

EVOLUTIONARY COMPUTING APPLICATION IN HARDWARE

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Evolvable systems encompass understanding, modelling and applying biologically inspired mechanisms to physical systems. Application areas for bio-inspired algorithms include the creation of novel physical devices/systems, novel or optimised designs for physical systems and for the achievement of adaptive physical systems. Having showcased examples from analogue and digital electronics, antennas, MEMS chips, optical systems as well as quantum circuits in the past, we are looking for papers that apply techniques and applications of evolvable systems to these hardware systems, and in particular this year looking for papers in the areas of evolutionary robotic and evolutionary many-core system.

Topics

- Self-reconfigurable systems
- Adaptive systems
- Self-repairing systems
- Fault tolerant systems
- Autonomous systems
- Specialised hardware
- Learning and adaptation
- Cooperation and competition
- Co-evolution of robot
- morphologies
- Real-world applications
- Self-adaptation

- Self-monitoring
- Self-testing
- Hardware system
- optimisation