Conference Theme

During the past decades, computational mechanics has become a field of central scientific importance spanning across all fields of science. This conference series is dedicated to bring together delegates from across the globe to promote computational and applied mechanics on the African continent. In this spirit, the following topics will be covered:

100 Biological Systems

110 Recent advances in skin biomechanics and mechanobiology – Convergence of physical experiments, imaging and modelling techniques

200 Control Theory and Optimization

300 Coupled and Contact Problems

400 Damage, Fracture and Failure

500 Data Science and Machine Learning

600 Discretization Methods, Grid, Mesh and Solid Generation

700 Flow Problems

800 Geomechanics and Reservoirs Modelling

900 Graphics and Visualization

1000 High performance computing

1100 Inverse Problems, Optimization and Design

1110 Topology Optimization of Micro-/Nano-structures

1200 Manufacturing and Process Engineering

1300 Material Design and Modelling

1400 Multi-scale and Multi-physics Problems

1410 Modeling and Computation of Electrochemical Cells

1420 Experimental, Theoretical and Numerical Investigations of Sea Ice in the Marginal Ice Zone of Antarctica

1500 Numerical Simulation Methods

1510 Discrete Element Modelling: Calibration and Validation

1600 Reduction Methods

1610 Model Order Reduction in Computational Mechanics and Mechatronics

1700 Structural Mechanics, Stability and Dynamics

1800 Uncertainty Quantification and Error Estimation

1810 Advanced strategies for numerical simulations in the presence of polymorphic uncertain data

1900 Others