Paper Index

David Bailly, Pierre Andry and Philippe Gaussier. Learning Anticipatory Motor Control

Jimmy Baraglia, Yukie Nagai, Minoru Asada and Yuji Kawai. The Role of Temporal Variance in Motions for the Emergence of Mirror Neurons Systems

Paul Baxter, Joachim de Greeff, Rachel Wood and Tony Belpaeme. "And what is a Seasnake?" Modelling the Acquisition of Concept Prototypes in a Developmental Framework

Christina Bergmann, Lou Boves and Louis ten Bosch. A model of the Headturn Preference Procedure: Linking cognitive processes to overt behaviour

Preeti Bhargava, Michael Cox, Tim Oates, Uran Oh, Matthew Paisner, Don Perlis and Jared Shamwell. The Robot Baby and Massive Metacognition: Future Vision

Elizabeth Bonawitz, Tomer Ullman, Alison Gopnik and Josh Tenenbaum. Sticking to the Evidence? A computational and behavioral case study of micro-theory change in the domain of magnetism

Sofiane Boucenna, Emilie Delaherche, Mohamed Chetouani and Philippe Gaussier. Learning postures through an imitation game between a human and a robot

Jeremy Boyd, Farrell Ackerman and Marta Kutas. Adult learners use both entrenchment and preemption to infer grammatical constraints

Samuel Brian, Linda Salamanca, Judy Reilly, Jacob Whitehill, Marion Bartlett, Daniel Angus and Janet Wiles. Using Recurrence Plots to Visualize the Temporal Dynamics of Tutor/Student Interactions

Sylvain Calinon, Affan Pervez and Darwin Caldwell. Multi-policy search with adaptive Gaussian mixture model

Suhas Chelian, Nicolas Oros, Andrew Zaldivar, Jeffrey Krichmar and Rajan Bhattacharyya. Model of the interactions between neuromdoluation and prefrontal cortex during a resource allocation task

David Claveau. Progress Towards a Humanoid Robot that Learns to Stand

Moulin-Frier Clément and Pierre-Yves Oudeyer. Curiosity-driven phonetic learning

Joachim de Greeff, Frederic Delaunay and Tony Belpaeme. Active Robot Learning with Human Tutelage

Antoine de Rengervé, Raphaël Braud, Pierre Andry and Philippe Gaussier. Behavior adaptation from negative social signal based on own goal awareness

Kaya de Barbaro, Christine M. Johnson, Deborah Forster and Gedeon O. Deak. Sensory-motor Dynamics of Mother-Infant-Object interactions: Longitudinal Changes in Micro-Behavioral Patterns Across the First Year

Alessandro Di Nuovo and Davide Marocco. Recurrent Neural Network for Ballistic Actions: a Study with the iCub

Miguel Duarte, Sancho Oliveira and Anders Christensen. Hierarchical Evolution of Robotic Controllers for Complex Tasks

Karmen Dykstra, Jacob Whitehill, Linda Salamanca, Monique Lee, Amber Carini, Judy Reilly and Marni Bartlett. Modeling One-on-one Tutoring Sessions

Brent Eskridge and Dean Hougen. Nurturing Promotes Learning in Uncertain Environments

Martin F. Stoelen, Fabio Bonsignorio, Carlos Balaguer, Davide Marocco and Angelo Cangelosi. Online Learning of Sensorimotor Interactions using a Neural Network with Time-Delayed Inputs

Judith Gaspers and Philipp Cimiano. A usage-based model for the online induction of constructions from phoneme sequences

Olivier Georgeon, James Marshall and Simon Gay. Interactional Motivation in Artificial Systems: Between Extrinsic and Intrinsic Motivation

Alexander Gepperth. Simultaneous concept formation driven by predictability

Vieri Giuliano Santucci, Gianluca Baldassarre and Marco Mirolli. Intrinsic motivation mechanisms for competence acquisition

Sascha Griffiths, Stefano Nolfi, Giuseppe Morlino, Lars Schillingmann, Sina Kuehnel, Katharina Rohlfing and Britta Wrede. Bottom-Up Learning of Feedback in a Categorization Task

Frank Guerin and Severin Fichtl. Rapidly Learning Preconditions for Means-Ends Behaviour Using Active Learning

Souheil Hanoune, Philippe Gaussier and Mathias Quoy. An architecture for online chunk learning and planning in complex navigation and manipulation tasks
Jordan Hashemi, Thiago Vallin Spina, Mariano Tepper, Amy Esler, Vassilios Morellas, Nikolaos Papanikolopoulos and Guillermo Sapiro. A computer vision approach for the assessment of autism-related behavioral markers

Fabien Hervouet and Eric Bourreau. Improvement Proposals to Intrinsically Motivationnal Robotics

