### Day 1: Wednesday 31 August 2005: AM

#### ROOM 5

**09.00-10.30: Chaired by: Professor F. Molenkamp and Professor T. Nakai**

**CC.XLVIII DAM ENGINEERING**
- CC.250 Dam Safety Instrumentation Computer Program
  - R.L. Hill and L.L. Perrin
- CC.251 Collapse Settlement of a Clay Core Rockfill Dam during the First Impoundment
  - F. Jafarzadeh, T. Heidari and A.R. Azami
- CC.252 Inverse Analysis of an Embankment on Soft Clay using the Ensemble Kalman Filter
  - A. Hommels, F. Molenkamp, B. Nguyen and A.W. Heemink

**CC.XLIX FOUNDATION ENGINEERING**
- CC.253 An Elastoplastic Model for Geomaterials using the Modified Stress and Subloading Surface Concept and its Application to Bearing Capacity Problems
  - T. Nakai, M. Hinokio and S. Kurosaki
- CC.254 Three Dimensional Bearing Capacity Analysis of Shallow Foundations Adjacent to Slopes
  - A.A. Mirghasemi and A.R. Majidi
- CC.255 Impedance of Surface Footings on Layered Ground
  - L. Andersen and J. Clausen

**10.30-11.00: Coffee**

**11.00-12.30: Chaired by: Professor R. Montenegro**

**CC.XV ENVIRONMENTAL MODELLING AND SIMULATION**
- CC.84 Innovative Approach in Simulation of Suspended Floc Formation in Activated Sludge, N. Khandani A., T. Donnelly and D.J. Elliott
- CC.85 An Investigation into the Influence of Hydrogeological Conditions on LNAPL Migration, M.H.A. Mohamed
- CC.86 Interaction between Physical, Chemical and Biological Processes in the Coastal Water off a River Mouth in a Post-Flood Condition
  - Y.M. Yustiani and A. Mano
- CC.87 Preconditioning Shifted Linear Systems arising in a Wind Model
  - G. Montero, A. Suárez, E. Rodriguez, E. Flórez and M.D. García

**AL.V ENVIRONMENTAL DECISION SYSTEMS**
- AL.15 Process Control using Artificial Intelligence Techniques: Innovative Activated Sludge Process
  - P.N. Ravindra and H. Rao
- AL.16 Solid Waste Management using a Multicriteria Decision System
  - R. Galvez-Cloutier and R. Rodriguez-Méndez

#### ROOM 6

**09.00-10.30: Chaired by: Professor J.C. Miles and Dr J.W.Z. Lu**

**INVITED LECTURE**
- LE.2 Structural Design Inspired by Nature
  - T. Arciszewski and R. Kicinger

**AI.VII METAPHORS FROM NATURE FOR ENGINEERING ANALYSIS**
- AI.15 Process Control using Artificial Intelligence Techniques: Innovative Activated Sludge Process
  - P.N. Ravindra and H. Rao
- AI.16 Solid Waste Management using a Multicriteria Decision System
  - R. Galvez-Cloutier and R. Rodriguez-Méndez

**AI.VIII GENETIC AND EVOLUTIONARY ALGORITHMS IN STRUCTURAL ENGINEERING**
- AI.24 Genetic Algorithm Optimization of Semi-Rigid Steel Structures
  - V. Esfahanian, A. Khajavi Rad and F. Torabi
- AI.26 Parallel Computing for Design Optimization with Computationally Expensive Functions using Evolutionary Algorithms
  - M. Mrzyglod and A. Osyczka
- AI.27 Optimal Fuzzy Control of Hybrid Base Isolation System using Genetic Algorithms
  - H.S. Kim, P.N. Roschke and D.G. Lee
- AI.28 Conceptual Design of Geodesic Domes
  - D.J. Shaw, J.C. Miles and W.A. Gray
- AI.29 Optimum Shape Design of Space Structures using Genetic Algorithms
  - E. Salajegheh, M. Mashayekhi, M. Kaykha and M. Khatibinia

**10.30-11.00: Coffee**

**11.00-12.30: Chaired by: Professor E. Salajegheh and Professor P.C.G.S. Vellasco**

- AI.24 Genetic Algorithm Optimization of Semi-Rigid Steel Structures
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