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Towards Self-Assembling Artificial Neural Networks through Neural Developmental Programs

Minimal Neural Network Models for Permutation Invariant Agents

A Unified Substrate for Body-Brain Co-evolution

HyperNCA: Growing Developmental Networks with Neural Cellular Automata

Mario Plays on a Manifold: Generating Functional Content in Latent Space through Differential Geometry

Physical Neural Cellular Automata for 2D Shape Classification

Towards a Framework for Human-AI Interaction Patterns in Co-Creative GAN Applications

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Dealing with Adversarial Player Strategies in the Neural Network Game iNNk through Ensemble Learning

Growing 3D Artefacts and Functional Machines with Neural Cellular Automata

Safer Reinforcement Learning through Transferable Instinct Networks
Evolving and Merging Hebbian Learning Rules: Increasing Generalization by Decreasing the Number of Rule
Winther Pedersen, J. & Risi, S., 10 Jul 2021.

Growing Simulated Robots with Environmental Feedback: an Eco-Evo-Devo Approach
Helmut Hauser, Walker, K. E. & Risi, S., 10 Jul 2021, In: GECCO.

Utopian or Dystopian?: Using a ML-Assisted image generation game to empower the general public to envision the future

Regenerating Soft Robots through Neural Cellular Automata

Player-AI Interaction: What Neural Network Games Reveal About AI as Play

EvoCraft: A New Challenge for Open-Endedness

Deep Innovation Protection: Confronting the Credit Assignment Problem in Training Heterogeneous Neural Architectures

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Rapid Risk Minimization with Bayesian Models Through Deep Learning Approximation

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Safer reinforcement learning through evolved instincts

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Bootstrapping Conditional GANs for Video Game Level Generation

CPPN2GAN: Combining Compositional Pattern Producing Networks and GANs for Large-Scale Pattern Generation

Crea.Blender: A Neural Network-Based Image Generation Game to Assess Creativity

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Finding Game Levels with the Right Difficulty in a Few Trials through Intelligent Trial-and-Error

From Chess and Atari to StarCraft and Beyond: How Game AI is Driving the World of AI

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Deep learning for video game playing

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Towards a Plant Bio-Machine

A Robot to Shape your Natural Plant: The Machine Learning Approach to Model and Control Bio-Hybrid Systems

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Born to learn: The inspiration, progress, and future of evolved plastic artificial neural networks

Collaborative interactive evolution in minecraft

Deep interactive evolution

EuroGP 2018 panel debate: genetic programming in the era of deep neural networks

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Evolutionary Mario Levels in the Latent Space of a Deep Convolutional Generative Adversarial Network

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HyperNTM: Evolving Scalable Neural Turing Machines Through HyperNEAT

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Affective evolutionary music composition with MetaCompose

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A deep learning / neuroevolution hybrid for visual control

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DLNE: A hybridization of deep learning and neuroevolution for visual control

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Automatic Evolution of Multimodal Behavior with Multi-Brain HyperNEAT

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Evolving self-organizing simulated plant-inspired robots

Flora Robotica – Mixed Societies of Symbiotic Robot-Plant Bio-Hybrids

Interactively Evolving Compositional Sound Synthesis Networks

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Monte-Carlo Tree Search for Simulated Car Racing

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Script-and Cluster-based UCT for StarCraft

Single-unit pattern generators for quadruped locomotion

Generating Flower Images and Shapes with Compositional Pattern Producing Networks
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A Compiler for CPPNs: Transforming Phenotypic Descriptions Into Genotypic Representations

Confronting the challenge of learning a flexible neural controller for a diversity of morphologies

Encouraging reactivity to create robust machines

Ribosomal robots: Evolved designs inspired by protein folding

An enhanced hypercube-based encoding for evolving the placement, density, and connectivity of neurons

A unified approach to evolving plasticity and neural geometry

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Multirobot behavior synchronization through direct neural network communication

On the Benefits of Divergent Search for Evolved Representations
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Evolving policy geometry for scalable multiagent learning

Evolving the placement and density of neurons in the hyperneat substrate

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