

Elephant Delta: 22 – 27 November 2015

Abbreviations

- [A] Abstracts only
- [P] Full paper in the conference proceedings
- [IJMEST] Paper published in the International Journal of Mathematical Education in Science and Technology

SUNDAY 22 November

16:00 – 18:00	REGISTRATION Tsitsikamma C1
19:00 – late	WELCOME RECEPTION Tsitsikamma C1

MONDAY 23 November

08:45 – 09:00 Tsitsikamma C1	WELCOME TO ELEPHANT DELTA		
09:00 – 10:00 Tsitsikamma C1	KEYNOTE: Prof Tim Dunne: <i>The Rasch model for test outcomes and related item requirements</i>		
10:00 – 10:30 MORNING TEA			
10:30 – 12:30	MONDAY: MULTIPLE STREAM SESSION 1		
	Theme: Assessment Tsitsikamma C1	Theme: Teaching and learning practices Tsitsikamma D1	Theme: Extended programs Tsitsikamma D2
10:30 – 10:55	Theoretical perspectives on peer learning and how they can help in first year mathematics [A] <i>Anita Campbell</i>	Interventions to improve teaching and learning in first year mathematics courses [IJMEST] <i>Johann Engelbrecht and Ansie Harding</i>	Using history to help bridging learners see embedded mathematics [A] <i>Phil Kane</i>
11:00 – 11:25	Assessments: An Open and Closed Case [IJMEST] <i>R. Nazim Khan</i>	Looking into the Private World of the Private Tuition Industry [P] <i>Anne D'Arcy-Warmington</i>	Developing Academic Maturity of Students in an extended programme in Mathematics [A] <i>Bridgette MakhosazanaYani</i>
11:30 – 11:55	Are students actually learning what we intend to teach them? An analysis of student responses to first-year calculus examination questions [A] <i>Munyakazi, Kizito, Elengemoke</i>	The influence of student engagement on the performance of first-year mathematics students: A Case Study [A] <i>Elsabe Weyer</i>	Unisa Science Foundation Provision: From the Augmented to the Extended Model for teaching Mathematics in an Open Distance Learning environment [A] <i>Belinda Huntley</i>
12:00 – 12:25	Experimenting with assessment [A] <i>Rachel Passmore</i>	Cause-effect Analysis: Improvement of a 1st year Engineering Students' Calculus Teaching Model [A] <i>Quay van der Hoff & Ansie Harding</i>	Reforming a preparatory year maths module to improve attainment and engagement [A] <i>Hannah Bartholomew</i>
12:30 – 14:00	LUNCH		

14:00 – 15:30	MONDAY: MULTIPLE STREAM SESSION 2			
		Theme: Teaching and learning practices Tsitsikamma C1	Theme: Teaching and learning practices Tsitsikamma D1	Theme: Teaching and Learning practices Tsitsikamma D2
	14:00 – 14:25	Developing problem-solving skills through oral assessment [A] <i>Heather Lonsdale</i>	Moving away from traditional course delivery [A] <i>Mike Robinson</i>	Simple rule, hidden meaning: the scalar product in engineering mathematics [P] <i>Tracy Craig and Trevor Cloete</i>
	14:30 – 14:55	Skills involved in teaching large Groups of undergraduate Students [A] <i>Ansie Harding, Johann Engelbrecht</i>	Does the chalkboard still hold its own against modern technology in teaching mathematics? A case study [A] <i>Anneli Billman</i>	Engineering students' use of intuition and visualization in the mathematical problem solving [P] <i>Chih Hsien Huang</i>
15:00 – 15:25	Are we leaving mathematics students starved and bored in class? [A] <i>Harry Wiggins</i>	The challenge of applying trigonometry to real life situations at first year level [A] <i>Jeanetta du Preez</i>	Transfer of mathematical learning to science: first year university students' and academics' perspectives [A] <i>Yoshitaka Nakakoji, Rachel Wilson and Leon Poladian</i>	
15:30 – 16:00	AFTERNOON TEA			
16:00 – 18:00	SOCIAL FUNCTION AT HAVANA BLU			

TUESDAY 24 November

09:00 – 10:00
Tsitsikamma C1
KEYNOTE: Dr Deborah King: *Think Big! A local initiative that became a National Network*

