Call for Papers

3rd International Conference on Broadband Communications, Information Technology & Biomedical Applications (BroadCom 2008)

November 23 – 26, 2008

http://broadcom.eng.uts.edu.au/broadcom08/

CSIR International Convention Centre, Pretoria, South Africa

South Africa in recent years has continued to create significant excitement in R&D. This excitement is being supported by government, the National Research Fund (NRF), Department of Science and Technology (DST), industry and research organisations with strong collaboration and support from the European Union through its framework programs and the AU. This conference therefore is organised to further report and add impetus to the emerging collaborations and provide researchers the avenue for networking.

In 2008 the International conference on wireless broadband and ultra wideband communication) is being hosted by South Africa with stronger and more broad emphasis. The current emphasis reflects the growing interest in new areas of broadband communications. In 2008 the conference is being co-organised by South Africa's leading research organisations. The core theme of the conference has been expanded to include applications of broadband communications, broadband biomedical applications and biotechnology.

The conference is co-organised by the French South African Technical Institute in Electronics (F'SATIE); Tshwane University of Technology (TUT), South Africa; Meraka Institute, South Africa; University of Technology Sydney, Australia, University of Cape Town and the Cape Peninsula University of Technology (CPUT), Cape Town, South Africa and South African National Centre for Informatics, Knowledge Management and Knowledge Economy (SANCIKMKE).

All papers submitted to this conference are always peer-reviewed. All accepted papers will be published in the IEEE Xplore digital library and the best papers from the conference will be published as a book of best papers by River Publishers of Denmark (as in 2007). Other short-listed papers will also be published in a special edition of the African Journal of Information and Communication Technology (AJICT).

Lead Organisations
1. French South African Technical Institute in Electronics (F'SATIE), Pretoria, South Africa
2. Tshwane University of Technology, Pretoria, South Africa
3. Meraka Institute (African Advanced Institute for ICT), Pretoria, South Africa
4. University of Technology, Sydney, Australia
5. University of Cape Town, South Africa
6. Cape Peninsula University of Technology, Cape Town

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In Cooperation with

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1. French South African Technical Institute in Electronics (F'SATIE/TUT), Pretoria, South Africa
2. Tshwane University of Technology, Pretoria, South Africa
3. University of Technology, Sydney, Australia
4. Cape Peninsula University of Technology, Cape Town, Western Cape, South Africa
5. University of Cape Town, Western Cape, South Africa
6. University of Stellenbosch, Western Cape, South Africa
7. IEEE Region 10 (Under Negotiations)
8. River Publishers, Denmark

Organising Committee

Prof. Yskandar Haman, Scientific Director, F'SATIE, Pretoria, South Africa

Dr. Elmarie Bierman, Faculty of ICT, Tshwane University of Technology, Pretoria, South Africa

Dr Anwar Wahed, Meraka Institute, Pretoria, South Africa

Prof. H. Anthony Chan, University of Cape Town, South Africa

Ms Denise Umuhoza, Meraka Institute, Pretoria, South Africa

Dr. Johnson I Agbinya, F'SATIE / Alcatel Centre for Content Development, Pretoria, South Africa

Prof. Sam Reisenfeld, UTS, Australia

Mr. Anish Kurien, Faculty of Engineering & the Built Environment, Tshwane University of Technology, Pretoria, South Africa

Dr. Keith Ferguson, Meraka Institute, Pretoria, South Africa

Technical Program Committee

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Dr. Elmarie Biermann, Faculty of ICT, Tshwane University of Technology, Pretoria, South Africa

Prof. Ben van Wyk, Faculty of Engineering and the Built Environment, Tshwane University of Technology, Pretoria, South Africa

Dr Sara Lal, University of Technology, Sydney, Australia

Mr Zenon Chaczko, University of Technology, Sydney, Australia

Ms Oya Sevimli, CSIRO ICT, Sydney, Australia

Rajeev Prasad, River Publishers, Denmark

Dr Ntsibane Ntlatlapa, Meraka Institute, Pretoria, South Africa

Dr Aun Haider, Masey University, New Zealand

Dr Adel Al-Jumaily, University of Technology, Sydney, Australia

Dr. Keith Ferguson, Meraka Institute, Pretoria, South Africa

Dr Nolwazi Mbanang, South African National Centre for Informatics, Knowledge Management and Knowledge Economy (SANCIKMKE)

Dr Rongyu Qiao, CSIRO ICT Centre, Marsfield, Australia

Local Events Committee

Dr. Elmarie Biermann, Faculty of ICT, Tshwane University of Technology, Pretoria, South Africa

Ms Denise Umuhoza, Meraka Institute, Pretoria, South Africa

Mr. Anish Kurien, Faculty of Engineering and the Built Environment, Tshwane University of Technology, Pretoria, South Africa

Ms Saloshni Naidoo, Meraka Institute, Pretoria, South Africa

Dr. Johnson I Agbinya, UTS Australia / F'SATIE / Alcatel Centre for Content Development, South Africa

Dr Ntsibane Ntlatlapa, Meraka Institute, Pretoria, South Africa

STREAM 1: BROADBAND WIRELESS COMMUNICATION
(Dr Ntsibane Ntlatlapa, Meraka Institute); Ms Oya Sevimli, CSIRO ICT Australia)

