Presentations

Wed 09:00 – Workshop: Citizen Science, Gamification, and Virtual Reality for Cognitive Research

Citizen Science, Gamification, and Virtual Reality for Cognitive Research
Jana Jarecki, Jacob Sherson, Juho Hamari, Julia A. Bopp, Julian Jarecki, Libby Heaney, Sharon Steinemann, Pinja Haikka, Carsten Bergenholtz

Wed 09:00 – Workshop: Cooperative Social Intelligence: Understanding and Acting with Other

Cooperative Social Intelligence: Understanding and Acting with Other
Max Kleiman-Weiner, Yibiao Zhao, Josh Tenenbaum

Wed 09:00 – Tutorial: Dynamic Field Theory: Conceptual Foundations and Applications in Cognitive and Developmental Science

Dynamic Field Theory: Conceptual Foundations and Applications in Cognitive and Developmental Science
John Spencer, Vanessa Simmering, Sebastian Schneegans

Wed 09:00 – Tutorial: Recent Advances in Deep Learning

Tutorial: Recent Advances in Deep Learning
Matthew Botvinick, Peter Battaglia

Wed 09:00 – Workshop: Bridging the Gap: Is Logic and Automated Reasoning a Foundation for Human Reasoning?

Workshop: Bridging the Gap: Is Logic and Automated Reasoning a Foundation for Human Reasoning?
Ulrich Furbach, Steffen Hölldobler, Marco Ragni, Claudia Schon
Wed 09:00 – Workshop: The Fine Art of Conversation

The Fine Art of Conversation
Saul Albert, Claude Heath, Patrick Healey

Wed 09:00 – Workshop: The Computational Foundations of Religious Cognition

The Computational Foundations of Religious Cognition: A Workshop Hosted by the International Association for the Cognitive Science of Religion (IACSR)
Ann Taves, Dimitris Xygalatas, John Shaver

Wed 13:00 – Workshop: Building Bridges from (Ivory) Towers: Combining Academia and Industry for Cognitive Research

Building Bridges from (Ivory) Towers: Combining Academia and Industry for Cognitive Research
Katherine Livins, Jay Martin


Methods for Reconstructing Causal Networks from Observed Time-Series: Granger-Causality, Transfer Entropy, and Convergent Cross-Mapping
Fermin Moscoso del Prado Martin

Wed 13:00 – Workshop: Deep Learning in Computational Cognitive Science

Workshop proposal: Deep Learning in Computational Cognitive Science
Ilker Yildirim, Josh Tenenbaum

Thu 8:30 – Opening Session

Introduction & Welcome
Organizing Committee

Thu 9:00 – Keynote
Thu 10:30 – Invited Symposium: Computational Foundations

Peter Dayan, Karl Friston, Matt Botvinick, Howard Bowman, Ulrike Hahn

Thu 10:30 – Instruction

Supporting Low-Performing Students by Manipulating Self-efficacy in Digital Tutees
   Betty Tärning, Magnus Haake, Agneta Gulz

From Abstract to Concrete? Evidence for designing learning platforms that adapt to user’s proficiencies.
   Michael I. Swart, Sorachai Kornkasem, Nirmaliz Colon-Acosta, Amy Hachigian, Jonathan M. Vitale, John B. Black

Interactivity and Ego Depletion in Insight Problem Solving
   Frederic Vallee-Tourangeau

Preparatory Effects of Problem Posing on Learning from Instruction
   Manu Kapur

Promoting Children’s Relational Understanding of Equivalence
   Kristen Johannes, Jodi Davenport, Yvonne Kao, Caroline Byrd Hornburg, Nicole McNeil

Thu 10:30 – Reasoning 1

Rise and fall of conflicting intuitions during reasoning
   Bence Bago, Wim De Neys

The temporal dynamics of base rate neglect: People may not be intuitive statisticians after all
   Eoin Travers, Jonathan J. Rolison, Aidan Feeney

Conditionals, Individual Variation, and the Scorekeeping Task
   Niels Skovgaard-Olsen, David Kellen, Ulrike Hahn, Karl Christoph Klauer

The Wason Selection task: A Meta-Analysis
   Marco Ragni, Ilir Kola, Phil Johnson-Laird

Minimal covariation data support future one-shot inferences about unobservable properties of novel agents
   Julian Jara-Ettinger, Hyowon Gweon

Thu 10:30 – Causal Cognition 1
Discovering Multicausality in the Development of Coordinated Behavior  
Tian Linger Xu, Drew H. Abney, Chen Yu

Causal learning from interventions and dynamics in continuous time  
Neil Bramley, Ralf Mayrhofer, Tobias Gerstenberg, David Lagnado

Analogical gestures foster understanding of causal systems  
Kensy Cooperrider, Dedre Gentner, Susan Goldin-Meadow

The role of intentionality in causal attribution is culturally mediated: evidence from Chinese, Mayan, and Spanish populations  
Stephanie Evers, Erika Bellingham, Katharine Donelson, Jing Du, José Antonio Jódar Sánchez, Fuyin Li, Jürgen Bohnemeyer

Analogical Inferences in Causal Systems  
Matthew Myers, Dedre Gentner

Thu 10:30 – Symposium: Big Data and Little Learners

Big Data and Little Learners  
John Trueswell, Linda Smith, Josh Tenenbaum, Charles Yang

