

Monday Posters

- M0:** *Model parsimony and predictive power of computational models of cognition.* Tilman Lesch*, Mike Aitken Deakin, Barbara Sahakian
- M1:** *How can memory retrieval inform planning? The case of distinctiveness-guided search.* José Ribas Fernandes*, Clay Holroyd
- M2:** *Responses to reward value and reward receipt demonstrated with computational fMRI in macaque monkeys.* Peter Kaskan*, Vincent Costa, Andrew Mitz, Hana Eaton, Julie Zemskova, David Leopold, Leslie Ungerleider, Elisabeth Murray
- M3:** *Habitual Goals.* Adam Morris*, Fiery Cushman.
- M4:** *Bootstrapping Skills.* Daniel Mankowitz*, Timothy Mann, Shie Mannor
- M5:** *Signaling prediction for size versus value of rewards in rodent orbitofrontal cortex during Pavlovian unblocking.* Geoffrey Schoenbaum, Nina Lopatina*, Brian Sadacca, Michael McDannald
- M6:** *Reward-based network plasticity as Bayesian inference.* Stefan Habenschuss, Robert Legenstein, David Kappel*, Wolfgang Maass
- M7:** *The Role of Orbitofrontal Cortex in Cognitive Planning in the Rat.* Kevin Miller*, Matthew Botvinick, Carlos Brody
- M8:** *Covariance Matrix Estimation for Reinforcement Learning.* Tomer Lancewicki*, Itamar Arel
- M9:** *Cross stimulus suppression reveals orbitofrontal updating of expected outcomes and medial temporal lobe encoding of stimulus-outcome associations during goal-directed choice.* Eric Boorman*, Vani Rajendran, Jill O'Reilly, Tim Behrens
- M10:** *Mitigating Catastrophic Forgetting in Temporal Difference Learning with Function Approximation.* Benjamin Goodrich*, Itamar Arel
- M11:** *Reward-related Frontal Beta Oscillations Are Sensitive to Sequence Length.* Azadeh HajiHosseini*, Clay Holroyd
- M12:** *Performance metrics for time-varying drift and other diffusion based models for decision making.* Vaibhav Srivastava*, Samuel Feng, Amitai Shenhav
- M13:** *Dopamine Influences Use of Prior Knowledge When Learning Under Conditions of Expected Uncertainty .* Vincent Costa*, Bruno Averbeck
- M14:** *Inverse Reinforcement Learning with Density Ratio Estimation.* Eiji Uchibe*, Kenji Doya
- M15:** *Learning Dynamic Locomotion Skills for Terrains with Obstacles.* Xue Bin Peng*, Michiel van de Panne
- M17:** *Computational model of impulsive reaction to anxiety in Obsessive-Compulsive Disorder.* Saori Tanaka*, Yuki Sakai, Yutaka Sakai
- M18:** *Bootstrapped Linear Bandits.* Nandan Sudarsanam*, Ravindran Balaraman, Avijit Saha
- M19:** *Progress Toward the Shared Control of a Prosthetic Arm.* Ann Edwards*, Michael Dawson, Jacqueline Hebert, Craig Sherstan, Richard Sutton, K. Chan, Patrick Pilarski
- M20:** *Model-based strategy selection learning.* Falk Lieder*, Thomas Griffiths
- M21:** *A Biologically Plausible 3-factor Learning Rule for Expectation Maximization in Reinforcement Learning and Decision Making.* Mohammadjavad Faraji*, Kerstin Preusschoff, Wulfram Gerstner
- M22:** *On Convergence of Value Iteration for a Class of Total Cost Markov Decision Processes.* Huizhen Yu*
- M23:** *The formation of habits: a computational model mixing reinforcement and Hebbian learning.* Meropi Topalidou*, Daisuke Kase, Thomas Boraud, Nicolas Rougier
- M24:** *The Carli Architecture—Efficient Value Function Specialization for Relational Reinforcement Learning.* Mitchell Bloch*, John Laird
