

**Sultan Qaboos University**  
 College of Science  
 Department of Mathematics and Statistics  
 International Conference on Mathematical modelling (23- 26 February 2009)  
**Sultan Qaboos University Conference Hall Complex**  
**Day 1 - Monday - 23 February 2009**

| Time          | Event   |
|---------------|---|
| 8.15 -900     | Registration (at The Conference Hall)   |
| 9:00 - 10:00  | Opening Ceremony (at The conference Hall)   |
| 10:00 - 10:30 | Coffee Break  |
| 10:30 - 11:15 | Invited talk: Professor M. Celia<br>Title: Leakage estimation for large scale CO2 injection   |
| 11:20 - 12:05 | Invited talk: Professor A.W. Woods<br>Title: Fluid dynamics of carbon sequestration - from reservoir to surface   |
| 12:10 - 12:35 | Contributed talk: Nail S. Khabeev<br>Title: Modeling of micellar-polymer displacement of oil from flooded strata  |
| 12:35 - 14:00 | Lunch   |
| 14:00 - 14:45 | Invited talk: Professor N.U. Ahmed<br>Title: Dynamics of flow in porous media and optimal management of underground resources   |
| 14:50 - 15:15 | Contributed talk: A.K. Tiwari and A.K. Singh<br>Title: Non-Darcy mixed convection between differentially heated vertical walls filled with a porous material:<br>Application of new modified Adomian decomposition method |
| 15:20 - 15:45 | Contributed talk: A.R. Kacimov and Yu.V. Obnosov<br>Title: Modeling Gas Traps Under Anticline Crests With Morphed Gas-Groundwater Interfaces  |
| 15:45 - 16:15 | Coffee Break  |
| 16:15 - 17:00 | Invited talk: Professor R. McKibbin<br>Title: Analytic mathematical models for pollutant transport by advection and dispersion in layered porous media  |
| 17:05 - 17:30 | Contributed talk: Nirmal C. Sacheti<br>Title: Some aspects of Pulsatile flow in a permeable annulus   |

**Day 2 - Tuesday - 24 February 2009**

| Time          | Event  |
|---------------|--|
| 9:00 - 9:45   | Invited talk: Professor M. Wheeler<br>Title: Reservoir simulation  |
| 9:50 - 10:15  | Contributed talk: A.H. Siddiqi, A.K. Verma and Noor-E-Zahra<br>Title: Reservoir flow simulation by wavelet techniques  |
| 10:20 - 10:45 | Contributed talk: A.H. Siddiqi<br>Title: Identification and characterization of oil reservoirs by wavelet-based well logs processing   |
| 10:45 - 11:15 | Coffee Break   |
| 11:15 - 12:00 | Invited talk: Professor H. Wang<br>Title: Underground water flows  |
| 12:05 - 12:30 | Contributed talk: M. Al Lawati<br>Title: Higher order interpolation in space for Eulerian-Lagrangian methods   |
| 12.300-14:00  | Lunch  |
| 14:00 - 14:45 | Invited talk: Professor J. Neufeld<br>Title: Surprising flows in porous media  |
| 14:50 - 15:15 | Contributed talk: Baljinder S. Saini<br>Title: Free convection MHD flow past a moving vertical porous surface with oscillatory suction and gravity modulation                          |
| 15:20 - 15:45 | Contributed talk: Ashok K. Singh, Nirmal C. Sacheti and Pallath Chandran<br>Title: On free convection in a cubical cavity comprising an incompressible fluid overlying a porous medium |
| 15:45 - 18.00 | Break<br>1800 take buses to Crown Plaza for Dinner   |
| 19.00 - 21.00 | <b>Conference Dinner Hosted by H.E. The Vice Chancellor</b>  |
| 2100          | Take buses back  |

**Day 3 - Wednesday - 25 February 2009**

| Time          | Event   |
|---------------|---|
| 9:00 - 9:45   | Invited talk: Professor D.E. Loper<br>Title: A new approach to modeling flow and transport in karstic aquifers  |
| 9:50 - 10:15  | Contributed talk: Osman Abdalla and Hilal Al-Zidi<br>Title: Simulation of seawater intrusion in arid batinah region of oman   |
| 10:15 - 10:45 | Coffee Break  |
| 10:45 - 11:10 | Contributed talk: Salim A. Messaoudi<br>Title: General decay for the solution of a viscoelastic wave equation with a nonlinear damping  |
| 11:15 - 11:40 | Contributed talk: Nasser-eddine Tatar<br>Title: Stability for a Large Class of Kernels in Viscoelasticity   |
| 11:45 - 12:10 | Contributed talk: Mesloub Said<br>Title: On the solvability of a thermoelasticity system with a non-local constraint of integral type   |
| 12:15 - 12:40 | Contributed talk: Mohammad Kafini and Salim A. Messaoudi<br>Title: Decay rates of solutions to a nonlinear viscoelastic evolution equation of fourth order  |
| 12:40 - 14:00 | Lunch   |
| 14:00 - 14:25 | Contributed talk: Phoolan Prasad<br>Title: Kinematical conservation Laws: Equations of Evolution of Curves and Surfaces   |
| 14:30 - 14:55 | Contributed talk: Messaoud Bounkhel<br>Title: Applications of Nonsmooth Analysis to: Nonconvex Differential Inclusions, Quasi-variational Inequalities (QVI), Differential QVI, Economic Problems         |
| 15:00 - 15:25 | Contributed talk: Ivan Subhi Latif<br>Title: A non-convex descent method for non-linear optimization problem  |
| 15:25 - 16:00 | Coffee Break  |
| 16.00 - 16.30 | Contributed talk: Gabil M. Amiraliyev and Erkan Cimen<br>Title: Numerical analysis of a singularly perturbed convection diffusion problem with delay material having constant heat flux on inner cylinder |
| 16:30 - 17:00 | Contributed talk: Thomas Bier<br>Title: A Nonstandard Approach to the Generalized Hypergeometric Differential Equation  |
| 17:00 - 17:30 | Contributed talk: A. Heydari, M.H. Farahi, T.A. Bafghi and A.A. Heydari<br>Title: Introduce a model for HIV and three models for optimal control of HIV   |

**Day 4- Thursday 26 February 2009**

**Trips :**

trip 1 Sightseeing in Muscat

trip2 Visit Alhhooti and forts of Nizwa and Jabrine (Bahla)