Thu 10:30 – Learning

What is Learning? A Definition for Cognitive Science  
Jim Davies

Cross-situational learning of novel anaphors  
Karen Clothier, Satoshi Nambu, Hajime Ono, Akira Omaki

Explaining Guides Learners Towards Perfect Patterns, Not Perfect Prediction  
Elizabeth Kon, Tania Lombrozo

When extremists win: On the behavior of iterated learning chains when priors are heterogeneous  
Daniel Navarro, Amy Perfors, Arthur Kary, Scott Brown, Chris Donkin

Learning on Multi-Touch Devices: The influence of the distance between information in pop-ups and the hands of the users  
Birgit Brucker, Lara Scatturin, Peter Gerjets

Thu 10:30 – Semantics & Concepts

Dynamic Effects of Conceptual Combination on Semantic Network Structure  
Yoed Kenett, Sharon Thompson-Schill

Inferential Role Semantics for Natural Language  
Peter Blouw, Chris Eliasmith
Interoception: The Forgotten Modality in Perceptual Grounding of Concepts
Louise Connell, Dermot Lynott, James Carney

Knowledge of Cross-Linguistic Semantic Diversity Reduces Essentialist Beliefs about Categories
Kevin Holmes, Erin Luby, Sarah Husney

Relational Concept Learning via Guided Interactive Discovery
John Patterson, David Landy, Kenneth Kurtz

Thu 10:30 – Spatial Cognition

Characterizing spatial construction processes: Toward computational tools to understand cognition
Cathryn S. Cortesa, Jonathan D. Jones, Gregory D. Hager, Sanjeev Khudanpur, Amy L. Shelton, Barbara Landau

Reference Systems in Spatial Memory for Vertical Locations
Thomas Hinterecker, Caroline Leroy, Maximilian E. Kirschhock, Mintao Zhao, Martin Butz, Heinrich H. Bülthoff, Tobias Meilinger

Spatial Cognition and Science: The Role of Intrinsic and Extrinsic Spatial Skills from Seven to Eleven Years
Alex Hodgkiss, Katie Gilligan, Michael Thomas, Andrew Tolmie, Emily Farran

Flexible integration of a navigable, clustered environment
Marianne Strickrodt, Heinrich H. Bülthoff, Tobias Meilinger

Uncovering visual priors in spatial memory using serial reproduction
Thomas Langlois, Nori Jacoby, Jordan Suchow, Thomas Griffiths

Thu 10:30 – Linguistic Conventions

Optimization of American English, Spanish, and Mandarin Chinese over time for efficient communication
John Pate

Cute Little Puppies and Nice Cold Beers: An Information Theoretic Analysis of Prenominal Adjectives
Melody Dye, Petar Milin, Richard Futrell, Michael Ramscar

Maintaining Credibility When Communicating Uncertainty: The Role of Communication Format
Sarah Jenkins, Adam Harris, Murray Lark

Effects of Grammatical Gender on Object Description
Arturs Semenuks, Webb Phillips, Ioana Dalca, Cora Kim, Lera Boroditsky

Convention-formation in iterated reference games
Robert X.d. Hawkins, Mike Frank, Noah Goodman
Thu 10:30 – Reading

Different processes for reading words learned before and after onset of literacy
Padraic Monaghan, Ya-Ning Chang, Stephen Welbourne

Semantic diversity, frequency and learning to read: A mini-mega study with children
Yaling Hsiao, Kate Nation

Gaze Shifts between Text and Illustrations are Negatively Related to Reading Fluency in Beginning Readers
Karrie E. Godwin, Cassondra M. Eng, Anna V. Fisher

Word Embedding Distance Does not Predict Word Reading Time
Stefan Frank

Refixations gather new visual information rationally
Yunyan Duan, Klinton Bicknell

Thu 10:30 – Transfer

Far Transfer: Does it Exist?
Giovanni Sala, Fernand Gobet

Modeling transfer of high-order uncertain information
Michele Herbstritt, Michael Franke

Promoting Spontaneous Analogical Transfer byIdealizing Target Representations
Máximo Trench, Lucía Micaela Tavernini, Robert L. Goldstone

Individual Differences in Transfer Mediated by Conceptual Priming
Jairo A. Navarrete

Knowledge transfer in a probabilistic Language Of Thought
Samuel Cheyette, Steve Piantadosi

Thu 15:00 – Symposium: Glushko Dissertation Prize Recipients

Alexandra Carstensen, Judith Ellen Fan, Julian Jara-Ettinger, Samuel G. B. Johnson, Dave F. Kleinschmidt

Thu 15:00 – Coping with Inconsistency

Could both be right? Children’s and adults’ sensitivity to subjectivity in language
Ruthe Foushee, Mahesh Srinivasan

Inconvenient samples: Modeling the effects of non-consent by coupling observational and experimental results
Children’s social referencing reflects sensitivity to graded uncertainty
   Emily Hembacher, Benjamin demayo, Michael Frank

What do you really think? Children’s ability to infer others’ desires when emotional expressions change between social and nonsocial contexts
   Yang Wu, Laura Schulz

Intuitive psychophysics: Children’s exploratory play quantitatively tracks the discriminability of alternative hypotheses
   Rachel Magid, Max Siegel, Josh Tenenbaum, Laura Schulz

Thu 15:00 – Reasoning 2

Re-representation in comparison and similarity
   Samuel Day, Jennifer Asmuth

Numbers Uniquely Bias Spatial Attention: A Novel Paradigm for Understanding Spatial-Numerical Associations
   Lauren Aulet, Sami Yousif, Stella Lourenco

