SATURDAY SEPTEMBER 30th 2006

9:00 - 9:30   Registration

Morning Session

9:30 - 9:45   Opening Remarks

9:45 - 11:00   **Invited Talk**:

- An experiment in swarm robotics: the swarm-bot

  - M. Dorigo

11:00 - 11:30   Coffee break

11:30 - 13:00   **Session: Algorithms-I** (Chair:To be announced)

- A navigation algorithm for swarm robotics inspired by slime mold aggregation

  - T. Schmickl and K. Crailsheim

- Strategies for energy optimisation in a swarm of foraging robots

  - W. Liu, A. Winfield, J. Sa, J. Chen, L. Dou

- An empirical study on the motion of self-propelled particles with turn angle restrictions

  - A. Samiloglu, V. Gazi, B. Koku

13:00 - 14:15   Lunch Break

Afternoon Session

14:15 – 16:00   **Session: Modelling and Analysis** (Chair: To be announced)

- A macroscopic model for probabilistic aggregation in swarm robotic systems

  - O. Soysal, E. Sahin

- An analytical and spatial model of foraging in a swarm of robots

  - H. Hamann and H. Woern

- Algorithms for the analysis and synthesis of a bio-inspired swarm robotic system

  - S. Berman, A. Halasz, V. Kumar, S. Pratt

- Review of Control and Coordination of Multi-agent dynamic systems: models and approaches

  - V. Gazi and B. Fidan

16:00 - 16:30   Coffee break

16:30 – 18:00 **Panel Discussion: Topic will be announced later** (Chair: To be announced)

SUNDAY OCTOBER 1st 2006

Morning Session

9:30 - 10:00 **Session: Hardware** (Chair: To be announced)

- Communication in a swarm of miniature robots: The e-Puck as an educational tool for swarm robotics

  - C. Cianci, X. Raemy, J. Pugh, A. Martinoli

- UltraSwarm: A further step towards a flock of miniature helicopters

  - R. De Nardi, O. Holland

- Where are you?

  - W. Spears, J. Hamann, P. Maxim, T. Kunkel, R. Heil, D. Zarhitsky., D. Spears, C. Karlsson

11:00 - 11:30 **Coffee break**

11:30 - 13:00 **Session: Algorithms II** (Chair: To be announced)

- Collective perception in a robotic swarm

  - T. Schmickl, C. Moslinger, K. Crailsheim

- Distributed task selection in multi-agent based swarms using heuristic strategies

  - D. Miller, P. Dasgupta, T. Judgkins

13:00 - 14:15 **Lunch Break**

Afternoon Session

14:15 – 16:00 **Session: Evolutionary Approaches** (Chair: To be announced)

- Evolution of signaling in a swarm of robots controlled by dynamic neural networks

  - C. Ampatzis, E. Tuci, V. Trianni, M. Dorigo

- Evolutionary design of specialized aerial explorer controllers

  - A. Eiben, G. Nitschke, M.Schut

- Scalability in evolved neurocontrollers that guide a swarm of robots in a navigation task

  - F. Vicentini, E. Tuci

16:00 - 16:30 **Coffee break**

16:30 – 18:00 **Discussion: Topic will be announced later** (Chair: To be announced)