- M25:** *Teaching Behavior with Punishments and Rewards.* Mark Ho*, Michael Littman, Fiery Cushman, Joseph Austerweil
- M26:** *Putting value in context: Context of past choices alters decisions that rely on sampling from memory.* Aaron Bornstein*, Kenneth Norman
- M27:** *A Deeper Look at Planning as Learning from Replay.* Harm Van Seijen*, Richard Sutton
- M28:** *Decision making mechanisms in a connectionist model of the basal ganglia .* Charlotte Herice*, André Garenne, Thomas Boraud, Martin Guthrie
- M29:** *RLPy: A Value-Function-Based Reinforcement Learning Framework for Education and Research.* Alborz Geramifard*, Christoph Dann, Robert Klein, William Dabney, Jonathan How
- M30:** *Cognitive biases: dissecting the influence of affect on decision-making under ambiguity in humans and animals.* Mike Mendl*, Elizabeth Paul, Samantha Jones, Aurelie Jolivald, Iain Gilchrist, Kiyohito Igaya, Peter Dayan
- M31:** *Towards Closed-Loop Mortality Prediction and Off-Policy Learning of Medical Decision Derived from Very Large Scale Intensive Care Unit Databases.* Matthieu Komorowski, Aldo Faisal*
- M32:** *Context specific learning is captured by hierarchically structured model-free reinforcement learning.* Matthew Balcarras*, Thilo Womelsdorf
- M33:** *Dopaminergic Correlates of Foraging Behavior in Humans.* Angela Ianni*, Daniel Eisenberg, Eric Boorman, Sara Constantino, Catherine Hegarty, Joseph Masdeu, Michael Gregory, Philip Kohn, Tim Behrens, Karen Berman
- M34:** *Lost causes and unobtainable goals: Dynamic choice behavior in multiple goal pursuit .* Jason Harman*, Claudia Gonzalez-Vallejo, Jeffery Vancouver
- M35:** *The Moveable Feast of Predictive Reward Discounting in Humans.* Luke Dickens*, Bernardo Caldas, Benedikt Schoenhense, Guy-Bart Stan, Aldo Faisal
- M36:** *Strategies for exploration in the domain of losses.* Paul Krueger*, Robert Wilson, Jonathan Cohen
- M37:** *Separating value from selection frequency in rapid reaching biases to visual targets.* Craig Chapman*, Jason Gallivan, Nathan Wispinski, James Enns
- M38:** *KWIK Inverse Reinforcement Learning.* Vaishnavh Nagarajan*, Ravindran Balaraman
- M39:** *Hierarchical Decision Making using Spatio-Temporal Abstractions In Reinforcement Learning.* Ramnandan Krishnamurthy*, Peeyush Kumar, Nikhil Nainani, Ravindran Balaraman
- M40:** *When good news leads to bad choices: A reinforcement-learning model of information-driven suboptimal choice.* Elliot Ludvig*, Marcia Spetch, Roger Dunn, Margaret McDevitt
- M41:** *A Stochastic Cooperative Game Theoretic Approach to Trajectory Optimization.* Yunpeng Pan*, Evangelos Theodorou, Kaivalya Bakshi
- M42:** *Parameter Selection for the Deep Q-Learning Algorithm.* Nathan Sprague*
- M43:** *Reinforcement learning objectives constrain the cognitive map.* Kimberly Stachenfeld*, Matthew Botvinick, Samuel Gershman
- M44:** *Human Orbitofrontal Cortex Represents a Cognitive Map of State Space.* Nicolas Schuck*, Yael Niv
- M45:** *Feature Discrimination in Human Learning.* Ian Ballard*, Samuel McClure
- M46:** *What does it mean to control a random process?.* Kaivalya Bakshi*, Evangelos Theodorou
- M47:** *(Non-Parametric) Bayesian Linear Value Function Approximation.* Andras Kupcsik*, Gerhard Neumann
- M48:** *The successor representation in human reinforcement learning: evidence from retrospective revaluation.* Ida Momennejad*, Jin Cheong, Matthew Botvinick, Samuel Gershman
