Botswana

GUEST SPEAKER (OPENING ADDRESS)

Hon. Ponatshego H. Kedikilwe – Minister of Minerals, Energy and Water Resources of the Republic of Botswana, Botswana

TUTORIAL PRESENTER

Dr. Jan Awrejcewicz – Technical University of Łódź, Poland

WELCOME SPEECH

Prof. Bojosi K. Otlhogile – Vice Chancellor of the University of Botswana

HOST ORGANIZATION

University of Botswana



LOCAL ARRANGEMENTS COMMITTEE

G.O. Anderson - Head, Electrical Engineering Department, University of Botswana; Chair

D. Moalafhi- Department of Environmental Sciences, University of Botswana; Secretary

E. Maje - Department of Electrical Engineering, University of Botswana; Financial Secretary

A. Masizana - Department of Computer Science, University of Botswana; Member

C. Kiravu - Department of Electrical Engineering, University of Botswana; Member

J. Sakala - Department of Electrical Engineering, University of Botswana; Member

B. Nkwae - Department of Electrical Engineering, University of Botswana; Member

R. Marumo - Department of Electrical Engineering, University of Botswana; Member

INTERNATIONAL PROGRAM COMMITTEE

- J. Abdo** – Sultan Qaboos University, Oman
J. Abonyi – Pannon University, Hungary
G.K. Adam – Technological Educational Institute of Larissa, Greece
S. Al-Khayatt – Sheffield Hallam University, UK
S. Al-Sharhan – Gulf University for Science and Technology, Kuwait
H. Arsham – University of Baltimore, USA
S.D. Asare – University of Botswana, Botswana
M.S. Ashhab – Hashemite University, Jordan
Y. Baoan – Dong Hua University, PRC
V. Baryamureeba – Makerere University, Uganda
M. Bojic – University of Kragujevac, Yugoslavia
H. Boyer – University of Reunion Island, France
A.G. Bruzzone – University of Genoa, Italy
F. Castiglione – National Research Council, Italy
J. Davila – University of the Andes, Venezuela
B.S. Dhillon – University of Ottawa, Canada
P. Ekel – Pontifical Catholic University of Minas Gerais, Brazil
A. Elkamel – University of Waterloo, Canada
J.L. Facó – Federal University of Rio de Janeiro, Brazil
L. Fan – Shenyang Institute of Chemical Technology, PRC
R. Fernández Alcalá – University of Jaén, Spain
P. Fonseca i Casas – Polytechnic University of Catalunya, Spain
M. Fossa – University of Genoa, Italy
P. Gorce – University of Toulon-Var, France
G.A. Gravvanis – Democritus University of Thrace, Greece
V. Grout – University of Wales, UK
G. Horton – University of Magdeburg, Germany
T. Kawabe – University of Tsukuba, Japan
J. Kinyua – Central University of Technology, Free State, South Africa
G.J. Koehler – University of Florida, USA
P. Kropf – University of Neuchâtel, Switzerland
A. Kurkovsky – University of the Sciences in Philadelphia, USA
C. Kyrtsov – University of Macedonia, Greece
H.J. Lin – Tamkang University, Taiwan
A. Løkketangen – Molde University College, Norway
M. Loffalian – University of Evansville, USA
M. Mahfouf – University of Sheffield, UK
A. Mantawy – King Fahd University of Petroleum & Minerals, Saudi Arabia
T. Marwala – University of the Witwatersrand, South Africa
A. Masizana – University of Botswana, Botswana
M. Monticino – University of North Texas, USA
M.A. Munlin – Tapee College, Thailand
S. Narayanan – Wright State University, USA
J. Navarro-Moreno – University of Jaen, Spain
T. Niculiu – University "Politehnica" of Bucharest, Romania
A. Nketsa – Paul Sabatier University, France
P. Nyamuhanga – Jomo Kenyatta University of Agriculture and Technology, Kenya
F.J. Ogwu – University of Botswana, Botswana
M.C. Park – Korea Institute of Science and Technology, Korea
G. Petuelli – South-Westphalia University of Applied Sciences, Germany
P. Poggi – University of Corsica, France
A. Prodan – Iuliu Hatieganu University, Romania
E. Radwan – University of Central Florida, USA
M.K. Rashid – Sultan Qaboos University, Oman
Y.B. Reddy – Grambling State University, USA
T. Riismaa – Tallinn University of Technology, Estonia
J.L. Risco – Complutense University of Madrid, Spain
S. Rubin – Space and Naval Warfare Systems Center, USA
E.W. Sachs – University of Trier, Germany
W. Sandmann – University of Bamberg, Germany
E. Santini – La Sapienza University of Rome, Italy
D. Schreurs – Catholic University of Leuven, Belgium
T. Schulze – University of Magdeburg, Germany
V. Selman – American University, USA
Y. Shmaliy – Guanajuato University, Mexico
R. Sitte – Griffith University, Australia

