

Southern African Computer Lecturers Association

43rd SACLA CONFERENCE PROGRAMME

24—26 June 2014

Summerstrand South Campus, Nelson Mandela Metropolitan University and Summerstrand Hotel

Port Elizabeth

Nelson Mandela Bay

http://www.sacla.org.za/ and http://sacla2014.nmmu.ac.za/

Welcoming Message from the Conference Co-Chairs

A very warm welcome to our friendly city of Port Elizabeth and to SACLA 2014. South Africa urgently needs huge investments in improving its standard of education. I hope and believe that this conference will inspire you to be even better lecturers than you are currently and will motivate you to do more research in the field of Education. In this way we can all do our small bit to increase the quality level of South Africa's tertiary education and improve the society in which we live.

Prof Andre Calitz, Dr Brenda Scholtz and Mr Clayton Burger (SACLA 2014 Conference Co-Chairs)

The Organising Committee would like to express SACLA's grateful thanks to our generous sponsors:

- Microsoft (Gold Sponsor)
- SAP (Gold Sponsor)
- SEDA Nelson Mandela Bay ICT Incubator (Silver Sponsor)
- NMMU Department of Computing Sciences (Silver Sponsor)
- Oracle (Silver Sponsor)
- Business Connexion
- Investec
- Korbitec
- Syspro
- Telkom
- Pearson Education and
- Wiley.

SACLA 2014 Committee

Organising Committee	
Conference Co-Chairs	Prof Andre Calitz (NMMU) Dr Brenda Scholtz (NMMU) Mr Clayton Burger (NMMU)
Programme Co-Chairs	Prof Janet Wesson (NMMU) Dr Kevin Naudé (NMMU)
Secretary, Treasurer, Marketing and Sponsors	Ms Desma van der Walt (NMMU)
Programme Coordinator	Dr Lester Cowley (NMMU)
Webmaster	Ms Samantha Ludick (NMMU)
Assistant Members	Ms CH Dixie (NMMU) Mr Darren Ferreira (NMMU) Mr Ross Haupt (NMMU) Ms Alyssa Whale (NMMU)

Technical Review Committee

Ms Hanifa Abdullah (UNISA) Dr Shaun Bangay (Deakin) Dr Karen Bradshaw (Rhodes) Mr Clayton Burger (NMMU) Prof Andre Calitz (NMMU) Prof Charmain Cilliers (NMMU) Dr Lester Cowley (NMMU) Dr Lizette De Wet (UFS) Dr Nomusa Dlodlo (Meraka Institute, CSIR) Dr M.C. du Plessis (NMMU) Prof Nestor Garay-Vitoria (University of the Basque Country) Dr Aurona Gerber (Meraka Institute, CSIR) Prof Paul Gloess (ENSEIRB-MATMECA, Bordeaux Institute of Technology) Prof Chris Johnson (Glasgow) Dr George Konidaris (CSAIL, MIT) Dr Melisa Koorsse (NMMU) Prof Elmarie Kritzinger (UNISA) Prof Michelle Kuttel (UCT) Prof Awie Leonard (Pretoria) Prof Philip Machanick (Rhodes) Dr Audrey Mbogho (UCT) Mr Jan Mentz (UNISA) Dr Thomas Meyer (UKZN/Meraka Institute, CSIR) Prof Mohamed Mosbah (LaBRI) Ms Jane Nash (Rhodes) Dr Kevin Naudé (NMMU, Technical Review Committee Chair) Dr David Navarre (ICS-IRIT, University of Toulouse III) Prof Isaac Osunmakinde (UNISA) Prof Keshnee Padayachee (UNISA) Prof Nelishia Pillay (UKZN) Dr Karen Renaud (Glasgow) Prof Ingrid Rewitzky (Stellenbosch) Dr Brenda Scholtz (NMMU) Prof Hussein Suleman (UCT) Prof Mamello Thinyane (Fort Hare) Dr Mos Tsietsi (Rhodes) Dr Anwar Vahed (Meraka Institute, CSIR) Dr Wynand van Staden (UNISA) Prof Herna Viktor (Ottowa) Prof George Wells (Rhodes) Prof Janet Wesson (NMMU)

