

MONDAY - 2 NOVEMBER 2009			
07:30 - 08:40	Registration		
08:45 - 09:10	Opening Address		
09:15 - 10:10	Plenary Talk: A. Yeo <i>Transversals in hypergraphs, total domination in graphs and other related problems</i>		Session Chair M. Henning
10:10 - 10:30	Refreshments		
Session	Combinatorics, Finite Groups and Graph Theory (Congella)	Operator Algebra and Functional Analysis (Syndicate 14)	Computational Methods (Tutuka)
Session Chair	Name: M. Henning	Name: R. Brits	Name: O. Makinde
10:30 - 10:55	Name: A. Burger <i>Non-existence: self-orthogonal Latin squares order 6</i>	Name: L. Labuschagne <i>Maps on noncommutative Orlicz spaces</i>	Name: D. Reddy <i>Predictor-corrector methods: variational inequalities</i>
11:00 - 11:25	Name: M. Kidd (MSc) <i>Enumeration of self-orthogonal Latin squares</i>	Name: B. Zinsou (PhD) <i>Self-adjoint fourth order differential operators</i>	Name: K. Penzhorn (MSc) <i>Consistency and convergence of SPH approximations</i>
11:30 - 11:55	Name: J. van Vuuren <i>Integer programming-based Latin squares</i>	Name: R. Duvenhage <i>Joinings of W^*- and C^*-dynamical systems</i>	Name: A. Chama (PhD) <i>Moving finite element method in 2D</i>
11:55 - 13:00	Lunch		
13:00 - 13:55	Plenary Talk: A. Beardon <i>Continued fractions, hyperbolic geometry, and Farey arithmetic</i>		Session Chair K. Jordaan
Session	Combinatorics, Finite Groups and Graph Theory (Congella)	Operator Algebra and Functional Analysis (Syndicate 14)	Computational Methods (Tutuka)
Session Chair	Name: J. van Vuuren	Name: L. Labuschagne	Name: D. Reddy
14:00 - 14:25	Name: J. Moori <i>Designs from maximal subgroups; conjugacy classes</i>	Name: S. Mouton <i>Spectral continuity in ordered Banach algebras</i>	Name: B. Grieshaber (MSc) <i>Discontinuous Galerkin finite element methods</i>
14:30 - 14:55	Name: B. Rodrigues <i>Self orthogonality and strongly regular graphs: $L_4(3)$</i>	Name: R. Heymann (MSc) <i>Fredholm theory in Banach algebras</i>	Name: O. Makinde <i>MHD mixed convection in a porous medium</i>
15:00 - 15:25	Name: E. Mphako-Banda <i>Path-width vs bridge number</i>	Name: G. Braatvedt <i>Spectral characterizations of scalars</i>	Name: P. Sibanda <i>A new method for solving boundary value problems</i>
15:25 - 15:45	Refreshments		
Session	Combinatorics, Finite Groups and Graph Theory (Congella)	Operator Algebra and Functional Analysis (Syndicate 14)	
Session Chair	Name: P. Dankelmann	Name: S. Mouton	
15:45 - 16:10	Name: I. Broere <i>An abundance of Rado graphs</i>	Name: C. Hattingh (MSc) <i>Searching for identity à la Gelfand</i>	
16:15 - 16:40	Name: M. Morgan <i>On the eccentric connectivity index of a graph</i>		
16:45 - 17:10	Name: W. Fish <i>Binary codes and partial permutation decoding sets</i>		
17:20	Bus Departs for Cocktail Function		
18:00 - 22:00	Cocktail Function		