R. Spolon Ulson – Sao Paulo State University, Brazil
A. Swierniak – Silesian University of Technology, Poland
T. Thyagarajan – MIT, Anna University, India
M.B. Trabia – University of Nevada, Las Vegas, USA
L. Trajkovic – Simon Fraser University, Canada
G. Varga – University of Miskolc, Hungary

A.K. Verma – Indian Institute of Technology, Bombay, India
J. Vincent – Bournemouth University, UK
J. Vondrich – Czech Technical University in Prague, Czech Republic
K.T. Wong – Hong Kong Polytechnic University, PRC
L.T. Yang – St. Francis Xavier University, Canada
L. Yilmaz – Auburn University, USA
M. Zwolinski – University of Southampton, UK

PROGRAM OVERVIEW

Sunday, September 7, 2008

- 17:30 - Registration
- 19:00 (*GICC Pre-Function Area*)

- 19:00 Welcome Reception
 (*Tsodilo A*)

Monday, September 8, 2008

- 07:45 - Registration
- 09:00 (*GICC Pre-Function Area*)

- 09:00 Opening Ceremony
 (*Tsodilo C Room*)

- 10:15 - Coffee Break
- 10:30 (*GICC Pre-Function Area*)

- 10:30 - Invited Speaker - "Intellectual
11:15 Capital"
 (*Tsodilo C*)

- 11:15 Power and Energy Systems
 Keynote Address - "Energy,
 Environment, and the
 Advancing Frontier of Power
 Electronics"
 (*Tsodilo C*)

- 12:15 - Lunch
- 13:45 (*Livingstones Restaurant*)

- 13:45 - Session 1 – Special Session
15:30 "Health Informatics"
 (*Moremi 1*)

- 15:30 Optional Evening Tour -
 "Botswana Bush Braai"
 (*Meeting Place: Main Entrance
 GICC*)

Tuesday, September 9, 2008

- 08:00 - Modelling and Simulation
- 09:00 Keynote Address - "Modelling
 and Simulation of Complex
 Systems Using Computational
 Intelligence Techniques"
 (*Tsodilo C*)

- 09:00 Water and Resource
 Management Keynote
 Address - "Supplying
 Increasing Water Demands
 with Decreasing Resources"
 (*Tsodilo C*)

- 09:15 Session 2 - Economic
 Application
 (*Moremi 1*)

- 10:00 - Coffee Break
- 10:15 (*Grand Palm Convention Rooms
 Pre-Function Area*)

- 10:15 Session 2 Continued

- 12:15 - Lunch
- 14:00 (*Livingstones Restaurant*)

- 14:00 Tutorial Presentation -
 "Bifurcation, Chaos and
 Stability Theories for High
 Technology: Modelling,
 Simulation and Experimental
 Investigations"
 (*Moremi 1*)

- 15:30 - Coffee Break
- 15:45 (*Grand Palm Convention Rooms
 Pre-Function Area*)

- 15:45 - Tutorial Presentation
- 17:15 Continued

19:00 Dinner Banquet
(*Tsodilo A Room*)

14:00 Session 5 – Simulation
Optimization
(*Tsodilo B3*)

Wednesday, September 10, 2008

09:00 Session 3 – Modelling
Techniques (*Moremi 1*)

Session 4 – Mathematical
Modelling
(*Moremi 2*)

