

Monday, 03 April	
Time	Event
09:00 – 09:15	Welcome
09:15 – 10:15	Plenary: Jan Nordstrom Title: Nonlinear Boundary Conditions for Energy and Entropy Stable Initial Boundary Value Problems in Computational Fluid Dynamics <i>Chair: Byron Jacobs</i>
10:15 – 10:30	Tea Break
SESSION 1 Chair: Byron Jacobs	
10:30 – 11:00	Nick Hale <i>A spectral collocation method for functional and delay differential equations</i>
11:00 – 11:30	Carel Olivier <i>Pseudospectral methods with odd discretizations revisited</i>
11:30 – 12:00	Emma Nel <i>Spectral Domain Decomposition</i>
12:00 – 12:30	André Weideman <i>Beyond blow-up: A numerical and asymptotic study</i>
12:30 – 13:30	Lunch
SESSION 2 Chair: Simphiwe Simelane	
13:30 – 14:00	Claude Moutsinga <i>A time multidomain spectral method for valuing affine stochastic volatility and jump diffusion models</i>
14:00 – 14:30	Molwantwa Shapa Kanyane <i>A Mathematics Model for Pricing Bond under Affine Process</i>
14:30 – 15:00	Walter Mudzimbabwe <i>A policy iteration approximation for stochastic optimal control with random coefficients</i>
15:00 – 15:30	Katlego Joshwin Mabena <i>Numerical and analytical methods for the valuation of financial derivatives</i>

Tuesday, 04 April	
Time	Event
09:00 – 10:00	Plenary: Sandile Motsa Title: Overlapping Grids and Rationalized Hybrid Block Methods for Efficient Numerical Solutions of Stiff IVPs <i>Chair: Phumlani Dlamini</i>
10:00 – 10:15	Tea Break
SESSION 3 Chair: Phumlani Dlamini	
10:15 – 10:45	Prince Nchupang <i>A provably stable and high-order accurate finite difference approximation for the incompressible boundary layer equations</i>
10:45 – 11:15	Uthman Olamide Rufai <i>A One-Step Multi-Derivative Hybrid Block Method with Modified-Picard Iteration for the Solution of Second Order IVPs</i>
11:15 – 11:45	James Malele <i>Highly accurate compact finite difference schemes for two-point boundary value problems with Robin boundary conditions</i>
11:45 – 12:15	Felix Damilola Ajibade <i>Investigation of the f^* algorithm on strong pseudo-contractive mappings and its application</i>
12:15 – 13:30	Lunch
SESSION 4 Chair: Katlego Sebogodi	
13:00 – 13:30	Inger Fabris-Rotelli <i>Linear hotspot detection for a point pattern in the vicinity of a linear network</i>
13:30 – 14:00	Rene Stander <i>Multiscale decomposition of spatio-temporal lattice data for hotspot trend predictions</i>
14:00 – 14:30	Kabelo Mahloromela <i>Window selection in spatial point pattern analysis</i>
14:30 – 15:00	Renate Thiede <i>Measuring homogeneity of spatial line patterns</i>
15:00 – 15:30	Alta Jooste <i>On the zeros of Meixner polynomials</i>

Wednesday, 05 April	
Time	Event
09:00 – 10:00	Plenary: Clare Dunning Title: Rational solutions of the Painleve equations and partition combinatorics <i>Chair: Farai Chirove</i>
10:00 – 10:15	Tea Break
SESSION 5 Chair: Farai Chirove	
10:15 – 10:45	Kirstin Hohls <i>Existence and properties of solutions of a semi-linear Timoshenko rod model with axial force</i>
10:45 – 11:15	Nic van Rensburg <i>Spectral theory for linear rod models</i>
11:15 – 11:45	Sonja du Toit <i>A nonlinear model for a local linear elastic rod</i>
11:45 – 12:15	Madelein Labuschagne <i>Finite element application to earthquake induced oscillations in vertical structures</i>
12:15 – 12:45	Belinda Stapelberg <i>Modal analysis of a new model for earthquake induced oscillations of high-rise vertical structures</i>
12:45 – 13:30	Lunch
SESSION 6 Chair: Vivien Visaya	
13:30 – 14:00	Thasheel Singh Jagutpal <i>A stable and high-order continuous Galerkin method for linear hyperbolic equations</i>
14:00 – 14:30	Praise-God Madueme <i>Understanding the transmission pathways of Lassa Fever: a mathematical modeling approach</i>
14:30 – 15:00	Gerald Marewo <i>Numerical solution of the minimal surface problem</i>
15:00 – 15:30	Sinenhlanhla Mtshali <i>On the validation of a fractional order model for pharmacokinetics using clinical data</i>
15:30 – 15:45	Closing