10:00 – 10:30 MORNING TEA

10:30 – 12:30 TUESDAY: MULTIPLE STREAM SESSION 3

	Theme: Professional development Tsitsikamma C1	Theme: Maths Educators Tsitsikamma D1	Theme: Technology Tsitsikamma D2
10:30 – 10:55	Theoretical and Empirical Approaches to Abstraction in Mathematics Education [A] <i>Stuart Torr</i>	Curriculum mismatch: TVET colleges face major challenges [A] <i>Batseba Mofolo-Mbokane</i>	Mathematica, my teaching assistant [A] <i>Esmé Voges</i>
11:00 – 11:25	Placing undergraduate mathematics assessment on the national Higher Education agenda [A] <i>Deborah King, Cristina Varsavsky</i>	Advanced mathematics curriculum for students preparing to teach middle school mathematics [A] <i>Gary Harris</i>	Developing interactive applets with GeoGebra: processes, impacts, technologies [P] <i>Anthony Morphett, Sharon Gunn, Robert Maillardet</i>
11:30 – 11:55	Mathematicians & Mathematics Education: A Marriage of Convenience in Professional Development [A] <i>Greg Oates & Tanya Evans</i>	Opening Real Science: Engaging Tomorrow's Science and Mathematics Teachers [A] <i>Leigh Wood</i>	Teaching Mathematics in the PC Lab – The Students' Viewpoints Today and Five Years Ago [A] <i>Karsten Schmidt</i>
12:00 – 12:25	Improving Mathematics Knowledge of Educators in the Teaching of Statistics: A Case of Continuing Professional Development [A] <i>Avhasei Richard Tsanwani</i>	Investigating how past experiences in mathematics have influenced pre-service primary teachers [A] <i>Dilshara Hill</i>	

12:30 – 14:00		LUNCH		
14:00 – 15:30	TUESDAY: MULTIPLE STREAM SESSION 4			
	14:00 – 14:25	Theme: Teaching and Learning practices Tsitsikamma C1	Theme: Maths Educators Tsitsikamma D1	Theme: Technology Tsitsikamma D2
	14:30 – 14:55	An Analysis of the Reasoning Abilities of Students in the Transition Period from Secondary to Tertiary Mathematics [P] <i>Trudie Benadé and Sonica Froneman</i>	Numeracy and Mathematical Skills of Pre-service Primary Teachers [A] <i>Therese Wilson, Bronwyn Ewing, Daniel Crane, Charisse Farr</i>	Western Cape Maths4Stats training 2012 to 2014 – valuable or not? [A] <i>Renette J Blignaut, Abduraghiem Latief, Ronell Jacobus, Retha Luus, Morne Lamont, Rechelle Jacobs</i>
	15:00 – 15:25	The impact of assumed knowledge entry standards on undergraduate mathematics teaching in Australia [IJMEST] <i>Dr Deborah King and Ms Joann Cattlin</i>	Zimbabwean pre-service teachers' responses to matrix algebra assessment items [P] <i>Cathrin Kazungu and Sarah Bansilal</i>	Using clickers in the mathematics classroom: novelty or necessity [A] <i>Karin Bothma</i>
15:30 – 15:55	Great Expectations: expectations and attitudes of first-year mathematics students [A] <i>Leanne Rylands and Don Shearman</i>	An investigation of Zimbabwean pre-service students' conceptions of vector space concepts [A] <i>Mutambara, Lillias H.N and, Sarah Bansilal</i>		
16:00 – 16:30		AFTERNOON TEA		
16:30 – 17:45		PLENARY SESSION		
		Theme: Collaboration Tsitsikamma C1		

WEDNESDAY 25 November – Excursion day

THURSDAY 26 November

09:00 – 10:10 Tsitsikamma C1	KEYNOTE: Prof Maxine Pfannkuch, the Judy Patterson speaker: <i>Visualizing chance in introductory probability</i>
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10:10 – 10:30 MORNING TEA