- M49:** *Nonstationary Evaluation for Reinforcement Learning.* Travis Mandel*, Yun-En Liu, Emma Brunskill, Zoran Popovic
- M50:** *Policy Learning with Hypothesis based Local Action Selection.* Bharath Sankaran*, Jeannette Bohg, Nathan Ratliff, Stefan Schaal
- M51:** *Contingency and Correlation in Reversal Learning.* Bradley Pietras*, Peter Dayan, Thomas Stalnaker, Geoffrey Schoenbaum, Tzu-Lan Yu
- M52:** *Investigating the trace decay parameter in on-policy and off-policy reinforcement learning.* Adam White*, Martha White
- M53:** *Conditional computation in neural networks using a decision-theoretic approach.* Pierre-Luc Bacon*, Emmanuel Bengio, Joelle Pineau, Doina Precup
- M54:** *Impulsive Choice Behavior Predicts Exaggerated Learning Signals within Corticostriatal Circuitry.* Edward Patzelt*
- M55:** *Escaping Groundhog Day.* James MacGlashan*, Michael Littman, Stefanie Tellex
- M56:** *Contributions to Teams Formed in Dynamic Networks.* Nathaniel Dykhuis*, Filippo Rossi, Clayton Morrison
- M57:** *A Drift Diffusion Model of Proactive and Reactive Control in a Context-Dependent Two-Alternative Forced Choice Task.* Olga Lositsky*, Robert Wilson, Michael Shvartsman, Jonathan Cohen
- M58:** *Functional specialization of striatum for social versus non-social valuation.* Josiah Nunziato*, Fiery Cushman, Kyle Dillon
- M59:** *A computational model of control allocation based on the Expected Value of Control.* Sebastian Musslick*, Amitai Shenhav, Matthew Botvinick, Jonathan Cohen
- M60:** *Thompson Sampling with Adaptive Exploration Bonus for Near-Optimal Policy Learning.* Prasanna Parthasarathi*, Sarath Chandar A P, Ravindran Balaraman
- M61:** *A Constrained Least-squares Approach to Model-based Reinforcement Learning.* Csaba Szepesvari*, Bernardo Pires, Xinhua Zhang, Hengshuai Yao
- M62:** *Human behavior in contextual multi-armed bandit problems.* Hrvoje Stojic*, Maarten Speekenbrink, Pantelis Analytis
- M63:** *Pre-response dopamine transients in the nucleus accumbens.* Kevin Lloyd*, Peter Dayan

Tuesday Posters

- T0:** *Temporal structure in associative retrieval.* Zeb Kurth-Nelson*, Gareth Barnes, Dino Sejdinovic, Ray Dolan, Peter Dayan
- T1:** *Cognitive influences in stock markets: an agent-based model of stock markets to explore the role of neuroeconomic biases and reinforcement learning in collective financial behavior.* Johann Lussange*, Boris Gutkin
- T2:** *Coarse Q-Learning: Addressing the convergence problem when quantizing continuous state variables.* Richard Dazeley*, Peter Vamplew, Adam Bignold
- T3:** *The Online Discovery Problem and Its Application to Lifelong Reinforcement Learning.* Emma Brunskill, Lihong Li*
- T4:** *Reward Shaping by Demonstration.* Halit Suay*, Sonia Chernova, Tim Brys, Matthew Taylor
- T5:** *Neural computations for value-based decision-making with reward to other.* Haruaki Fukuda*, Ning Ma, Shinsuke Suzuki, Norihiro Harasawa, Kenichi Ueno, Justin Gardner, Noritaka Ichinohe, Masahiko Haruno, Kang Cheng, Hiroyuki Nakahara
- T6:** *The dopaminergic midbrain mediates an effect of average reward on Pavlovian vigour.* Francesco Rigoli*, Benjamin Chew, Peter Dayan, Ray Dolan
- T8:** *Ensembles of Shapings.* Tim Brys*, Anna Harutyunyan, Matthew Taylor, Ann Nowé