A Common Neural Component for Finger Gnosis and Magnitude Comparison
   Terrence Stewart, Marcie Penner-Wilger, Rylan Waring, Michael Anderson

The impact of descriptions and incentives on the simultaneous underweighting and overestimation of rare events
   Garston Liang, Emmanouil Konstantinidis, Aba Szollosi, Christopher Donkin, Ben R. Newell

Mathematical invariants in people’s probabilistic reasoning
   Fintan Costello, Paul Watts

Thu 15:00 – Meanings & Categories

The Role of Imagination in Exemplar Generation: The Effects of Conflict and Explanation
   Tammy Dennis, Daniel Little

Non-Symbolic Exact Quantity Representation in a Language Impaired Population
   John Verbos, Sarah Wallace, Alexander Kranjec

Diversity in a Contrast Set Increases Generalization from a Single-Item Target
   David Bosch, David Kalkstein, Tali Kleiman

The adaptive evolution of early human symbolic behavior
   Katrin Heimann, Riccardo Fusaroli, Sergio Gonzalez de La Higuera Rojo, Niels Nørkær Johannsen, Felix Riede, Nicolas Fay, Marlize Lombard, Kristian Tylén

The Relational Luring Effect: False Recognition via Relational Similarity
   Vencislav Popov, Penka Hristova
Thu 15:00 – Language Comprehension & Context

Inhibitory Control Supports Referential Context Use in Language Production and Comprehension  
Alison Trude, Nazbanou Nozari

Refining the distributional hypothesis: A role for time and context in semantic representation  
Melody Dye, Michael Jones, Daniel Yarlett, Michael Ramscar

Highly Proficient Bilinguals Maintain the Language-Specific Pragmatic Constraints on Pronouns: Evidence from Speech and Gesture  
Zeynep Azar, Ad Backus, Aslı Özyürek

Warm (for winter): Comparison class understanding in vague language  
Michael Henry Tessler, Michael Lopez-Brau, Noah Goodman

Comprehenders Model the Nature of Noise in the Environment  
Rachel Ryskin, Richard Futrell, Edward Gibson

Thu 15:00 – Cognitive Development 1

What’s worth the effort: Ten-month-old infants infer the value of goals from the costs of actions  
Shari Liu, Tomer Ullman, Josh Tenenbaum, Elizabeth Spelke

Reverse-engineering the process: Adults’ and preschoolers’ ability to infer the difficulty of novel tasks  
Hyowon Gweon, Mika Asaba, Grace Bennett-Pierre

More than meets the eye: Early relational reasoning cannot be reduced to perceptual heuristics  
Caren Walker, Alison Gopnik

Children’s spontaneous comparisons from 26 to 58 months predict performance in verbal and non-verbal analogy tests in 6th grade  
Catriona Silvey, Dedre Gentner, Lindsey Richland, Susan Goldin-Meadow

Computational Exploration of Lexical Development in Down Syndrome  
Angel Tovar, Gert Westermann

Thu 15:00 – Deep Learning

Structure Learning in Motor Control: A Deep Reinforcement Learning Model  
Ari Weinstein, Matthew Botvinick

Functionally localized representations contain distributed information: insight from simulations of deep convolutional neural networks  
Nicholas Blauch, Elissa Aminoff, Michael Tarr

Modeling human categorization of natural images using deep feature representations
Assessing the Linguistic Productivity of Unsupervised Deep Neural Networks
Lawrence Phillips, Nathan Hodas

Deep Networks as Models of Human and Animal Categorization
Bradley Love, Olivia Guest, Piotr Slomka, Victor Navarro, Edward Wasserman

Thu 15:00 – Symposium: Anthropological Contributions to Cognitive Science

Anthropological Contributions to Cognitive Science
Andrea Bender, Sieghard Beller, Rita Astuti, Olivier Le Guen, Karenleigh Overmann, Peter Rácz, Fiona Jordan, Mads Solberg

Thu 15:00 – Cognitive Moderators

Insomniacs Misidentify Angry Faces as Fearful Faces Because of Missing the Eyes: an Eye-Tracking Study
Jinxiao Zhang, Antoni B. Chan, Esther E.y. Lau, Janet H. Hsiao

A Cognitive-Pharmacokinetic Computational Model of the Effect of Toluene on Performance
Christopher Fisher, Christopher Myers, Reem Hassan, Christopher Stevens, Charles Hack, Jeffery Gearhart, Glenn Gunzelmann

A Dynamic Process Model for Predicting Workload in an Air Traffic Controller Task
Martina Truschzinski, Maria Wirzberger

Dynamics of Affordance Actualization
Patric Nordbeck, Laura Soter, Rachel Kallen, Anthony Chemero, Michael Richardson

A modeling link between cognitive and biological homeostasis
Gavin Jenkins, Jordan Barnes, Paul Tupper, Mark Blair

Thu 15:00 – Rational Behaviour

A rational analysis of marketing strategies
Nisheeth Srivastava, Ed Vul

A Rational Approach to Stereotype Change
Jake Spicer, Adam Sanborn

A rational analysis of curiosity
Rachit Dubey, Tom Griffiths

Touch Screen Text Entry as Cognitively Bounded Rationality
Jussi Jokinen
Thu 15:00 – The Development of Meaning

Converging Evidence for Abstract Phonological Knowledge in Speech Processing
Anne Cutler