Todd Hester and Peter Stone. Intrinsically Motivated Model Learning for a Developing Curious Agent

Galit Hofree, Paul Ruvolo, Christopher Reinert, Marian Bartlett and Piotr Winkielman. Why Are You Smiling? In a Strategic Context, People’s Affective Responses Reflect the Meaning of Android’s Facial Expressions

Daniel Johnson, Deborah Forster, Mohsen Malhmir, Morana Alac and Javier Movellan. Design and Early Evaluation of the RUBI-5 Sociable Robots

Paul Joseph and Haim Levkowitz. Computing Affect in Autonomous Agents

George Kachergis, Chen Yu and Richard Shiffrin. Cross-situational Word Learning is Better Modeled by Associations than Hypotheses


Sohrob Kazerounian, Matthew Luciw, Yulia Sandamirskaya, Mathis Richter, Juergen Schmidhuber and Gregor Schoener. Autonomous Reinforcement of Behavioral Sequences in Neural Dynamics

Syed Khursheed Hasnain, Philippe Gaussier and Ghiles Mostafaoui. “Synchrony” as a Way to Choose an Interacting Partner

Rupesh Kumar Srivastava, Bas Steunebrink and Jürgen Schmidhuber. Continually Adding Self-Invented Problems to the Repertoire: First Experiments with PowerPlay

Naveen Kuppuswamy, Christopher M. Harris and Angelo Cangelosi. Effect of Physical Variation on the Reduced Dimensional Control of a Mass-Spring-Damper Chain System

Mark Lee, James Law, Patricia Shaw and Michael Sheldon. An Infant Inspired Model of Reaching for a Humanoid Robot


Armand Leonce, Bryan Hoke and Dean Hougen. Evolution of Robot-to-Robot Nurturing and Nurturability

Nan Li, William Cohen and Kenneth R. Koedinger. Integrating Perceptual Representation Learning and Skill Learning in a Simulated Student
Bingyao Liu, Satinder Singh, Richard Lewis and Shiyin Qin. Optimal Rewards in Multiagent Teams

Manuel Lopes and Pierre-Yves Oudeyer. The Strategic Student Approach for Life-Long Exploration and Learning

Sao Mai Nguyen and Pierre-Yves Oudeyer. Socially Guided Intrinsically Motivated Learner


Gakuto Masuyama, Atsushi Yamashita and Hajime Asama. Intrinsically Motivated Anticipatory Learning Utilizing Transformation Invariance

S. Mohammad Mavadati and Mohammad H. Mahoor. A New Approach for Curvature Estimation of Sampled Data

Ali Mollahosseini, Mohammad H. Mahoor and Hamid R. Shahbazkia. Bidirectional Warping of Active Appearance Model

Hiroki Mori and Yasuo Kuniyoshi. Is the developmental order of fetal behaviors self-organized in an uterine environment?

Yukie Nagai, Akiko Nakatani, Shibo Qin, Hiroshi Fukuyama, Masako Myowa-Yamakoshi and Minoru Asada. Co-Development of Information Transfer within and between Infant and Caregiver

Vikram Narayan, Marko Tscherepanow and Britta Wrede. Integrating Habituation into Saliency Maps

Vikram Narayan, Marko Tscherepanow and Britta Wrede. A Saliency Model for Goal Directed Actions

Sushobhan Nayak and Amitabha Mukerjee. Concretizing the image schema: How semantics guides the bootstrapping of syntax

Vien Ngo and Wolfgang Ertel. Reinforcement Learning Combined with Human Feedback in Continuous State and Action Spaces

Logan Niehaus and Stephen Levinson. Online Learning and Integration of Complex Action and Word Lexicons for Language Grounding

Lisa Oakes and Heidi Baumgartner. Manual object exploration and learning about object features in human infants

Masaki Ogino, Mai Hikita, Sawa Fuke and Minoru Asada. Generating condition-dependent reaching movements based on layered associative network

Nicolas Oros and Jeffrey Krichmar. Neuromodulation, Attention and Localization Using a Novel Android™ Robotic Platform

Thomas Palmer, Matthew Bodenhamer and Andrew Fagg. Learning to Predict Action Outcomes in Continuous, Relational Environments

Alex Pitti, Arnaud Blanchard, Matthieu Cardinaux and Philippe Gaussier. Distinct Mechanisms for Multimodal Integration and Unimodal Representation in Spatial Development
Varun Raj Kompella, Matthew Luciw, Marijn Stollenga, Leo Pape and Juergen Schmidhuber. Autonomous Learning of Abstractions using Curiosity-Driven Modular Incremental Slow Feature Analysis

Florian Raudies, Rick O Gilmore, Kari S Kretch, John M Franchak and Karen E Adolph. Understanding the Development of Motion Processing by Characterizing Optic Flow Experienced by Infants and their Mothers