10:00 - Coffee Break
10:15 (*Grand Palm Convention Rooms
Pre-Function Area*)

10:15 Sessions 3 and 4 Continued

12:30 - Lunch
14:00 (*Livingstones Restaurant*)

Session 6 – General Methods
(*Moremi 1*)

Session 7 – Scientific
Applications
(*Moremi 2*)

15:30 - Coffee Break
15:45 (*Grand Palm Convention Rooms
Pre-Function Area*)

15:45 Sessions 5, 6, and 7 Continued

17:30 Closing Ceremony
(*Tsodilo C*)

PLEASE NOTE

- ❖ Paper presentations are 15 minutes in length with an additional 5 minutes for questions.
- ❖ Report to your Session Chair 15 minutes before the session is scheduled to begin.
- ❖ Presentations should be loaded onto the presentation laptop in the appropriate room prior to your session.
- ❖ End times of sessions vary depending on the number of papers scheduled.

**SUNDAY,
SEPTEMBER 7, 2008**

17:30 – 19:00 REGISTRATION
IASTED Representative: TBA
Room: GICC Pre-Function Area

**19:00 – 20:00 WELCOME
RECEPTION**
Room: Tsodilo A

**MONDAY,
SEPTEMBER 8, 2008**

07:45 – 09:00 REGISTRATION
IASTED Representative: TBA
Room: GICC Pre-Function Area

**09:00 – 10:15 OPENING
CEREMONY**
Brief Introduction
Presenter: Prof. George O. Anderson
(Botswana)

Welcome Address
Presenter: Prof. Bojosi K. Otlhogile
(Botswana)

Opening Speech
Hon. Ponatshego H. Kedikilwe
(Botswana)

Vote of Thanks
Dr. Otlogetswe Totolo (Botswana)
Room: Tsodilo C

10:15 – 10:30 COFFEE BREAK
Location: GICC Pre-Function Area

**10:30 – 11:15 INVITED
SPEAKER - “INTELLECTUAL
CAPITAL”**
Presenter: Prof. A.B. Ngowi
(Botswana)
Location: Tsodilo C

**11:15 – PES KEYNOTE
ADDRESS - “ENERGY,
ENVIRONMENT, AND THE
ADVANCING FRONTIER OF
POWER ELECTRONICS”**
Presenter: Prof. Bimal K. Bose
(USA)
Location: Tsodilo C

12:15 – 13:45 LUNCH
Location: Livingstones Restaurant

**13:45 – SESSION 1 – SPECIAL
SESSION - “HEALTH
INFORMATICS”**
Organizer: Dr. Francis J. Ogwu
(Botswana)
Room: Moremi 1

603-803
**Group Decision Support for
Provision of HIV Therapy**
A.N. Masizana-Katongo and
T. Taukobong (Botswana)

603-804

Incorporating Data Mining into a
Mobile Healthcare Portal

*G. Anderson, A.N. Masizana-
Katongo, and D. Mpoeleng
(Botswana)*

603-805

Organization of a Health
Informatics Research Project

*G. Anderson, A.N. Masizana-
Katongo, and D. Mpoeleng
(Botswana)*

603-806

Healthcare FAQ Information
Retrieval using a Commercial
Database Management System

*G. Anderson, Y. Ayalew,
P.A. Mokotedi, N.P. Motlogelwa,
D. Mpoeleng, and E. Thuma
(Botswana)*

603-807

Understanding HIV/AIDS
Pandemic by High Performance
Computing Epidemiology

*A. Masizana-Katongo, D. Mpoeleng,
and T. Tau (Botswana)*

**15:30 – OPTIONAL EVENING
TOUR – “BOTSWANA BUSH
BRAAI AND GAME DRIVE”**

*Meeting Place: Main Entrance GICC
Time: 15:30*

Our group will set out on our
journey just before sunset to the
Mokolodi Nature Reserve for a 2-
hour game drive. Refreshments
will be available upon arrival and

then you can relax and enjoy the
sights. Following the game drive,
we will be served a full hot Braai
menu around a cozy fire as we
enjoy entertainment provided by
the Ditshwene traditional dance
troupe.