Mental Algorithms in the Historical Emergence of Word Meanings
Christian Ramiro, Barbara Malt, Mahesh Srinivasan, Yang Xu

More Siblings Means Lower Input Quality in Early Language Development
Catherine Laing, Elika Bergelson

Quantifying the impact of active choice in word learning
Shohei Hidaka, Takuma Torii, George Kachergis

Early Colour Word Learning in British Infants
Samuel Forbes, Kim Plunkett

Thu 17:10 – Heineken Prize Lecture

Core Knowledge and Composition
Elizabeth Spelke

Thu 18:30 – Cognitive Science Society Business Meeting

Fri 9:00 – Keynote

Principles of Brain Circuit Architectures, from Percept to Concept
Richard Granger

Fri 10:30 – Rumelhart Prize Symposium in honor of Lila R. Gleitman

Finding structure and meaning in language acquisition
Elissa Newport, Cindy Fisher, John Trueswell, Barbara Landau
Fri 10:30 – Logical Reasoning

The elusive odness of or-introduction
Nicole Cruz, David Over, Mike Oaksford

A Two-Step Signal Detection Model of Belief Bias
Rachel Stephens, John Dunn, Brett Hayes

Modeling the Ellsberg Paradox by Argument Strength
Niki Pfeifer, Hanna Pankka

A Computational Logic Approach to Human Syllogistic Reasoning
Ana Oliveira da Costa, Emmanuelle-Anna Dietz Saldanha, Steffen Hölldobler, Marco Ragni

The Semantics and Pragmatics of Logical Connectives: Adults’ and Children’s Interpretations of And and Or in a Guessing Game
Masoud Jasbi, Michael Frank

Fri 10:30 – Regularity in Language

Creating words from iterated imitation
Pierce Edmiston, Marcus Perlman, Gary Lupyan

Social Network Limits Language Complexity
Matt Lou-Magnuson, Luca Onnis

Harmony in a non-harmonic language: word order learning in French children
Guillaume Braquet, Jennifer Culbertson

Is the strength of regularisation behaviour uniform across linguistic levels?
Carmen Saldana, Kenny Smith, Simon Kirby, Jennifer Culbertson

Prior Expectations in Linguistic Learning: A Stochastic Model of Individual Differences
R. Alexander Schumacher, Janet Pierrehumbert

Fri 10:30 – Causal Cognition 2

Opponent Uses of Simplicity and Complexity in Causal Explanation
Samuel Johnson, J. J. Valenti, Frank Keil

Investigating the Explore/Exploit Trade-off in Adult Causal Inferences
Erik Herbst, Christopher Lucas, Daphna Buchsbaum

A non-parametric Bayesian prior for causal inference of auditory streaming
Tim Yates, Nathanael Larigaldie, Ulrik Beierholm
Statistical and Mechanistic Information in Evaluating Causal Claims
   Samuel Johnson, Frank Keil

Causal and compositional generative models in online perception
   Ilker Yildirim, Michael Janner, Mario Belledonne, Christian Wallraven, Winrich Freiwald, Josh Tenenbaum

Fri 10:30 – Choice

The Refugees’ Dilemma: not all deontological moral choices are of the same kind
   Albert Barque-Duran, Emmanuel Pothos

Attractor Dynamics in Delay Discounting: A Call for Complexity
   Martin Schoemann, Stefan Scherbaum

Comparing Individual and Collaborative Problem Solving in Environmental Search
   Franziska Keilmann, Stephan de La Rosa, Stephan Schwan, Ulrike Cress, Betty J Mohler, Heinrich H Bülthoff, Tobias Meilinger

A Unified Model of Entropy and the Value of Information
   Jonathan D. Nelson, Vincenzo Crupi, Björn Meder, Gustavo Cevolani, Katya Tentori

Word Identification Under Multimodal Uncertainty
   Abdellah Fourtassi, Michael Frank

Fri 10:30 – Cognitive Control

Multitasking Capability Versus Learning Efficiency in Neural Network Architectures
   Sebastian Musslick, Andrew Saxe, Kayhan Ozcimder, Biswadip Dey, Greg Henselman, Jonathan Cohen

A Model of Cognitive Control in the Wisconsin Card Sorting Test: Integrating Schema Theory and Basal Ganglia Function
   Andrea Caso, Richard P. Cooper

A Formal Approach to Modeling the Cost of Cognitive Control
   Kayhan Ozcimder, Biswadip Dey, Sebastian Musslick, Giovanni Petri, Nesreen K. Ahmed, Theodore L. Willke, Jonathan D. Cohen

Strategic exploration in human adaptive control
   Eric Schulz, Edgar Klenske, Neil Bramley, Maarten Speekenbrink

Novel Evidence for the Bilingual Advantage: Effects of Language Control on Executive Function in Balanced and Unbalanced Dual-Language Users
   W. Quin Yow, Adam C. Oei, Xiaqian Li

Fri 10:30 – Semantics
The Semantic Spaces of Child-Directed Speech, Child Speech and Adult-directed Speech: A Manifold Perspective
Hao Sun, John Pate

Semantic Typology and Parallel Corpora: Something about Indefinite Pronouns
Barend Beekhuizen, Julia Watson, Suzanne Stevenson

A Biologically Constrained Model of Semantic Memory Search
Ivana Kajic, Jan Gosmann, Brent Komer, Ryan W. Orr, Terrence Stewart, Chris Eliasmith