Arturo Ribes, Jesus Cerquides, Yiannis Demiris and Ramon Lopez De Mantaras. Incremental Learning of an Optical Flow Model for Sensorimotor Anticipation in a Mobile Robot

Mark Ring, and Tom Schaul. The Organization of Behavior into Temporal and Spatial Neighborhoods

Benjamin Rosman and Subramanian Ramamoorthy. What Good are Actions? Accelerating Learning using Learned Action Priors and Perceptual Contexts

Marek Rucinski, Angelo Cangelosi and Tony Belpaeme. Robotic Model of the Contribution of Gesture to Learning to Count


Takashi Sakamoto and Toshiyuki Kondo. Can Passive Arm Movement Affect Adaptation to Visuomotor Rotation?

Linda Salamanca, Amber Carini, Monique Lee, Karmen Dykstra, Jacob Whitehill, Daniel Angus, Janet Wiles, Judy Reilly and Marian Bartlett. Characterizing the Temporal Dynamics of Student-Teacher Discourse

Joe Saunders, Hagen Lehmann, Frank Foerster and Christypher Nehaniv. Robot Acquisition of Lexical Meaning - Moving Towards the Two-word Stage

Matthew Schlesinger, Dima Amso, Scott Johnson, Neda Hantehzadeh and Lalit Gupta. Using the iCub Simulator to Study Perceptual Development: A Case Study

Jared Shamwell, Tim Oates, Preeti Bhargava, Mike Cox, Uran Oh, Matt Paisner and Don Perlis. The Robot Baby and Massive Metacognition: Early Steps via Growing Neural Gas

Katsunari Shibata and Shunsuke Kurizaki. Emergence of Color Constancy Illusion through Reinforcement Learning with a Neural Network

Clare Sims, Savannah Schilling and Eliana Colunga. Interactions in the Development of Skilled Word Learning in Neural Networks and Toddlers

Katrin Solveig Lohan, Katharina Rohlfing, Joe Saunders, Christypher Nehaniv and Britta Wrede. Contingency Scaffolds Language Learning

Freek Stulp and Pierre-Yves Oudeyer. Emergent Maturation through Adaptive Exploration

Daniel Takahashi, Darshana Narayanan and Asif Ghazanfar. A computational model for vocal exchange dynamics and their development in marmoset monkeys

Tomoyasu Takata, Daisuke Higuchi and Seiichi Ozawa. A Sequential Multitask Learning Algorithm for Pattern Recognition
Walter Talbott and Javier Movellan. An Expected Motion Information Model of Salience for Active Cameras

Walter Talbott, Crane Huang and Javier Movellan. Infomax Models of Oculomotor Control

Philip Thomas and Andrew Barto. Motor Primitive Discovery

Paolo Tommasino, Daniele Caligiore, Marco Mirolli and Gianluca Baldassarre. Reinforcement Learning Algorithms that Assimilate and Accommodate Skills with Multiple Tasks

Richard Veale and Matthias Scheutz. Auditory Habituation via Spike-Timing Dependent Plasticity in Recurrent Neural Circuits

Nikita Wagle and Juyang Weng. Developing Dually Optimal LCA Features in Sensory and Action Spaces for Classification

Alan Wagner. The Impact of Stereotyping Errors on a Robot’s Social Development

Fang Wang and Shahram Payandeh. A Study of Hybrid Virtual Fixtures in Assistive Path Following Problems

Anne Warlaumont. A spiking neural network model of canonical babbling development

Adam White, Joseph Modayil and Richard Sutton. Scaling Life-long Off-policy Learning

Janet Wiles, Scott Heath, David Ball, Laleh Quinn and Andrea Chiba. Rat meets iRat

Mark Woehr, Dean Hougen, Ingo Schlupp and Brent Eskridge. Robot-to-Robot Nurturing: A Call to the Research Community

Tingfan Wu and Javier Movellan. Simultaneous Motor and Sensory Learning for Imitation

Horng Wu, Michael Mayer and Wen-Chun Chen. A face recognition system simulating of autistic children

Yasunori Yamada and Yasuo Kuniyoshi. Embodiment guides motor and spinal circuit development in vertebrate embryo and fetus


Shiqi Zhang, Mohan Sridharan and Forrest Sheng-Bao. ASP+POMDP: Integrating Non-Monotonic Logic Programming and Probabilistic Planning on Robots

Yu Zhao, Constantin Rothkopf, Jochen Triesch and Bertram Shi. A Unified Model of the Joint Development of Disparity Selectivity and Vergence Control

Tao Zhou, Piotr Dudek and Bertram Shi. Development of Robot Self-Identification Based on Visuomotor Prediction