Academic Conference Attendees				
TITLE	NAME	SURNAME	INSTITUTION	EMAIL
Mr	Nemr	Alnseerat	NMMU	nemr.alnseerat@nmmua.c.za
Mr	Romeo	Botes	NWU, Vaal Triangle	romeo.botes@gmail.com
Mr	Clayton	Burger	NMMU	clayton.burger@nmmu.ac.za
Prof	André	Calitz	NMMU	andre.calitz@nmmu.ac.za
Dr	Lester	Cowley	NMMU	lester.cowley@nmmuac.za
Mr	Grant	Eastwood	NMMU	grant.eastwood@nmmu.ac.za
Prof	Greg	Foster	Rhodes	g.foster@ru.ac.za
Dr	Lynn	Futcher	NMMU	lynn.futcher@nmmua.c.za
Dr	Mariana	Gerber	NMMU	mariana@nmmua.c.za
Prof	Leilani	Goosen	UNISA	goosel@unisa.ac.za
Prof	Jean	Greyling	NMMU	jean.greyling@nmmua.c.za
Mr	Ken	Halland	UNISA	hallakj@unisa.ac.za
Mr	Bertram	Haskins	NMMU	bertram.haskins@nmmu.ac.za
Mr	Ross	Haupt	NMMU	ross.haupt@nmmu.ac.za
Mr	Pieter	Joubert	UJ	pjoubert@uj.ac.za
Mr	Kabe	Tlou	TUT	tlouk@daff.gov.za
Prof	Estelle	Kritzinger	UNISA	kritze@unisa.ac.za
Prof	Jan	Kroeze	UNISA	kroezjh@unisa.ac.za
Ms	Janet	Liebenberg	NWU	janet.liebenberg@nwu.ac.za
Mr	Jose	Lukose	WSU	jlukose@wsu.ac.za
Prof	Philip	Machanick	Rhodes	p.machanick@ru.ac.za
Mr	Craig	Marais	Rhodes	craig@meerkatio.net
Ms	Thembekile	Mayayise	UNISA	tmayayise@gmail.com
Mr	Jan	Mentz	UNISA	mentzjc@unisa.ac.za
Ms	Eunice	Mokgotho	UL	eunice.mokgotho@ul.ac.za
Ms	Lizelle	Naidoo	UNISA	naidool@unisa.ac.za
Ms	Jane	Nash	Rhodes	j.nash@ru.ac.za
Dr	Kevin	Naude	NMMU	kevin.naude@nmmu.ac.za
Prof	Martin	Olivier	Pretoria	molivier@cs.up.ac.za
Dr	Jacques	Ophoff	UCT	jacques@ophoff@uct.ac.za
Prof	Isaac	Osunmakinde	UNISA	osunmio@unisa.ac.za
Ms	Vreda	Pieterse	Pretoria	vpieterse@cs.up.ac.za
Mr	Colin	Pilkington	UNISA	pilkicl@unisa.ac.za
Ms	Correlie	Pretorius	TUT	correlie@tut.ac.za
Prof	lan	Sanders	UNISA	sandeid@unisa.ac.za
Dr	Brenda	Scholtz	NMMU	brenda.scholtz@nmmu.ac.za
Prof	Lisa	Seymour	UCT	lisa.seymour@uct.ac.za
Mr	Thivhakoni	Swethane	UL	thivhakoni.swethane@ul.ac.za
Prof	Judy	van Biljon	UNISA	vbiljja@unisa.ac.za

Academic Conference Attendees				
Ms	Suné	Van der Linde	NWU Vaal	sunevdlinde@gmail.com
Ms	Ronell	Van der Merwe	UNISA	vdmerwer@unisa.ac.za
Ms	Ulna	Wasserman	TUT	wassermannu@tut.ac.za
Ms	Ntombovuyo	Wayi	UFH	nwayi@ufh.ac.za
Prof	Janet	Wesson	NMMU	janet.wesson@nmmu.ac.za
Ms	Alyssa	Whale	NMMU	alyssa.whale@nmmu.ac.za

Conference Management

		Ms Desma van der Walt	<u>Desma.VanDerWalt@nmmu.ac.za</u> 041 504 2322 (office) 082 656 5545 (cell)
--	--	-----------------------	--

Tuesday 24 June 2014	
13:30-17:30	HoD Colloquium and Blended Learning Workshop
18:00-20:00	Registration and Welcoming Function

Wednesday 25 June 2014	
08:00-09:00	Registration
09:00-16:30	Conference Starts and Full Day Presentations
16:30-18:00	SACLA Annual General Meeting
19:00-22:00	Gala Dinner and Best Paper Award

Thursday 26 June 2014	
08:30-12:30	Half Day Presentations
12:30-12:45	Closing Address
12:45-13:45	Lunch and Departure

Keynote Speaker—Professor Steve Burgess



Professor Steve Burgess is a Professor in Marketing and the Director of the Nelson Mandela Metropolitan University Business School. He was a Professor in Business Administration and Research Director at the Graduate School of Business of the Cape University of Town, and the Professor Association of Marketers' of Marketing at the University of the Witwatersrand. He has also taught programmes at numerous leading United States, European and Asian business schools, including the Kenan-Flagler Business School of the University of North Carolina (Visiting Professor of Marketing) and the Fisher College of Business at the

Ohio State University. Professor Burgess sits on the editorial review boards of the International Journal for Advertising and the International Journal of Research in Marketing.