A Bayesian Model of Memory for Text
Mark Andrews

Evaluating Vector-Space Models of Word Representation, or, The Unreasonable Effectiveness of Counting Words Near Other Words
Aida Nematzadeh, Stephan C. Meylan, Thomas L. Griffiths

Fri 10:30 – Learning & Instruction

The most efficient sequence of study depends on the type of test
Paulo Carvalho, Rob Goldstone

Is there an explicit learning bias? Students beliefs, behaviors and learning outcomes.
Paulo Carvalho, Elizabeth McLaughlin, Ken Koedinger

Teaching by Intervention: Working Backwards, Undoing Mistakes, or Correcting Mistakes?
Mark Ho, Michael Littman, Joseph Austerweil

Is Play Better Than Direct Instruction? Learning About Causal Systems through Play
Zi L. Sim, Kuldeep K. Mahal, Fei Xu

The impact of practice frequency on learning and retention
Caitlin Tenison, John Anderson

Fri 10:30 – Perceptual Learning

A computational decomposition of task-irrelevant perceptual learning
Angelo Pirrone, Tom Stafford

Non-syntactic Processing Explains Cortical Entrainment During Speech Perception
Stefan Frank, Jin-Biao Yang

Sequential Effects in the Garner Tasks
Deborah Lin, Daniel Little

Narrowing of the Cone-of-Direct Gaze Through Reinforcement Learning
Sam Blakeman, Denis Mareschal
Watching Non-Corresponding Gestures Helps Learners with High Visuospatial Ability to Learn about Movements with Dynamic Visualizations: An fNIRS Study
   Birgit Brucker, Björn de Koning, Ann-Christine Ehlis, David Rosenbaum, Peter Gerjets

Fri 10:30 – Collaborative Cognition

Synchronization Assessment for Collective Behavior
   Maurici A. López-Felip, Tehran J. Davis, Till D. Frank

Examining Multiscale Movement Coordination in Collaborative Problem Solving
   Travis J. Wiltshire, Sune Vork Steffensen

Selective Information Sampling and the In-Group Heterogeneity Effect
   Elizaveta Konovalova, Gael Le Mens

Leveraging Response Consistency within Individuals to Improve Group Accuracy for Rank-Ordering Problems
   Brent Miller, Mark Steyvers

Preschoolers appropriately allocate roles based on relative ability in a cooperative interaction
   Rachel Magid, Mary Depascale, Laura Schulz


Time in the mind of a child: Perspectives on the development of temporal cognition
   Katharine Tillman, Florie Monier, Meng Zhang, Jonathan Redshaw, Teresa McCormack

Fri 15:00 – Bayes

Sampling frames, Bayesian inference and inductive reasoning
   Brett Hayes, Stephanie Banner, Daniel Navarro

Interpreting Asymmetric Perception in Speech Perception with Bayesian Inference
   Jie Ren, Joseph Austerweil

Modelling dependency completion in sentence comprehension as a Bayesian hierarchical mixture process: A case study involving Chinese relative clauses
   Shravan Vasishth, Nicolas Chopin, Robin Ryder, Bruno Nicenboim

Task-oriented Bayesian inference in interval timing: People use their prior reproduction experience to calibrate time reproduction
   Zhenguang Cai, Ruiming Wang, Huihui Liu, Maarten Speekenbrink

A hierarchical Bayesian model of “memory for when” based on experience sampling data
Fri 15:00 – Visual Search

Mechanisms of overharvesting in patch foraging
Gary Kane, Aaron Bornstein, Robert Wilson, Amitai Shenhav, Nathaniel Daw, Jonathan Cohen

Seeing Is Not Enough for Sustained Visual Attention
Lei Yuan, Tian Linger Xu, Chen Yu, Linda Smith

Human Visual Search as a Deep Reinforcement Learning Solution to a POMDP
Aditya Acharya, Xiuli Chen, Christopher Myers, Richard Lewis, Andrew Howes

Looking for the Cat and Seeing the Dog: Using Visual Search to Study Semantic Knowledge in Children
Catarina Vales, Layla Unger, Anna Fisher

Target-to-distractor similarity can help visual search performance
Vencislav Popov, Lynne Reder

Fri 15:00 – Categorisation

Distributional learning and lexical category acquisition: What makes words easy to categorize?
Giovanni Cassani, Robert Grimm, Steven Gillis, Walter Daelemans

Unsupervised Learning in an Animal Model
Edward Wasserman, Leyre Castro, Vladimir Sloutsky

Perceptual contrast and response assimilation in sequential categorization without feedback
James Hampton

Comparative analysis of visual category learning
John Freeman, Matthew Broschard, Jangjin Kim, Leyre Castro, Edward Wasserman, Vladimir Sloutsky

Executive function and attention predict low-income preschoolers’ active category learning
Katherine A. Adams, George Kachergis

Fri 15:00 – Interaction

Audiovisual integration is affected by performing a task jointly
Basil Wahn, Ashima Keshava, Scott Sinnett, Alan Kingstone, Peter König

Moving together: in the body or the mind?
Lilla Hodossy, Jorina von Zimmermann, Daniel Richardson
Opinion Cascades and Echo-Chambers in Online Networks: A Proof of Concept Agent-Based Model
   Toby D. Pilditch

Inferring Human Interaction from Motion Trajectories in Aerial Videos
   Tianmin Shu, Yujia Peng, Lifeng Fan, Hongjing Lu, Song-Chun Zhu

