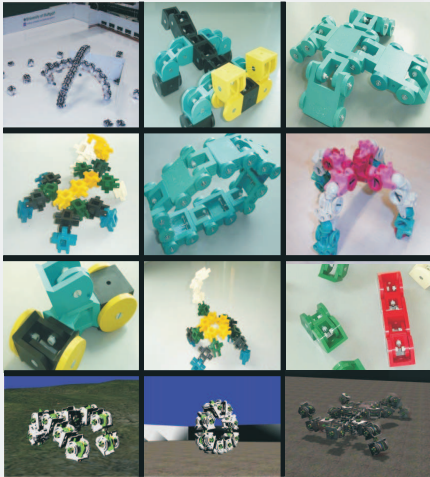


# Robotic Evolutionary Self-Programming and Self-Assembling Organisms

Serge Kernbach, Eugen Meister, Florian Schlachter, Olga Kernbach, Fabio Caparrelli, Stephen McKibbin, Anne van Rossum and Paul Levi

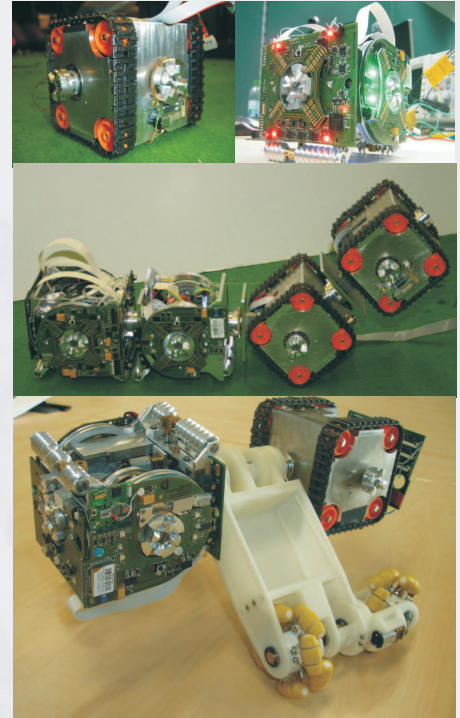
## Embodied Cognition



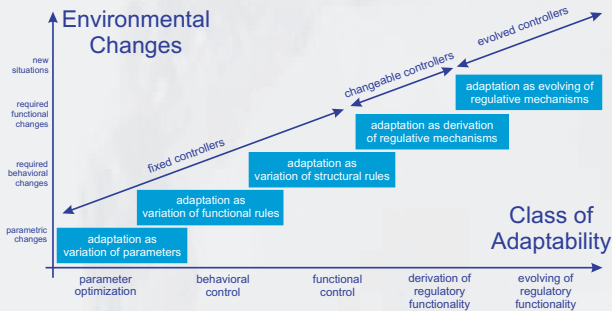
## bio-inspired

- reconfigurable
- adaptive
- collective
- cooperative
- fully autonomous
- energy management
- power sharing
- learning

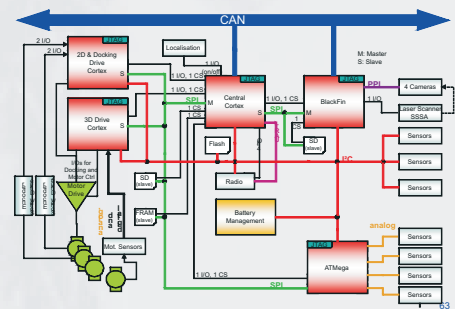
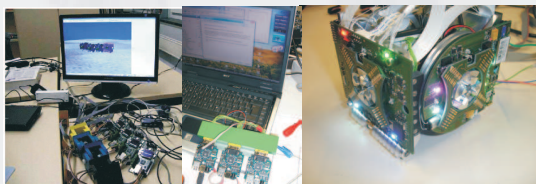
## Reconfigurable Robot Platform



## Adaptivity



## On- and Off-board Evolving and Learning



## Application in human-less environments:

- new vision of a robot: self-healing, self-programming, evolvable
- new generation of autonomous systems: small, reconfigurable, adaptive, collective, energy-efficient
- deep space/deep sea exploration, search and rescue



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