1. MIMO and OFDM techniques
2. Wireless Mesh Networks
3. WiMAX
4. Millimetre Wave Technologies
5. Millimetre wave Imaging
6. Ultra wideband communications and systems
7. Ultra wideband synchronisation
8. Broadband Antennas and systems
9. Modulation and coding schemes
10. 4G and B3G MAC protocols
11. Real Time Internet
12. Personal Area Networks (PAN)
13. Mobility management
14. Radio resource management
15. Packet scheduling algorithms
16. Routing protocols
17. Vehicular Wireless Networks
18. Network architecture and topology design
19. Cross-layer design and optimization
20. Operations Support Systems (OSS)
21. Wireless QoS
22. Multihop and relay networks
23. Mobile ad hoc networks
24. Wireless sensor networks

STREAM 2: BROADBAND OPTICAL COMMUNICATIONS
(Dr Robert, TUT / FSATIE, CPUT, Cape Town)

1. WDM transmission technologies and systems
2. Optical cross-connects and optical packet and burst switches
3. Optical packet, burst and circuit switching networks
4. Optical access networks - FTTx networks and systems
5. Hybrid packet and circuit nodes and architectures
6. Radio over fiber based networks
7. FTTx networks and systems
8. Optical grids in access and core
9. Storage Area Network extensions
10. Multilayer optical networks (Ethernet, IP, G-MPLS technologies, etc)
11. Cross-layer design
12. Optical networking for green information and communications technology
13. Traffic grooming and processing
14. Modelling and design of optical networks and systems
15. Network operations and management
16. Passive Optical Networks

STREAM 3: COMMUNITY WIRELESS ACCESS NETWORKS and IP COMMUNICATIONS
(Dr Keith Ferguson, Meraka Institute)

1. Wireless mesh networks (WMN)
2. Business Models of wireless access networks
3. Fixed and Mobile WiMAX
4. IP Services (Voice over IP (VoIP) communications, IPTV, Presence, Mobile TV , SIP – based services)
5. IP Service Architectures (Parlay, SIP and IMS)

6. Second Life and Social Networking
7. Softswitching
8. MPLS and IPv6
9. Instant Messaging and Presence
10. Routing and Scheduling
11. Congestion control and Traffic engineering
12. Network modelling, measurement and management
13. QoS
14. Peer-to-peer networks
15. Content distribution networks
16. Web and Media technologies
17. Internet architectures, algorithms, protocols, and services
18. Internet2

STREAM 4: SECURITY, Management and Regulations
(Dr Elmarie Biermann, TUT/FSATIE, Pretoria)
1. Detection, mitigation and prevention of SPIT, SPIM, Vishing
2. Intrusion and anomaly detection and protection for VoIP, NGN and IMS systems
3. Denial of Service detection and prevention
4. Security of voice, video and text over IP services
5. Fraud detection and prevention
6. Threat and vulnerability analyses of VoIP, NGN and IMS systems
7. Content security and protection of media flows
8. Security of VoIP supporting systems
9. End-to-end security schemes
10. Inter-provider trust and verification schemes
11. Emerging security aspects in standards
12. Management, Resilience and QoS
13. Management of VoIP infrastructure and services
14. P2P overlays for future telecommunication systems
15. Self-healing architectures
16. Traffic monitoring and QoS measurement of VoIP, NGN and IMS traffic
17. Monitoring and testing tools for VoIP, NGN and IMS infrastructures
18. QoS for voice and video
19. VoIP and IMS system performance, reliability and scalability
20. Load balancing for VoIP, NGN and IMS systems
21. High availability solutions for VoIP, NGN and IMS systems
22. Billing and AAA
23. Emergency services
24. Regulatory aspects of IP-based telecommunication systems
25. Lawful intercept for VoIP, NGN and IMS systems
26. Inter-connections

STREAM 5: APPLICATIONS & CONTENT
(Dr Johnson I Agbinya, UTS/TUT/FSATIE, Pretoria)
1. Sensor networks and ontologies
2. Sensor monitoring systems
3. Sensor web, resource and services
4. Semantic Web
5. Ontology theory, model and visualisation
6. Web ontology languages
7. E-Healthcare and health care networks
8. Intelligent broadband transport networks
9. Applications of RFID
10. Interactive Multimedia Systems over IP networks
11. Multimedia Content Distribution and Management,
12. Content Personalization in IP-based Applications
13. Internet Agents/Softbots

14. Adaptive Agent Systems
15. Agent Communication and Multi-Agent Systems
16. E-government, Entertainment and Home Networking

STREAM 6: Biomedical, Health Technologies & Knowledge Management
(Dr Sara Lal (UTS) / Dr Nolwazi Mbanang (SANCIKMKE))
1. Biomedical Applications
2. BioNets
3. Medical Imaging and compression
4. Implantable devices and applications
5. e-Forensics
6. Telemedicine
7. Bioinformatics
8. Knowledge management
9. Clinical Applications of telehealth (Dermatology, Chronic Disease Management)
10. Cost benefit analysis of telehealth
11. Applications of Telehealth
12. Telehealth Technologies and Interoperability
13. Telehealth networking and interfaces
14. Image and x-ray Transmission
15. Knowledge management
16. Demand for telehealth
17. Web-based Telehealth
18. Database and health information systems
19. Digital Imaging
20. Computed Radiology
21. Computed Tomography
22. Ultrasound Imaging
23. Image Processing
24. Image and x-ray Compression
25. Data Transmission

Important Dates:
* Tutorial Proposals;   April 30, 2008
* Paper submission deadline: May 31,   2008
* Notification of acceptance: June 30,   2008
* Final camera-ready Copy Due: July 21,   2008

Book of Best Papers (2007 Edition)
You may now order copy(ies) of the 'extended best papers from the conference' of 2007 being published by River Publishers Denmark.

Order now and get a unique 50% discount. The book can be ordered NOW for just Euro 48.50!!

The Best Papers BroadCom 2008 will also be published in a similar manner.