MONDAY - 2 NOVEMBER 2009 - Continued		
07:30 - 08:40	Registration	
08:45 - 09:10	Opening Address	
09:15 - 10:10	Plenary Talk: A. Yeo <i>Transversals in hypergraphs, total domination in graphs and other related problems</i>	
10:10 - 10:30	Refreshments	
Session	History and Teaching of Mathematics (Port Rex)	ODE's and Dynamical Systems (John Maree)
Session Chair	Name: A. Campbell	Name: F. Nyabadza
10:30 - 10:55	Name: M. de Villiers <i>Generalizing a hexagon result via proof</i>	Name: B. Ntsime (PhD) <i>Noether point symmetries of a Lane-Emden equation</i>
11:00 - 11:25	Name: C. Bohlmann/B. Huntley <i>The NBT and NSC: how to optimise the partnership</i>	Name: M. Khaliq <i>Lagrangian approach: a coupled Lane-Emden system</i>
11:30 - 11:55	Name: G. Robinson <i>Integrated approach to community intervention</i>	Name: A. Biswas <i>Soliton perturbation theory</i>
11:55 - 13:00	Lunch	
13:00 - 13:55	Plenary Talk: A. Beardon <i>Continued fractions, hyperbolic geometry, and Farey arithmetic</i>	
Session	History and Teaching of Mathematics (Port Rex)	ODE's and Dynamical Systems (John Maree)
Session Chair	Name: M. de Villiers	Name: D. Mason
14:00 - 14:25	Name: P. Maritz <i>The versatile Ruder Josip Bošković</i>	Name: F. Nyabadza <i>A dynamic model of substance abuse</i>
14:30 - 14:55	Name: A. Campbell <i>An online course management system</i>	Name: B. Bekele (MSc) <i>Hopf bifurcation of tuberculosis transmission model</i>
15:00 - 15:25	Name: C. Dempers <i>Mathematica demonstration</i>	Name: B. Abdulra'uf Bello (MSc) <i>HIV model in the presence of antiretroviral treatment</i>
15:25 - 15:45	Refreshments	
Session	Real and Complex Analysis (Port Rex)	ODE's and Dynamical Systems (John Maree)
Session Chair	Name: R. Anguelov	Name: J. Hlomuka
15:45 - 16:10	Name: K. Jordaan <i>Convergence of ray sequences of Padé approximants</i>	Name: J. Ssebuliba (PhD) <i>The dynamics of HIV-1 infection</i>
16:15 - 16:40	Name: A. Jooste <i>Zeros of ${}_2F_1(-n, -x; a; t)$</i>	Name: D. Mbabazi (MSc) <i>Model of mixed infection in tuberculosis</i>
16:45 - 17:10	Name: N. Mbuyi Cimwanga (PhD) <i>Interlacing of the zeros of Jacobi polynomials</i>	
17:20	Bus Departs for Cocktail Function	
18:00 - 22:00	Cocktail Function	

TUESDAY - 3 NOVEMBER 2009

08:00 - 08:55	Plenary Talk: J. Hattingh <i>Restrained domination in graphs</i>		Session Chair E. Jonck
Session	Combinatorics, Finite Groups and Graph Theory (Congella)	Matrix, Ring Theory, Algebra (Tutuka)	Topology (Port Rex)
Session Chair	Name: I. Broere	Name: L. van Wyk	Name: G. Jäger
09:00 - 09:25	Name: J. Singleton <i>Independent sets meeting all longest paths</i>	Name: J. Botha <i>Spectrally arbitrary matrix factorization over fields</i>	Name: Y. Zelenyuk <i>Idempotents in Stone-Čech compactifications</i>
09:30 - 09:55	Name: S. van Aardt <i>Pancyclicity of k-traceable oriented graphs</i>	Name: D. Janse van Rensburg (PhD) <i>Maximal invariant subspaces: H-expansive matrices</i>	Name: O. Shuungula <i>The smallest ideal of an ultrafilter semigroup</i>
10:00 - 10:25	Name: M. Frick <i>Traceability of oriented graphs with fixed girth</i>	Name: G. Booth <i>On Wielandt near-rings</i>	Name: W. Toko (PhD) <i>Semiprincipal closed ideals of βS</i>
10:25 - 10:45	Refreshments		
Session	Combinatorics, Finite Groups, Graphs (C)	Matrix, Ring Theory, Algebra (Tutuka)	Topology (Port Rex)
Session Chair	Name: S. Mukwembi	Name: J. Botha	Name: T. Dube
10:45 - 11:10	Name: P. Dankelmann <i>Average distance in weighted graphs</i>	Name: L. van Wyk <i>Automorphism groups of triangular matrix rings</i>	Name: H. Tshilombo (PhD) <i>Topologies and smooth maps in Frolicher spaces</i>
11:15 - 11:40	Name: M. Henning <i>Strong transversals and double total domination</i>	Name: M. Marais (PhD) <i>Centralizers of matrices</i>	Name: G. Jäger <i>Lattice-valued categories</i>
11:45 - 12:10	Name: P. Ali (PhD) <i>Upper bounds on the Steiner diameter of a graph</i>	Name: A. Fransman <i>Trifactorized locally finite groups</i>	Name: D. Orpen (MSc) <i>Characterization of stratified L-topological spaces</i>
12:10 - 13:10	Lunch		
13:10 - 14:05	Plenary Talk: M. Clementino <i>On function objects in topology and algebra</i>		Session Chair T. Dube
Session	Combinatorics, Finite Groups, Graphs (C)	Matrix, Ring Theory, Algebra (Tutuka)	Topology (Port Rex)
Session Chair	Name: A. Burger	Name: G. Janelidze	Name: P. Ghosh
14:10 - 14:35	Name: E. Jonck <i>Bounds on the broadcast chromatic number</i>	Name: L. Godloza <i>The zero square radicals</i>	Name: T. Dube <i>Contracting maximal ideals in rings</i>
14:40 - 15:05	Name: S. Mukwembi <i>On diameter and inverse degree of a graph</i>	Name: J. Gray (PhD) <i>Homology and cohomology for semi-Abelian categories</i>	Name: A. Razafindrakoto (MSc) <i>Tight maps and extensions of metric spaces</i>
15:10 - 15:35	Name: J. Southey (MSc) <i>Domination partitions in graphs</i>	Name: E. Inyangala (PhD) <i>The semidirect product in a variety of right Ω-loops</i>	Name: M. Matlabyana <i>Characterizations of quasi F-frames</i>
15:35 - 15:55	Refreshments		
Session	Combinatorics, Finite Groups, Graphs (C)	Matrix, Ring Theory, Algebra (Tutuka)	Topology (Port Rex)
Session Chair	Name: J. Moori	Name: A. Fransman	Name: Y. Zelenyuk
15:55 - 16:20	Name: S. Wagner <i>Determinant identities for Laplace matrices</i>	Name: T. Janelidze (PhD) <i>Relative non-Abelian homological algebra</i>	Name: J. van der Walt <i>Pseudo-topologies on reduced power algebras</i>
16:25 - 16:50	Name: A. Basheer (PhD) <i>Regular elements and primary classes of $GL(n, q)$</i>	Name: G. Janelidze <i>Precategories, abstract radicals, factorization systems</i>	Name: P. Ghosh <i>Regular closed extensions</i>
16:55 - 17:20	Name: K. Zimba <i>Conjugacy classes of a subgroup $S_n^m : C_m$ of S_{mn}</i>	Name: B. Green <i>On good reductions of function fields revisited</i>	Name: Z. Mushaandja (PhD) <i>The M_3 versus M_1 problem</i>
17:25 - 18:30	Conference Photo (5 - 10min)	SAMS Annual General Meeting	
18:30 - 22:00	Conference Dinner		