**TUESDAY,
SEPTEMBER 9, 2008**

**08:00 – 09:00 MS KEYNOTE
ADDRESS – “MODELLING
AND SIMULATION OF
COMPLEX SYSTEMS USING
COMPUTATIONAL
INTELLIGENCE
TECHNIQUES”**

*Presenter: Prof. Tshilidzi Marwala
(South Africa)
Room: Tsodilo C*

Many complex systems cannot be
easily modelled and simulated
using traditional mathematical
techniques. Recently, there has
been increased interest in using
computational intelligence
methods to model and simulate
complex systems. In this study
computational intelligence
techniques are used to model
complex systems. In particular,
agent-based modelling, rough sets
and causal graphical models are
used to model complex systems.
Three classes of complex
problems are studied and these

are interstate conflict, HIV and fault detection in mechanical as well as electrical systems. The results obtained demonstrate that computational intelligence techniques are able to model and simulate complex systems.

Tshilidzi Marwala, born 28 July 1971 in Venda, Limpopo, South Africa, is the Adhominem Professor of Electrical Engineering, the Carl and Emily Fuchs Chair of Systems and Control Engineering as well as the DST/NRF South Africa Research Chair of Systems Engineering at the University of the Witwatersrand and is a professor extraordinaire at the University of Pretoria. He is the youngest recipient of the Order of Mapungubwe, whose other recipients are Nobel Prize Winners Sydney Brenner, J.M. Coetzee, Nelson Mandela and F.W. de Klerk. He holds a Bachelor of Science in Mechanical Engineering (Magna Cum Laude) from Case Western Reserve University, a Master of Engineering from the University of Pretoria, a PhD in Engineering from the University of Cambridge, and a Program for Leadership Development from Harvard Business School. He was a post-doctoral research associate at the Imperial College of Science, Technology and Medicine and in the year 2006 to 2007 was a

visiting fellow at Harvard University. In the year 2007 to 2008 he is a visiting fellow at Wolfson College of the University of Cambridge. His research interests include theory and applications of computational intelligence to engineering, computer science, finance, social science and medicine. Marwala has made fundamental contributions to engineering including the development of the concept of pseudo-modal energies and the development of a Bayesian framework for solving engineering problems. He has successfully supervised 32 Masters and PhD students to completion and has published over 180 papers in journals, proceedings and book chapters. His book *Computational Intelligence for Modelling Complex Systems* is published by Research India Publications. He is an associate editor of the *International Journal of Systems Science*, *Journal of Computers* as well as the *ICIC Express Letters: An International Journal of Research and Surveys*. He was part of a team that succeeded in bringing the 2014 World Congress of Automatic Control to Africa for the first time. He sits on more than 9 boards such as City Power Johannesburg (Pty) Ltd., as well as the State Information Technology Agency (Pty) Ltd. He is a fellow of many organizations such as the Royal Society of Arts.

His work has been featured in prestigious publications such as the New Scientist.