- T9:** *A Computational Model of Gait Changes in Parkinson's Disease Patients Passing Through Doorways.* Vignesh Muralidharan, Pragathi Balasubramani, Srinivasa Chakravarthy*, Ravindran Balaraman, Simon Lewis, Ahmed Moustafa
- T10:** *Combining Approximate Planning and Learning in a Cascade.* Joseph Modayil*, Kavosh Asadi, Richard Sutton
- T11:** *Habits without values: A case in which RL can be left out of DM.* Amitai Shenhav*, Kevin Miller, Elliot Ludvig
- T12:** *Concurrent PAC RL.* Zhaohan Guo*, Emma Brunskill
- T13:** *Recurrent Neural Network Modeling of Anterior Cingulate Function.* Danesh Shahnazian*, Clay Holroyd
- T14:** *Task-specific Effects of Reward on Task Switching.* Akina Umemoto*, Clay Holroyd
- T15:** *Human Reinforcement Learning in Non-Stationary Environments.* Cameron Hassall*, Olave Krigolson
- T16:** *Metacognition and Variance in Two Arms Bandit Task.* Uri Hertz*, Mehdi Keramati, Bahador Bahrami
- T17:** *Reinforcement Learning with Preferences.* Johannes Feldmaier*, Hao Shen, Dominik Meyer, Klaus Diepold
- T18:** *Off-policy learning with linear function approximation based on weighted importance sampling.* A. Rupam Mahmood*, Richard S. Sutton
- T19:** *Actively Learning to Attract Followers on Twitter.* Nir Levine*, Shie Mannor, Timothy Mann
- T20:** *Motivated bias in a reversal learning task.* Donal Cahill*, Joshua Greene
- T21:** *Expressing Tasks Robustly via Multiple Discount Factors.* Ashley Edwards*, Michael Littman, Charles Isbell
- T22:** *Multi-Objective Markov Decision Processes for Decision Support.* Dan Lizotte*, Eric Laber
- T23:** *Reinforcement learning based on impulsively biased time scale and its neural substrate in OCD.* Yuki Sakai*, Saori Tanaka, Yoshinari Abe, Seiji Nishida, Takashi Nakamae, Kei Yamada, Kenji Doya, Kenji Fukui, Jin Narumoto
- T24:** *Direct Predictive Collaborative Control of a Prosthetic Arm.* Craig Sherstan, Joseph Modayil, Patrick Pilarski*
- T26:** *Feedback Related Negativity: Reward Prediction Error or Salience Prediction Error?.* Sepideh Heydari*, Clay Holroyd
- T27:** *Independent Biases in Human Decision Making from Experience Revealed by Action Dynamics.* Nathan Wispinski*, Christopher Madan, Craig Chapman
- T28:** *Utility-weighted sampling in decisions from experience.* Falk Lieder*, Thomas Griffiths, Ming Hsu
- T29:** *An Actor-Critic Contextual Bandit Algorithm for Personalized Interventions using Mobile Devices.* Huitian Lei*, Ambuj Tewari, Susan Murphy
- T30:** *Valuation systems in risky decisions from description and experience.* Christopher Madan*, Elliot Ludvig, Matthew Brown, Marcia Spetch
- T31:** *Bayesian Learning for Safe High-Speed Navigation in Unknown Environments.* Charles Richter*, William Vega-Brown, Nicholas Roy
- T32:** *Decision Mechanisms Underlying Mood-Congruent Emotional Classification.* Elad Liebman*, Peter Stone, Corey White
- T33:** *Self-reinforcing expectancy effects on pain: Behavioral and brain mechanisms.* Marieke Jepma*, Tor Wager
- T34:** *Human Information Search: Choosing the Best Cause.* Benjamin Rottman*
- T35:** *Open-Ended Learning of Skills in Robots: Insights from Looking at the Brain.* Gianluca Baldassarre*, Francesco Mannella, Vieri Santucci, Valerio Sperati, Daniele Caligiore, Emilio Cartoni, Bruno Castro da Silva, Marco Mirolli