Unifying recommendation and active learning for human-algorithm interactions
   Scott Cheng-Hsin Yang, Jake Alden Whritner, Olfa Nasraoui, Patrick Shafto

**Fri 15:00 – Representation of Events**

A Model of Event Knowledge
   Jeffrey Elman, Ken McRae

A Computational Model for the Dynamical Learning of Event Taxonomies
   Christian Gumbsch, Sebastian Otte, Martin Butz

Viewers’ Sensitivity to Abstract Event Structure
   Yue Ji, Anna Papafragou

Picturing time: Children’s preferences for visual representations of events
   Katharine Tillman, Eren Fukuda, David Barner

Listeners integrate speech, gesture, and discourse structure to interpret the temporal structure of complex events
   Andrea Nishimi, Esther Walker, Benjamin Bergen, Tyler Marghetis

**Fri 15:00 – Decision Making 1**

A Cognitive Model of Strategic Deliberation and Decision Making
   Russell Golman, Sudeep Bhatia

Using mouse-tracking data to visualise decision landscapes
   Arkady Zgonnikov, Andrea Aleni, Petri Piirainen, Denis O’Hara

A computational model for decision tree search
   Bas van Opheusden, Gianni Galbiati, Zahy Bnaya, Yunqi Li, Wei Ji Ma

The Dynamics of Selective Integration during Rapid Experiential Decisions
   Konstantinos Tsetsos

Decisions based on verbal probabilities: Decision bias or decision by belief sampling?
   Hidehito Honda, Toshihiko Matsuka, Kazuhiro Ueda

**Fri 15:00 – Symposium: LUCID science: Advancing Learning through Human-**
Machine Cooperation

LUCID science: Advancing learning through human-machine cooperation
  Timothy Rogers, Charles Kalish

Fri 15:00 – Cognitive Development 2

Children’s semantic and world knowledge overrides fictional information during anticipatory linguistic processing
  Ruth Lee, Craig Chambers, Falk Huettig, Patricia Ganea

The Development of Structural Thinking about Social Categories
  Nadya Vasilyeva, Alison Gopnik, Tania Lombrozo

Children’s intuitions about the structure of mental life
  Kara Weisman, Carol Dweck, Ellen Markman

Variables Involved in Selective Sustained Attention Development: Advances in Measurement
  Jaeah Kim, Anna Vande Velde, Erik Thiessen, Anna Fisher

How can I help? 24- to 48-month-olds provide help specific to the cause of others’ failed actions
  Sophie Bridgers, Sara Altman, Hyowon Gweon

Fri 15:00 – Symposium: Game-XP: Action Games as Cognitive Science Paradigms

Game-XP: Action Games as Cognitive Science Paradigms
  Wayne Gray, Ray Perez, Martin Butz, Stuart Reeves, Matthew Sangster, Tom Stafford, Fernand Gobet

Fri 15:00 – Spatial Language

Thinking about the future: The role of spatial metaphors for time
  Stephen Flusberg, Teenie Matlock, Paul Thibodeau

How Relative is the Relative Frame of Reference? Front and back in Norwegian, Farsi, German, and Japanese
  Sieghard Beller, Andrea Bender

Spatial language promotes cross-domain associations in early childhood
  Ariel Starr, Mahesh Srinivasan

Does Mandarin Spatial Metaphor for Time Influence Chinese Deaf Signers’ Spatio-Temporal Reasoning?
  Yan Gu, Yeqiu Zheng, Marc Swerts

Language and Spatial Memory in Japanese and English
  Harmen Gudde, Kenny Coventry
Fri 15:00 – Inference

Generic and Universal Generalisations: Contextualising the ‘Generic Overgeneralisation’ Effect
Dimitra Lazaridou-Chatzigoga, Napoleon Katsos, Linnea Stockall

Mindshaping the world can make mindreading tractable: Bridging the gap between philosophy and computational complexity analysis
Andrea Zeppi, Mark Blokpoel

The provenance of modal inference
Sangeet Khemlani, Thomas Hinterecker, Philip Johnson-Laird

Is Conflict Detection in Reasoning Domain General?
Darren Frey, Wim De Neys

Interpreting actions by attributing compositional desires
Joey Velez-Ginorio, Max H. Siegel, Joshua B. Tenenbaum, Julian Jara-Ettinger

Fri 17:10 – Rumelhart Prize Presentation

Takes Two to Tango: The Linguistic Representation of Symmetry
Lila Gleitman

Fri 18:10 – Rumelhart Prize Reception & Announcement of the 17th Rumelhart Prize Recipient

Sat 9:00 – Keynote

Rationality and the Role of Limited Experience
Ulrike Hahn

Sat 10:30 – Computational Mechanisms

How Does Instance-Based Inference About Event Frequencies Develop? An Analysis with a Computational Process Model
Christin Schulze, Thorsten Pachur, Ralph Hertwig

Quantitative Models of Human-Human Conversational Grounding Processes
Cognitive mechanisms for imitation and the detection of imitation in human dyadic interactions  
Antonia Hamilton

A Priming Model of Category-based Feature Inference  
Laura Hiatt

Mental Representations and Computational Modeling of Context-Specific Human Norm Systems  
Vasanth Sarathy, Matthias Scheutz, Yoed Kenett, Mowafak Allaham, Joseph Austerweil, Bertram Malle