**09:00 – WRM KEYNOTE
ADDRESS – “SUPPLYING
INCREASING WATER
DEMANDS WITH
DECREASING RESOURCES”**

*Presenter: Prof. David Stephenson
(Botswana)*

Room: Tsodilo C

**09:15 – SESSION 2 – ECONOMIC
APPLICATION**

Room: Moremi 1

603-025

A Model for Bank Profit Subject to
Loan Losses

*T. Bosch, J. Mukuddem-Petersen,
M.A. Petersen, and C. Senosi
(South Africa)*

603-027

Optimizing Net Profit for Banks
with Interacting Loan Portfolios

*T. Bosch, J. Mukuddem-Petersen,
M. Mulaudzi, and M.A. Petersen
(South Africa)*

603-055

Economic Evaluation of
HIV/AIDS via the QALY Model

*T. Bosch, J. Mukuddem-Petersen, and
M.A. Petersen (South Africa)*

603-037

Modelling and Simulation for
Analysis of Sugarcane Transport
Systems

*B.C. McDonald, E. Dube, and
C. Bezuidenhout (South Africa)*

603-041

Modeling and Simulation for
Sustainable Manufacturing

D. Kibira and C. McLean (USA)

603-075

Modeling Vulnerability of the
Supply Chain to External Risks

A. Bruzzone and M. Massei (Italy)

603-081

Relational Networks for HIV
Classification

*V. Marivate and T. Marwala
(South Africa)*

603-801

Modeling and Simulation of
Network and Systems Service
Management in Healthcare

*T.J. Ali, P. Akhtar, and V. Abbas
(Pakistan)*

10:00 – 10:15 COFFEE BREAK

*Location: Grand Palm Convention
Rooms Pre-Function Area*

10:15 – SESSION 2 CONTINUED

12:15 – 14:00 LUNCH

Location: Livingstones Restaurant

**14:00 - TUTORIAL
PRESENTATION -
"BIFURCATION, CHAOS AND
STABILITY THEORIES FOR
HIGH TECHNOLOGY:
MODELING, SIMULATION
AND EXPERIMENTAL
INVESTIGATIONS"**

*Presenter: Dr. Jan Awrejcewicz
(Poland)*

Room: Moremi 1

Following an historical overview of natural sciences development, the significant role of a physical pendulum (and its various modifications), which is a very useful mechanism in the modeling and design of various real processes, is observed.

The nonlinear dynamics of a real plane and periodically forced triple pendulum is investigated experimentally and numerically. The mathematical modeling includes details taking into account some characteristic features (for example real characteristics of joints built by the use of roller bearings) as well as some imperfections (asymmetry of the forcing) of the real system. Parameters of the model are obtained by a combination of the estimation from experimental data and direct measurements of the geometric and physical system parameters. A few versions of the model of resistance in the joints are tested in the identification process. Good

agreement between both numerical simulation results and experimental measurements are obtained. Some novel features of the bifurcation and chaotic behavior of the investigated system are also reported, and a novel approach to rolling bearings friction modeling is proposed, among other results.

The introduction of motion limiters (barriers) to the pendulum dynamics allows the study of hybrid pendulum behavior including interaction with the barriers (impacts and/or sliding). In addition, the studied triple inverted pendulum can be used to model a piston-connecting rod-crankshaft system of a mono-cylinder combustion engine showing the well-known six stages of the piston along the cylinder per one engine cycle. The proposed methodology consisting of three fundamental steps including modeling, simulation and experimental investigation may serve as an engineering kit useful for solving a variety of challenging problems that occur in mechanical, civil and mechatronical high technology engineering.

Dr. Jan Awrejcewicz holds an M.S. (1977), Ph.D. (1981), D.Sci. (1990), Prof. (1994), and Full Prof. (1997) degrees from the Mechanical Engineering Faculty of the Technical University of Łódź, Poland. He is a founder and

head of the Department of Automatics and Biomechanics, as well as a founder and chairperson of the Ph.D. Schools on Mechanics. He is an author and/or a co-author of 34 monographs, 4 textbooks, 10 conference proceedings, 11 journal special issues, and over 460 purely reviewed papers in international journals, conferences and meetings.

He spent over 10 years abroad conducting research supported by The Fulbright Foundation (University of California, Berkeley), The Alexander von Humboldt Foundation (Technical University of Braunschweig, Germany), The Kosciuszko Foundation (University of Illinois, USA), The Research Centre for Advanced Science and Technology and The Japanese Society for Promotion of Science (Tokyo University, Japan), among others. His research is mainly focused on asymptotic methods, nonlinear dynamics of lumped continuous and discontinuous systems, nonlinear structural mechanics, engineering biomechanics, and recently mechatronics. He is a supervisor of 13 Ph.D. theses, a reviewer of numerous papers and books, a member of a variety of conferences, a member of editorial boards for numerous journals, and a recipient of a few

prestigious awards for his scientific activity.