TUESDAY - 3 NOVEMBER 2009 - Continued		
08:00 - 08:55	Plenary Talk: J. Hattingh <i>Restrained domination in graphs</i>	
Session	Mathematical Physics (Syndicate 14)	PDE's and Dynamical Systems (John Maree)
Session Chair	Name: S. Hansraj	Name: S. Oukouomi Noutchie
09:00 - 09:25	Name: S. Rajah <i>New exact models in radiating stellar colapse</i>	Name: J. Djoko Kamdem <i>Approximation: Brinkman-Forchheimer equations</i>
09:30 - 09:55	Name: G. Govender (PhD) <i>Junction conditions: the generalized Vaidya metric</i>	Name: H. Mohamed (PhD) <i>Stability of viscoelastic flows</i>
10:00 - 10:25	Name: A. Msomi (PhD) <i>Solutions of the Einstein field equations with heat flow</i>	Name: J. Hlomuka <i>Stability criterion for an implicit evolution problem</i>
10:25 - 10:45	Refreshments	
Session	Mathematical Physics (Syndicate 14)	PDE's and Dynamical Systems (John Maree)
Session Chair	Name: P. Wagener	Name: R. Maritz
10:45 - 11:10	Name: J. Pedro (PhD) <i>Fluid-structure interaction and numerical simulations</i>	Name: A. Goswami (PhD) <i>Spectral analysis of a population model</i>
11:15 - 11:40	Name: N. Dadhich <i>Characterization of Lovelock polynomial</i>	Name: D. Mason <i>Effect of road block on traffic flow</i>
11:45 - 12:10	Name: T. Chinyoka <i>Temperature effects in flowing polymeric liquids</i>	Name: S. Oukouomi Noutchie <i>Sex-structured population models</i>
12:10 - 13:10	Lunch	
13:10 - 14:05	Plenary Talk: M. Clementino <i>On function objects in topology and algebra</i>	
Session	Mathematical Physics (Syndicate 14)	PDE's and Dynamical Systems (John Maree)
Session Chair	Name: S. Rajah	Name: J. Djoko Kamdem
14:10 - 14:35	Name: A. Beesham <i>LRS Bianchi type-V cosmology with heat flow</i>	Name: R. Maritz <i>Formation of the cerebrospinal fluid</i>
14:40 - 15:05	Name: N. Bishop <i>The quasi-normal modes of a white hole</i>	
15:10 - 15:35	Name: P. Wagener <i>A universal model of interaction</i>	
15:35 - 15:55	Refreshments	
Session	Mathematical Physics (Syndicate 14)	Lie Groups and Transformations (John Maree)
Session Chair	Name: N. Bishop	Name: R. Moitsheki
15:55 - 16:20	Name: S. Hansraj <i>Conformally related Petrov type III spacetimes</i>	Name: A. Bokhari <i>Lie symmetry methods, wave equation on a manifold</i>
16:25 - 16:50		Name: I. Naeem <i>First integrals via complex partial Lagrangians</i>
16:55 - 17:20		
17:25 - 18:30	Conference Photo (5 - 10min)	SAMS Annual General Meeting
18:30 - 22:00	Conference Dinner	