Professor Burgess holds a Bachelor of Science in Business Administration (Marketing) degree from the Ohio State University and a Doctoral degree in Marketing from the University of the Witwatersrand.

Professor Burgess's lifetime contributions to marketing education were recognised when he received a special award at the World Marketing Summit in Malaysia in 2013. Additionally, he received the first-ever Marketing Science Institute Visiting Scholar Award from the Marketing Science Institute in Boston, USA in 2007. He also received the Fisher College of Business International Alumni Award of the Ohio State University for his lifetime contributions in South Africa and the United States of America, as well as the Millennium Merit Certificate of the South African Association of Marketers.

Tuesday 24 June 2014	
13:30-14:00 Venue: Foyer, 2 nd Floor, Embizweni Building	Light Lunch and Refreshments
14:00-17:30 Venue: Conference Room, Rendezvous Café, South Campus Facilitator: Prof Jean Greyling (NMMU)	Parallel Session 1A: HoD Colloquium
14:00-14:15	Welcome Address Prof Charmain Cilliers (Director, School of Computing Sciences, Mathematics, Physics and Statistics, NMMU)
14:15-15:45	 Colloquium Topics: Student numbers South African Computing Accreditation Board (SACAB) Work integrated learning in computing programmes Problems faced by Head of Departments Opportunities for collaboration amongst departments
15:45-16:00 16:00-17:30	 Refreshments Outside Venue Colloquium Topics (Continued): 6. The new proposed government subsidy for CESM 6 7. University wide computer science/engineering advisory board 8. Role of SACLA 9. Future HOD Colloquium 10. General

14:00-17:30 Venue: Council Chambers, Main Building, South Campus Facilitators: Prof Johannes Cronjé (CPUT) and Dr Brenda Scholtz (NMMU)	Parallel Session 1B: Blended Learning Workshop: Utilising the Full Potential of E- Learning Tools in a Blended Learning Environment
14:00-14:10	Introductions and Welcome Dr Brenda Scholtz (NMMU)
14:10-15:45	Learning 3.0 - the Implications of Web 3.0 for Learning in the 21st Century Prof Johannes Cronjé (CPUT)
15:45-16:00	Refreshments Outside Venue
16:00-17:20	Learn More About Moodle, Turnitin, Respondus and Camtasia from Experts and Colleagues Mr Simon Goldstone (CTLM, NMMU)
17:20-17:30	Closing and Thanks Dr Brenda Scholtz (NMMU)
18:00-20:00 Venue: Foyer, 2 nd Floor, Embizweni Building	Registration and Welcoming Function

Wednesday 25 June 2014

08:00-09:00	Registration
Venue: Foyer	
outside Meeting	
Rooms 2 and 3	

09:00-09:45 Venue: Meeting Rooms 2 and 3	Plenary Session: Opening Addresses
09:00-09:15	Welcome Address Prof Jean Greyling (Head, Computing Sciences Department, NMMU)
09:15-09:45	Marketing and Education in the Cyber World Keynote Address: Prof Steve Burgess (Director, Business School, NMMU)

09:45-10:15	Morning Refreshments
Venue: Pool	
Lounge	

10:15-12:25 Venue: Meeting Room 2 Session Chair: Mrs Janet Liebenberg (NWU)	Parallel Session 2A: Programming Education and Engagement
10:15-10:45	Incorporating Lessons Learned from the 'Indie Paradigm' into Student Game Development Projects Craig Marais, Lynn Futcher and Johan van Niekerk
10:45-11:15	Using Blended Learning to Increase Student Engagement in a Large Undergraduate Class Jane Nash
11:15-11:45	Teaching OOP Concepts to IS Students at the Tertiary Level Pieter Joubert, Machdel Matthee and Aurona Gerber
11:45-12:05	Teaching Without Technology Philip Machanick (<i>short paper</i>)
12:05-12:25	Exploring Challenges for Learning Programming Courses: WSU Ibika Campus Nobert Jere, Jose Lukose and Yonela Dungayezi (<i>short paper</i>)

40.45.40.05	
10:15-12:25	Parallel Session 2B: Supporting Technologies for
Venue: Meeting	Teaching Management
Room 3	
Session Chair: Prof	
Lisa Seymour	
(UCT)	
10:15-10:45	Utilising N-grams and Edit Distance as a Means of Identifying Copied Programming Assignments
	Bertram Haskins
10:45-11:15	Decoding Code Plagiarism Vreda Pieterse
11:15-11:45	Using Mobile Barcode Scanning Technology to Control Examination Venue Entry Ross Haupt and Charmain Cilliers
11:45-12:05	Students' Response to the Use of QR Codes to Encourage Participation in an Introductory Programming Module Greg Foster (<i>short paper</i>)
12:05-12:25	E-Learning Acceptance by Secondary Schools Educators in South Africa Tlou Johnson Kabe and Billy Mathias Kalema (<i>short paper</i>)
40.05 40.00	
12:25-13:30	Lunch
Venue: Satis	
Restaurant	
13:30-15:00	Parallel Session 3A: Information Systems
Venue: Meeting	Education
Room 2	Luututton
Session Chair: Prof	
Greg Foster	
(Rhodes)	
13:30-14:00	Renewal of a Typical Database Systems Module with
13.30-14.00	NoSOL Data Stores