15:30– 15:45 COFFEE BREAK

Location: Grand Palm Convention Rooms Pre-Function Area

**15:45 - TUTORIAL
PRESENTATION CONTINUED**

19:00 - DINNER BANQUET

Location: Tsodilo A

**WEDNESDAY,
SEPTEMBER 10, 2008**

**09:00 - SESSION 3 -
MODELLING TECHNIQUES**

Room: Moremi 1

603-051

Numerical Simulation of the Laser Thermokeratoplasty

*P. Ruzicka and S. Konvickova
(Czech Republic)*

603-061

Revolutionary New Algorithm to Simulate Solar Radiation Components and Optimum Slopes of Absorber Plate

*N. Nijgorodov, J.G. King, and
D. Khare (Botswana)*

603-065
Simulation of the Mean Monthly
and Mean Yearly Optimum
Slopes for Botswana and SADC
Countries
*N. Nijegorodov, D. Khare, and
T.A. Thomas (Botswana)*

603-073
Complete Investigation of Solar
Radiation Conditions in
Botswana: Comparison of
Simulated and
Experimental Results
*D. Khare, N. Nijegorodov, and
T.A. Thomas (Botswana)*

603-084
Finite Element Analysis of the
Dynamic Behaviour of Wind
Turbines by Component Modal
Synthesis
*P. Forte, G. Melani, and V. Giorgini
(Italy)*

603-085
Estimation of Missing Data using
a Neuro-Fuzzy Architecture
*N.U. Hlalele, F.V. Nelwamondo, and
T. Marwala (South Africa)*

603-086
Driving Simulator for the
Analysis of Driving Style and
Vehicle Motion Conditions
*R. Bartolozzi, F. Frenzo, and
E. Vitale (Italy)*

603-089
Comfort Study of a Building with
Photovoltaic Panels for the Solar
Protection
*D. Bigot, F. Miranville, and
H. Boyer (France)*

603-090
Impact of Wind Generators and
Synchronous Generator
Controllers on a Power System
Transient Stability
*M. Khomari and K.A. Folly
(South Africa)*

**09:00 – SESSION 4 –
MATHEMATICAL
MODELLING**
Room: Moremi 2

603-019
Estimation of Signal Parameters
for Power Systems Monitoring
using Separable Least Squares
*J.A. Jordaan and B.J. van Wyk
(South Africa)*

603-035
Mathematical Modelling and
Simulation of SVC and
STATCOM into a Power System
*D. Setlhaolo and E.T. Rakgati
(Botswana)*

603-052
A Mathematical Simulation
Model for Water Resources
Management in Multipurpose
Scenarios
*A. Pierleoni, S. Casadei, and
M. Bellezza (Italy)*

603-063

Modeling of Heat and Mass
Transfer in GMAW Including
Heat Sources and Reacting Forces
*N. Mbonde and A.Kh. Mohamed
(Tanzania)*

603-066

Entropy-Type Classification
Maximum Likelihood Method
M.-S. Yang and C.-Y. Lai (Taiwan)

603-067

Modelling Turbulent Convective
Fluid Flow Past a Vertical Infinite
Plate with Hall Current
*J.K. Kwanza, W.O. Mukuna, and
M. Kinyanjui (Kenya)*

603-074

Perturbations and Stability Issues
in Spectral Methods for
Simulation
F. Delebecque (France)

603-800

A Comprehensive Model of the
General Gas Metal Arc Welding
(GMAW) Processes
*N. Mbonde and G.J. Oliver
(South Africa)*

603-057

Trim and Stability Analysis of
Powered Parafoil/Payload
System
*J.O. Pedro and B.J. Wolmarans
(South Africa)*

10:00 – 10:15 COFFEE BREAK

*Location: Grand Palm Convention
Rooms Pre-Function Area*

**10:15 – SESSIONS 3 AND 4
CONTINUED**

12:30 – 14:00 LUNCH

Location: Livingstones Restaurant

**14:00 – SESSION 5 –
SIMULATION OPTIMIZATION**

Room: Tsodilo B3

603-002

Simulation of Active Blade
Servers in an Enterprise
*K.J. Poornaselvan, S.
Shanmugasundaram, and
C.D. Preya (Botswana)*

603-008

On Optimizing the Compiler
P.M. Nawghare (Botswana)

603-014

Stability of Control Systems with
Two Variable Parameters
K.M. Yanev (Botswana)