Sat 10:30 – Symposium: Problem Solving and Goal-Directed Sequential Activity

Symposium on Problem Solving and Goal-Directed Sequential Activity  
Pat Langley, Richard Cooper

Sat 10:30 – Symposium: Static and Dynamic Visual Narratives, by Brain and by Eye

Static and dynamic visual narratives, by brain and by eye  
Neil Cohn, Tom Foulsham, Tim Smith, Jeff Zacks

Sat 10:30 – Word Learning 1

Connecting stimulus-driven attention to the properties of infant-directed speech — Is exaggerated intonation also more surprising?  
Okko Rasanen, Sofoklis Kakouros, Melanie Soderstrom

Evidence for a facilitatory effect of multi-word units on child word learning  
Robert Grimm, Giovanni Cassani, Steven Gillis, Walter Daelemans

Multiple variable cues in the environment promote accurate and robust word learning  
Padraic Monaghan, James Brand, Rebecca Frost, Gemma Taylor

Simultaneous acquisition of vocabulary and grammar in an artificial language learning task  
Neil Walker, Christine Schoetensack, Padraic Monaghan, Patrick Rebuschat

Quantifying infants’ statistical word segmentation: a meta-analysis  
Alexis Black, Christina Bergmann

Sat 10:30 – Counterfactual Reasoning

How Can Memory-Augmented Neural Networks Pass a False-Belief Task?  
Erin Grant, Aida Nematzadeh, Thomas L. Griffiths
A cognitive analysis of deception without lying
Keith Ransom, Wouter Voorspoels, Amy Perfors, Daniel Navarro

Causation and norms of proper functioning: Counterfactuals are (still) relevant
Jonathan Phillips, Jonathan Kominsky

Marbles in Inaction: Counterfactual Simulation and Causation by Omission
Simon Stephan, Pascale Willemsen, Tobias Gerstenberg

Faulty Towers: A hypothetical simulation model of physical support
Tobias Gerstenberg, Liang Zhou, Kevin Smith, Joshua Tenenbaum

**Sat 10:30 – Interaction and Collaboration**

Split-Second Detection of Cooperativeness from Faces in the Trust Game
Jean-Francois Bonnefon, Astrid Hopfensitz, Wim De Neys

Repeated Interactions Can Lead to More Iconic Signals
Hannah Little, Marcus Perlman, Kerem Eryilmaz

Anticipatory Synchronization in Artificial Agents
Auriel Washburn, Rachel Kallen, Maurice Lamb, Nigel Stepp, Kevin Shockley, Michael Richardson

The Use of Iconic Words in Early Child-Parent Interactions
Marcus Perlman, Riccardo Fusaroli, Deborah Fein, Letitia Naigles

Burstiness across multimodal human interaction reveals differences between verbal and non-verbal communication
Drew Abney, Rick Dale, Chris Kello, Max Louwerse

**Sat 10:30 – Culture & Embodiment**

Enactive Mechanistic Explanation of Social Cognition
Ekaterina Abramova, Marc Slors, Iris van Rooij

Radical Embodied Cognition, Affordances, and the (Hard) Problem of Consciousness
Valerie Hardcastle

Explaining Enculturated Cognition
Regina E. Fabry

Population size, learning, and innovation determine linguistic complexity
Matthew Spike

Please Explain: Radical Enactivism’s Explanatory Debt
Lachlan Walmsley
Sat 10:30 – Risky Choice

Mapping the unknown: The spatially correlated multi-armed bandit
   Charley M. Wu, Eric Schulz, Maarten Speekenbrink, Jonathan D. Nelson, Björn Meder

Make-or-break: chasing risky goals or settling for safe rewards?
   Pantelis Pipergias Analytis, Charley Wu, Alexandros Gelastopoulos

Individual Differences in Gaze Dynamics in Risky Decision-making
   Siyuan Yin, Jennifer Trueblood

Exploring the decision dynamics of risky intertemporal choice
   Emmanouil Konstantinidis, Don van Ravenzwaaij, Ben R. Newell

An automatic method for discovering rational heuristics for risky choice
   Falk Lieder, Paul Krueger, Tom Griffiths

Sat 10:30 – Perception & Cognition

Timing Time: Why Early Vision is Cognitively Impenetrable
   Athanassios Raftopoulos

Evidence for the size principle in semantic and perceptual domains
   Joshua Peterson, Thomas Griffiths

Experts are better than novices when imagining wines, but not odors in general
   Ilja Croijmans, Laura Speed, Artin Arshamian, Asifa Majid

Speakers’ gestures predict the meaning and perception of iconicity in signs
   Gerardo Ortega, Annika Schiefner, Asli Ozyurek

Categorization, Information Selection and Stimulus Uncertainty
   David Halpern, Todd Gureckis

Sat 10:30 – Developmental Learning

What the Shape and Material Biases Can Tell Us About Object Recognition
   Lynn Perry

I know what you need to know: Children’s developing theory of mind and pedagogical evidence selection
   Ilona Bass, Elizabeth Bonawitz, Patrick Shafto, Dhaya Ramarajan, Alison Gopnik, Henry Wellman

Didn’t know, or didn’t show? Preschoolers consider epistemic state and degree of omission when evaluating teachers
Iterated Teaching Can Optimise Language Functionality
  Vera Kempe, Kamil Cichon, Nicolas Gauvrit, Monica Tamariz

