



7th Workshop

Collective & Swarm Robotics

Stuttgart 2010

18.11.10

Room 2.013,
Institute of Parallel and
Distributed Systems,
Universitätstr. 38,
70569 Stuttgart

Local Organizer:
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Agenda

9.30 Serge Kernbach (University of Stuttgart)

„Soft Robotics – New Generation of Collective Systems“

9.45 Niko Michiels (University of Tübingen)

„Important Questions Biologists Can Only Answer with Swarm Robots“

10.15-10.30 Coffee Break

Session on Self-Assembling and Collective Actuation

10.30 Lutz Winkler (Karlsruhe Institute of Technology)

„The Robot Formation Language“

11.00 Benjamin Girault (University of Stuttgart)

„Heterogeneous Constraint-based Assembling“

11.30 Guy Baele, Yao Yao (Flanders Institute for Biotechnology)

„Application of Gene Regulatory Networks for Self-regulating Assembling (tbd) “

11.45 Sergii Stepanenko, Eugen Meister (University of Donetsk, University of Stuttgart)

„Development and Research of the Control System for the Adaptive Robot“

12.15 Paul Levi (University of Stuttgart)

„Synergetics Agents for Assembling“

13.00-14.00 Lunch**Session on Robot Platforms, Networked and Underwater Robotics****14.00** Humza Raja (FRAUNHOFER)

„Energy-based Homeostasis of a Reconfigurable Robot (tbd)“

14.30 Alexander Kettler (Karlsruhe Institute of Technology)

„The Swarm Robot Wanda“

15.00 Oliver Zweigle, Daniel Di Marco (University of Stuttgart)

„RoboEarth – Knowledge Database for Robots“

15.30-15.45 Coffee Break**15.45** Donny Sutantyo , Tobias Dipper (University of Stuttgart)

„Challenges of Collective Odometry for Underwater Swarm Robotics“

16.15 Dmitrii Kryvukhov, Eugen Meister (University of Donezk, University of Stuttgart)

„Development of the Artificial Skin“

16.45-18.00 Panel Discussion, Brainstorming, Research Proposals

- What are challenges of collective robotics for next years?
 - Bio- chemo- soft-: material research or mechatronics?
 - FP7, FP8, FET Flagships, DFG: strategy of local community
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