603-016

Optimization of Frequency
Response and Design of
Electrochemical Kinetic
Measurement System
P.M. Nawghare (Botswana)

603-058

Optimization of Finite Capacity Scheduling based on an Evolutionary Approach

H.O. Nyongesa (South Africa), S. Maleki-dizaji (UK), and Z.A. Mbero (Botswana)

603-071

Investigation of Autoencoder Neural Network Accuracy for Computational Intelligence Methods to Estimate Missing Data

J. Mistry, F.V. Nelwamondo, and T. Marwala (South Africa)

603-079

Data Mining Operating System Scheduling Traces

T.Z. Nkgau and G. Anderson (Botswana)

603-083

The Effect of Structural Diversity of an Ensemble of Classifiers on Classification Accuracy

L. Masisi, V. Nelwamondo, and T. Marwala (South Africa)

603-043

Prototype of Five-Fingered Prosthetic Hand: EMG based Control Scheme and Novel Mechanical

J. Zajdlík (Czech Republic)

14:00 – SESSION 6 – GENERAL METHODS

Room: Moremi 1

603-015

Technologies and Utilization in Schools: Its Implications to Learning

E.N. Ogwu and F.J. Ogwu (Botswana)

603-018

Framework for Readiness Assessment of 3G Mobile Telecommunication Network

A.S. Akande, F.J. Ogwu, and S.O. Ojo (Botswana)

603-021

Visual Model of Feedback Transmission in IPTV

D. Komosny, P. Cimbalék (Czech Republic), K. Ganeshan (New Zealand), J. Muller, and R. Burget (Czech Republic)

603-024

Spur Policy using Income Administration in Grid Computing

K.J. Poornaselvan, S. Shanmugasundaram, and C.D. Preya (Botswana)

603-048

Correlation between Temperatures and Solar Irradiation in Botswana: Bivariate Models

P.K. Jain, J. Prakash, and E.M. Lungu (Botswana)

603-072
Impact of Wind Generators on the
Transient Stability of Power
Systems Network
S.P.N. Sheetekela and K.A. Folly
(South Africa)

**14:00 – SESSION 7 –
SCIENTIFIC APPLICATIONS**
Room: Moremi 2

603-003
Sensitivity Analysis of Process
Parameters on Arc, Heat Transfer
and Bead Shape in GMAW
N. Mbonde and G.J. Oliver
(South Africa)

603-020
Virtual Experimentation
Simulation on Transfer Platform
at Sea
Y. Zhang and Y. Hong (PRC)

603-044
Parametrizing Random Topology
Generating Functions
*T. Kisner, F. Kaderali, and
H. Hemmer (Germany)*

603-054
Effect of Transfer File Size on
TCP-ADaLR Performance: A
Simulation Study
M. Omueti and L. Trajkovic
(Canada)

603-068
Simulating Motion Effects using a
Hydraulic Platform with Six
Degrees of Freedom
E. Thöndel (Czech Republic)

603-070
Modelling Cluster Nucleation and
Growth in Alloys
K.A. Hawick (New Zealand)

603-080
Network Preservation Through a
Topology Control Algorithm for
Wireless Mesh Networks
*F.O. Aron, T.O. Olwal, A. Kurien,
and Y. Hamam (South Africa)*

603-082
Stability in Modal Identification:
Numerical Analysis of a Subspace
Method
M. Goursat (France)

603-091
Generalized Predictive Control for
Nonlinear Dynamic System:
Application of Induction Motor
B. Abdeldjebar and B. Khier (Algeria)

603-802
Dynamics of the Rotor Suspended
in a Hybrid Magneto-
Hydrodynamic Field
*J. Awrejcewicz (Poland) and
L.P. Dzyubak (Ukraine)*

15:30 – 15:45 COFFEE BREAK
*Location: Grand Palm Convention
Rooms Pre-Function Area*

15:45 - SESSIONS 5, 6, AND 7
CONTINUED

17:30 - CLOSING CEREMONY
Room: Tsodilo C

**IASTED would like to thank you
for attending PES 2008. Your
participation helped make this
international event a success, and
we look forward to seeing you at
upcoming IASTED events.**