	NoSQL Data Stores Romeo Botes and Imelda Smit
14:00-14:30	Students' Perceptions of ERP e-Learning Material in a Blended Learning Environment Brenda Scholtz, Andre Calitz and Alyssa Whale
14:30-15:00	Challenges to Business Process Teaching by South African Information Systems Lecturers Brett Flugel, Lisa Seymour and Francois van der Merwe

13:30-15:00 Venue: Meeting Room 3 Session Chair: Prof Isaac Osunmakinde (UNISA)	Parallel Session 3B: Learning Management Systems
13:30-14:00	Can IT Students' Use of Education Technology Predict Their Performance? Suné van der Linde and Etienne Barnard
14:00-14:30	Comparison of Institutional Recommended E-learning Platforms for Coordination and Supervision of Student Projects at Higher Educational Level Lynn Futcher and Mariana Gerber
14:30-15:00	Computer Lecturers Using Their Institutional LMS for ICT Education in the Cyber World Leila Goosen and Lizelle Naidoo

15:00-15:30	Afternoon Refreshments
Venue: Pool	
Lounge	

15:30-16:30 Venue: Meeting Rooms 2 and 3	Plenary Session: Industry Presentations
15:30-16:00	Mobile First, Cloud First World – How Can Academia Enable the Next Wave of Innovation? Nyaladzi Mpofu (Microsoft)
16:00-16:30	Enterprise Content Management and Content Archiving Francois Marais (Oracle)

16:30-18:00	Plenary Session: SACLA Annual General Meeting
Venue: Meeting	
Rooms 2 and 3	

19:00-22:00	Gala Dinner and Best Paper Award
Venue:	
Turnaround Room	Guest Speaker: Mr Guy Thomson

Thursday 26 June 2014	
08:30-10:30 Venue: Meeting Room 2 Session Chair: Dr Lynn Futcher (NMMU)	Parallel Session 4A: Teaching Strategies and Requirements
08:30-09:00	Combining Fundamentals, Traditions, Practice, and Science in a Digital Forensics Course Martin Olivier
09:00-09:30	Teaching the Single Responsibility Principle Ken Halland and Anitta Thomas
09:30-10:00	A Learning Structure of E-Commerce Assurance Revealing Hidden ICT Topics in Cyber World Isaac Osunmakinde and Thembekile Mayayise
10:00-10:30	South African Industry ICT Graduate Skills Requirements Andre Calitz, Jean Greyling and Margaret Cullen
08:30-11:00 Venue: Meeting	Parallel Session 4B: Student Perceptions and Opportunities

08:30-11:00 Venue: Meeting Room 3 Session Chair: Prof Janet Wesson (NMMU)	Parallel Session 4B: Student Perceptions and Opportunities
08:30-09:00	Increasing Personal Research Output by Utilising Honours Students Ian Sanders and Colin Pilkington
09:00-09:30	System Architecture for Mobile Campus Guides Grant Eastwood and Lynette Barnard
09:30-10:00	Student Perceptions of Online Learning Jacques Ophoff and Kevin Johnston
10:00-10:30	Towards Increasing Supervision Capacity: The Pyramid Cohort Supervision Model Judy Van Biljon, Tobie Van Dyk and Lizelle Naidoo
10:30-11:00	Online Safety for School Learners – Awareness vs Implementation Elmarie Kritzinger
11:00-11:30 Venue: Pool	Morning Refreshments

Lounge	
11:30-12:30 Venue: Meeting Rooms 2 and 3	Plenary Session: Industry Presentations
11:30-12:00	Empowering Millennials in Africa De Wet Naude (SAP)
12:00-12:30	ICT in Education at Pearson Karen Greyling (Pearson Education)
12:30-12:45 Venue: Meeting Rooms 2 and 3	Closing Address
12:45-13:45 Venue: Satis Restaurant	Lunch

Our Sponsors



Microsoft (Gold Sponsor)



NMMU Department of Computing Sciences (Silver Sponsor)



SEDA NMB Incubator (Silver Sponsor)



Investec



Syspro



Pearson Education





Oracle (Silver Sponsor)



Business Connexion



Korbitec



Telkom



Wiley