

The Australian Conference on Artificial Life ACAL 2005

Important Notices:

Monday and Tuesday ONLY will be at UTS: UTS Building 10: 235 -253 Jones street, Ultimo 2007 Seminar Room 250, Level 2, Building 10. Enter through Jones Street, walk straight forward and you can find a sign on the left and then it should be easy to find room 250, the room number on the door is 02.250.

Wednesday and Thursday will be at Carlton Crest: Carlton Crest Hotel Sydney, 169-179 Thomas Street, Sydney, New South Wales Australia 2000 Elizabeth Bay in Ground floor.

The conference dinner will be at Crown Plaza. Directions will be given at the conference.

Monday Location: University of Technology Sydney, Room 02.250, Level 2, Building 10

09:00-10:00 Trust Workshop

10:00-10:30 Morning Coffee

10:30-11:30 Software Presentations

11:30-12:30 Graph Visualization Presentation – Dr. Seokhee Hong, NICTA

12:30-13:30 Lunch

13:30-15:30 The Patterns Workshop

15:30-16:00 Afternoon coffee

Tuesday Location: University of Technology Sydney, Room 02.250, Level 2, Building 10

09:00-09:05 Opening: Hussein Abbass, Terry Bossomaier, Janet Wiles

09:05-10:00 Plenary Talk: Andy Wuensche

Emergent complexity in 3-value Cellular Automata

Session Chair: Janet Wiles

10:00-10:30 Morning Coffee

10:30-12:30 Session Chair: Andy Wuensche

K.A. Hawick, H.A. James and C.J. Scogings

Roles of Rule Priority Evolution in Animat Models

D. Newth, and D. Cornforth

Local Structure and Stability of Model and Real World Ecosystems

P.-M. Agapow

Recreating Large-Scale Evolutionary Phenomena

A. Pitti, M. Lungarella, and Y. Kuniyoshi

Quantification of Emergent Behaviors Induced by Feedback Resonance of Chaos

12:30-13:30 Lunch

13:30-15:00 Session Chair: Heath James

K. Kitto

Gauging ALife: Emerging Complex Systems

S. Mascaro, K.B. Korb and A.E. Nicholson

An ALife investigation on the origins of dimorphic parental investments

R. K. Standish

Complexity of Networks

15:00-15:30 Afternoon coffee

15:30-17:00 Session Chair: Russell Standish

A. Lafusa and T. Bossomaier

Localisation of critical transition phenomena in Cellular Automata rule-space

T. Rudge and N. Geard

Evolving gene regulatory networks for cellular morphogenesis

T. Watanabe, K. Kobayashi, M. Nakamura, K. Kishi, M. Kazuno and K. Tominaga

Describing DNA automata using an artificial chemistry based on pattern matching and recombination

Wednesday Location: Elizabeth Bay, Carlton Crest Hotel

09:00-10:00 Plenary Talk: Mark Bedau

Creating artificial cells

Session Chair: Terry Bossomaier

10:00-10:30 Morning Coffee

10:30-12:30 Session Chair: Mark Bedau

S. Alam, M. McPartland, M. Barlow, P. Lindsay, and H.A. Abbass

Neural Evolution for Collision Detection & Resolution in a 2D Free Flight Environment

C. Gondro and J.C.M. Magalhaes

A Simple Genetic Algorithm for Studies of Mendelian Populations

M.H. Luerssen

Phenotype Diversity Objectives for Graph Grammar Evolution

L. T. Bui, H. A. Abbass and D. Essam

Coevolution of genotype-phenotype mappings to solve epistatic problems

12:30-13:30 Lunch

13:30-14:30 Plenary Talk: Eric B Baum

Title Agent Models of Intelligence

Session Chair: Janet Wiles

14:30-15:30 Session Chair: David Newth

O. G. Woodberry, K. B. Korb and A. E. Nicholson

The Evolution of Aging

D. Chu and J. Rowe

Approaching Perfect Mixing in a Simple Model of the Spread of an Infectious Disease

15:30-16:00 Afternoon coffee

16:00-17:00 Session Chair: Kevin Korb

N. Geard, K. Willadsen and J. Wiles

Perturbation Analysis: A Complex Systems Pattern

J. Watson, J. Hawkins, D. Bradley, D. Dassanayake, J. Wiles and J. Hanan

Towards a Network Pattern Language for Complex Systems

19:00-21:00 Conference Banquet at the Crown Plaza

Thursday Location: Elizabeth Bay, Carlton Crest Hotel

09:00-10:00 Plenary Talk Joint with AI: David Goldberg

Little Models, Big Results

Session Chair: Hussein A. Abbass

10:00-10:30 Morning Coffee

10:30-12:30 Session Chair: David Goldberg

J. Lee and J. Sitte

Issues in the Scalability of Gate-level Morphogenetic Evolvable Hardware

A. Yang, H.A. Abbass, M. Barlow, R. Sarker and N. Curtis

Evolving capability requirements in WISDOM-II

D. Cornforth, D. G. Green and J. Awburn

The Formation of Hierarchical Structures in a Pseudo-Spatial Co-Evolutionary Artificial Life Environment

R.L. Stewart and R.A. Russell

A Generalised Technique for Building 2D Structures with Robot Swarms

12:30-13:30 Lunch

13:30-15:00 Session Chair: David Cornforth

M. Randall

A Dynamic Optimisation Approach for Ant Colony Optimisation using the Multiple Knapsack Problem

M. Randall

Maintaining Explicit Diversity Within Individual Ant Colonies

B. Tatomir and L.J.M. Rothkrantz

H-ABC: A scalable dynamic routing algorithm

15:00-15:30 Closing and Afternoon coffee