10:30 – 12:30	THURSDAY: MULTIPLE STREAM SESSION 5		
	Theme: Statistics Tsitsikamma C1	Theme: Curriculum design and delivery in the 21st century Tsitsikamma D1	Theme: Teaching and Learning practices Tsitsikamma D2
10:30 – 10:55	Predictors of success and failure in Statistics [A] <i>Lyness Matizirofa</i>	Online Video-based Tutorials for a first-year Mathematics Service course [A] <i>S Goldstone; M Snyders, M Walton</i>	Using the Creativity-in-Progress Rubric in an Inquiry-Based Introductory Proof Course [A] <i>Gail Tang et al.</i>
11:00 – 11:25	Influence of matric mathematics versus mathematical literacy in the success rate of an introduction course in statistics at TUT [A] <i>SA Mouton & I Louw</i>	Learning from experience: The realities of developing mathematics courses for an online engineering program [IJMEST] <i>Diana Quinn, Amie Albrecht, Brian Webby</i>	Teaching group theory using Rubik's cubes [IJMEST] <i>Claire Cornock</i>
11:30 – 11:55	A regression model to predict student success in Statistics at TUT [A] <i>PH Kloppers and SA Mouton</i>	Designing and using informal learning spaces to enhance student engagement with mathematical sciences [A] <i>Jeff Waldock</i>	Numerical solutions for the vibrating bar eigenvalue problem: a student exercise [A] <i>Stephan V. Joubert, Temple H. Fay and Michael Y. Shatalov</i>
12:00 – 12:25	Identifying and Evaluating Threshold Concepts in First Year Statistics courses at a large university in South Africa [A] <i>Andre Swanepoel, Johann Engelbrecht, Ansie Harding, Lizelle Fletcher</i>	Expectations and Implementations of the Flipped Classroom Model in Undergraduate Mathematics Courses [IJMEST] <i>Emilie Naccarato and Gulden Karakok</i>	Projective geometry as an undergraduate course: a tour of the three worlds of mathematics [A] <i>Alice. M.W. Hui</i>

12:30 – 14:00		LUNCH		
14:00 – 15:00 Tsitsikamma C1	KEYNOTE: David Wagner: <i>Mathematics, Culture, and the Responsibilities of Mathematics Educators</i>			
15:00 – 15:30 Tsitsikamma C1		PLENARY SESSION		
		Delta 2017 <i>The Brazilian team</i>		
15:30 – 16:00		AFTERNOON TEA		
16:00 – 16:25 Tsitsikamma C1		PLENARY SESSION		
		Achieving Sustained Positive Outcomes in Maths and Stats Education: An Efficacy Study [A] <i>Pearson team (Beverley Wharton-Hood /Seshni Mala)</i>		
16:30 – 17:30		THURSDAY: MULTIPLE STREAM SESSION 6		
		Theme: Miscellaneous Tsitsikamma C1	Theme: Teaching and learning practices Tsitsikamma D1	Theme: Teaching and learning Tsitsikamma D2
	16:30 – 16:55	Conceptual or procedural mathematics for engineering students – views of two qualified engineers from two countries [IJMEST] <i>Christer Bergsten; Johann Engelbrecht, and Owe Kågesten</i>	Mathematics pre-knowledge for entering Economic and Management Sciences [A] <i>Mardi Jankowitz, Ilsa Basson, Adele Immelman, Machteld Strydom</i>	Multicultural lecturing: some challenges [P] <i>JyotiJhagroo</i>
	17:00 – 17:30	Optimization in first semester calculus: A look at a classic problem [IJMEST] <i>Renee LaRue and Nicole Engelke Infante</i>	Threshold concepts in finance: student perspectives [IJMEST] <i>Susan Hoadley, Tim Kyng, Leonie Tickle, Leigh N. Wood</i>	An Investigation into the Effect of Mathematics Self-Efficacy and Mathematics Anxiety on Mathematics Performance [A] <i>SJ Wagner-Welsh, M Watson</i>
18:30 – late		BRAAI AT THE WILLOWS		

<p>09:00 – 10:00 Tsitsikamma C1</p>	<p>KEYNOTE:JoãoFrederico da Costa Azevedo Meyer: <i>Mathematical Disciplines for Undergraduate (and Graduate) Mathematics and Statistics: Challenges for Cooperating and Operating with Social Needs</i></p>			
<p>10:00 – 10:30MORNING TEA</p>				
<p>10:30 – 12:30</p>	<p>FRIDAY: MULTIPLE STREAM SESSION 7</p>			
		<p>Theme: Statistics Tsitsikamma C1</p>	<p>Theme: Miscellaneous Tsitsikamma D1</p>	
	<p>10:30 – 10:55</p>	<p>Mathematical Preparedness in the Quantitative Sciences: The QuADDS Project [A] <i>Greg Oates</i></p>	<p>OscillatorEquations:An EnergyPerspective [A] <i>TempleH.Fay</i></p>	
	<p>11:00 – 11:25</p>	<p>Teaching Statistics to Engineering Students: A Thirty Year Perspective [A] <i>Richard Wilson</i></p>	<p>The impact of Mathematics on the Africa socio- economic takeoff [A] <i>Nouzha El Yacoubil</i></p>	
<p>11:30 – 11:55</p>	<p>First level statistics students' performance in a large classroom environment under the magnifying glass [A] <i>Fransonet Reyneke</i></p>			
<p>12:00 – 14:00 CLOSING CEREMONY AND LUNCH</p>				