WEDNESDAY - 4 NOVEMBER 2009

08:00 - 08:55	Plenary Talk: M. de Villiers <i>Learning to define in geometry</i>		Session Chair B. Huntley
Session	Combinatorics, Finite Groups and Graph Theory (Port Rex)	Workshop: Mathematics Education (Tutuka)	Probability Theory, Mathematical Statistics and Financial Mathematics (Syndicate 3)
Session Chair	Name: B. Rodrigues	Name: Carol Bohlmann	Name: M. Sango
09:00 - 09:25	Name: T. Seretlo (PhD) <i>A group of the form $2^8 : O_8^+(2)$</i>	Workshop	Name: C. Makasu <i>Controlling a stopped diffusion process</i>
09:30 - 09:55	Name: L. Chikamai (PhD) <i>Optimal codes admitting $L_3(4)$ as an automorphism</i>	Workshop	Name: U. Koumba (MSc) <i>Risk measures via vector lattice theory</i>
10:00 - 10:25	Name: D. Ssevviiri (MSc) <i>The multiplicative group of the field of p-adic numbers</i>		Name: N. Caister (PhD) <i>Lie symmetry analysis of the Asian option</i>
10:25 - 10:45	Refreshments		
Session	Combinatorics, Finite Groups and Graph Theory (Port Rex)	Applications of Mathematics to the Sciences (Tutuka)	Stochastic Differential Equations (Syndicate 3)
Session Chair	Name: K. Zimba	Name: G. Braatvedt	Name: C. Makasu
10:45 - 11:10	Name: D. Ralaiwaosaona (PhD) <i>A central limit theorem for integer partitions</i>	Name: J. Bruyns <i>Electromagnetic distribution in a closed environment</i>	Name: M. Sango <i>Quasilinear stochastic parabolic equations</i>
11:15 - 11:40	Name: E. Andriantiana (MSc) <i>Independent vertex subsets of degree-restricted trees</i>	Name: C. Lock <i>Illustrating input and output waves</i>	Name: P. Razafimandimby (PhD) <i>The stochastic equation for second grade fluids</i>
11:45 - 12:10		Name: R. Anguelov <i>Bartonella infections in the invasive <i>Rattus rattus</i></i>	Name: G. Deugoue (Phd) <i>Stochastic 3D Navier-Stokes model: fluid turbulence</i>
12:15 - 12:40		Name: C. Botha (PhD) <i>The stability of the human spine</i>	Name: R. Kufakunesu (PhD) <i>A method for the valuation of variance swaps</i>
12:40 - 13:40	Lunch		
13:40 - 14:35	Plenary Talk: H. Raubenheimer <i>On spectral theory in Banach algebras</i>		Session Chair G. Braatvedt
14:40 - 15:40	Closing Ceremony		

WEDNESDAY - 4 NOVEMBER 2009 - Continued		
08:00 - 08:55	Plenary Talk: M. de Villiers <i>Learning to define in geometry</i>	
Session	Mathematical Logic and Foundations (Syndicate 14)	Lie Groups and Transformations (John Maree)
Session Chair	Name: I. Rewitzky	Name: A. Bokhari
09:00 - 09:25	Name: W. Morton (PhD) <i>MTL-chains with modalities</i>	Name: R. Moitsheki <i>Solutions of the two-dimensional fin problem</i>
09:30 - 09:55	Name: W. Conradie <i>Correspondence, canonicity: distributive modal logic</i>	Name: A. Kara <i>Conservation laws of a family of nonlinear equations</i>
10:00 - 10:25	Name: C. van Alten <i>Finite model properties for modal logics</i>	Name: R. Narain <i>Noether conservation laws for Riemannian manifolds</i>
10:25 - 10:45	Refreshments	
Session	Mathematical Logic and Foundations / Mathematical Aspects of Computer Science (Syndicate 14)	Lie Groups and Transformations (John Maree)
Session Chair	Name: W. Conradie	Name: A. Kara
10:45 - 11:10	Name: I. Rewitzky <i>Involutions on relational program calculi</i>	Name: M. Molati (PhD) <i>Group classification: second-order diffusion equations</i>
11:15 - 11:40	Name: K. Moodley <i>Repairing description logic ontologies</i>	Name: M. Matadi (PhD) <i>Symmetry analysis for sexually transmitted diseases</i>
11:45 - 12:10	Name: G. Davie <i>Kolmogorov complexity, events in random sequences</i>	Name: B. Feugang Nteumagne (MSc) <i>Continuous symmetries of difference equations</i>
12:15 - 12:40		
12:40 - 13:40	Lunch	
13:40 - 14:35	Plenary Talk: H. Raubenheimer <i>On spectral theory in Banach algebras</i>	
14:40 - 15:40	Closing Ceremony	