- T36:** *Modular Inverse Reinforcement Learning on Human Motion.* Shun Zhang*, Matthew Tong, Mary Hayhoe, Dana Ballard
- T37:** *Stable reinforcement learning via competition between eligibility traces.* Marco A. Huertas, Sarah Schwettmann, Alfredo Kirkwood, Kaiwen He, Harel Z. Shouval*
- T38:** *Decision Makers in a Changing Environment Anticipate Negative Changes and Resist Positive Changes.* Jason Harman*, Cleotilde Gonzalez
- T39:** *Directed and random exploration in realistic environments.* Paul Krueger*, Alexandria Oliver, Jonathan Cohen, Robert Wilson
- T40:** *Choice reflexes in the rodent habit system.* Aaron Gruber*, Ali Mashhoori, Rajat Thapa
- T41:** *Learning in multidimensional environments: Computational and neural processes across the lifespan.* Reka Daniel*, Yael Niv, Angela Radulescu
- T42:** *Dopamine type 2 receptors control inverse temperature beta for transition from perceptual inference to reinforcement learning.* Eunjeong Lee*, Olga Dal Monte, Bruno Averbeck
- T43:** *Cancer Treatment Optimization Using Gaussian Processes.* Audrey Durand*, Joelle Pineau
- T44:** *Reward-based decision making with infinite choice sets.* Jonathan Berliner*, Matthew Botvinick
- T45:** *Approximate MaxEnt Inverse Optimal Control.* De-An Huang, Amir-massoud Farahmand*, Kris Kitani, Drew Bagnell
- T46:** *Automatic Generation of HTNs From PDDL.* Anders Jonsson, Damir Lotinac*
- T47:** *Reinforcement Learning in Decentralized Stochastic Control Systems with Partial History Sharing.* Jalal Arabneydi*, Aditya Mahajan
- T48:** *Humans tradeoff information seeking and randomness in explore-exploit decisions.* Robert Wilson*, Jonathan Cohen
- T49:** *Reinforcement learning modeling of decision-making tasks with temporal uncertainty.* Stefania Sarno*, Victor de Lafuente, Ranulfo Romo, Néstor Parga
- T50:** *Model-based Analysis of the Tower of London Task.* Constantinos Mitsopoulos*, Richard Cooper, Denis Mareschal
- T51:** *Approximate Linear Successor Representation.* Clement Gehring*, Leslie Kaelbling, Tomas Lozano-Perez
- T52:** *Modeling Individual Differences in Risky Decision-Making with Cumulative Prospect Theory.* Claire McCormick, Meghann Pasternak, Adam Krawitz*
- T53:** *Learning for Multiagent Decentralized Control in Large Partially Observable Stochastic Environments.* Miao Liu*, Christopher Amato, Emily Anesta, John Griffith, Jonathan How
- T54:** *Learning and Planning with Timing Information in Markov Decision Processes.* Pierre-Luc Bacon*, Borja Balle, Doina Precup
- T55:** *The spillover effects of attentional learning on value-based choice.* Ian Krajbich*, Rachael Gwinn, Andrew Leber
- T56:** *A learning mechanism for variability-sensitive reinforcement learning.* Angela Langdon*, Yael Niv
- T57:** *Modeling the Hemodynamic Response Function for Prediction Errors in the Human Ventral Striatum.* Gecia Bravo Hermsdorff*, Yael Niv
- T58:** *Balancing The Moral Bank: Neural Mechanisms of Reciprocity.* Yuanbo Wang*, Jorie Koster-Hale, Fiery Cushman
- T59:** *Evaluating predictive variables by a dual system of structure and parameter learning.* Tamas Madarasz*, Joseph LeDoux, Joshua Johansen
- T60:** *Neural representations of posterior distributions over latent causes.* Stephanie Chan*, Kenneth Norman, Yael Niv
- T61:** *Model Comparison via Real-Time Manipulation of Human Learning.* Andra Geana, Yael Niv*