Cake or Hat? Words Change How Young Children Process Visual Objects
  Catarina Vales, Linda Smith

Sat 10:30 – Learning Mechanisms

Learning to reinforcement learn
  Jane Wang, Zeb Kurth-Nelson, Hubert Soyer, Joel Leibo, Dhruva Tirumala, Remi Munos, Charles Blundell, Dharshan Kumaran, Matt Botvinick

Testing Statistical Learning Implicitly: A Novel Chunk-based Measure of Statistical Learning
  Erin S. Isbilen, Stewart M. McCauley, Evan Kidd, Morten H. Christiansen

Learning induced illusions: Statistical learning creates false memories
  Yu Luo, Jiaying Zhao

Analogy and Episodic Memory to Support Domain Learning in a Cognitive Architecture: An Exploration
  Kenneth Forbus

Error-based learning: A mechanism for linking verbs to syntax
  Yi Lin, Cynthia Fisher

Sat 15:00 – Mathematical & Scientific Reasoning

Principles Used to Evaluate Mathematical Explanations
  Samuel Johnson, Angie Johnston, Marissa Koven, Frank Keil

The nature of quantities influences the representation of arithmetic problems: evidence from drawings and solving procedures in children and adults
  Hippolyte Gros, Jean-Pierre Thibaut, Emmanuel Sander

When does a ‘visual proof by induction’ serve a proof-like function in mathematics?
  Josephine Relaford-Doyle, Rafael Nunez

Numerical and Non-numerical Magnitude Estimation
  Dan Kim, John Opfer

  Christian Schunn
Sat 15:00 – Word Learning 2

Language-users choose short words in predictive contexts in an artificial language task
Jasmeen Kanwal, Kenny Smith, Jennifer Culbertson, Simon Kirby

The Learning of Subordinate Word Meanings
Hao Wang, Lila Gleitman, John Trueswell

The role of learning mechanisms in understanding spoken words
Jennifer Rodd, Rebecca Gilbert, Hannah Betts

Calculating Probabilities Simplifies Word Learning
Aida Nematzadeh, Barend Beekhuizen, Shanshan Huang, Suzanne Stevenson

Modeling Sources of Uncertainty in Spoken Word Learning
Matthias Hofer, Roger Levy

Sat 15:00 – Judgement

Preemption in Singular Causation Judgments: A Computational Model
Simon Stephan, Michael Waldmann

Perceived similarity mediates violations of independence in probabilistic judgments
James Yearsley, Daier Yuan, Jennifer Trueblood

Constructing Social Preferences From Anticipated Judgments: When Impartial Inequity is Fair and Why?
Max Kleiman-Weiner, Alex Shaw, Josh Tenenbaum

Low Dimensional Representations in Multi-Cue Judgement
Joyce Wenjia Zhao, Sudeep Bhatia, Clintin Davis-Stober

Consistent Probabilistic Simulation Underlying Human Judgment in Substance Dynamics
James Kubricht, Yixin Zhu, Chenfanfu Jiang, Demetri Terzopoulos, Song-Chun Zhu, Hongjing Lu

Sat 15:00 – Measurement & Methodology

A Flexible Mapping Scheme for Discrete and Dimensional Emotion Representations
Sven Buechel, Udo Hahn

Inferential Pitfalls in Decoding Neural Representations
Vencislav Popov, Markus Ostarek, Caitlin Tenison

Empirical tests of large-scale collaborative recall
Monica Gates, Jordan Suchow, Thomas Griffiths

Using Measurement Models to Understand Eyewitness Identification
Matthew Kaesler, John Dunn, Carolyn Semmler

The statistical significance filter leads to overconfident expectations of replicability
Shravan Vasishth, Andrew Gelman

**Sat 15:00 – Symposium: Intuitive Biology and Global Challenges: Applying Theoretical Insights for Public Good**

Intuitive Biology and Global Challenges: Applying Theoretical Insights for Public Good
Lauren Swiney, Deborah Kelemen, Andrew Shtulman, John Coley, Nicole Betz, Stefaan Blancke

**Sat 15:00 – Memory**

Why Does Higher Working Memory Capacity Help You Learn?
Kevin Lloyd, Adam Sanborn, David Leslie, Stephan Lewandowsky

Broadening the Scope of Recognition Memory
Justin Olds, Julian Marewski

Neural and computational arguments for memory as a compressed supported timeline
Zoran Tiganj, Karthik Shankar, Marc Howard

Computational and behavioral investigations of the SOB-CS removal mechanism in working memory
Violette Hoareau, Sophie Portrat, Klaus Oberauer, Benoit Lemaire, Gaën Plancher, Stephan Lewandowsky

Vanishing the mirror effect: The influence of prior history & list composition on recognition memory
Melody Dye, Michael Jones, Richard Shiffrin

**Sat 15:00 – Decision Making 2**

A Computational Model for Constructing Preferences for Multiple Choice Options
Lena M. Wollschaeger, Adele Diederich

A Dynamic Tradeoff Model of Intertemporal Choice
Junyi Dai, Timothy Pleskac, Thorsten Pachur

The ecological rationality of children’s option generation and decision making
Lisa Musculus, Azzurra Ruggeri, Markus Raab, Babett Lobinger

Sequential Effects in Prediction
Dinis Gökaydin, Anastasia Ejova

A core-affect model of decision making in simple and complex tasks
Othalia Larue, Alexander Hough, Ion Juvina
**Sat 15:00 – Language Perception**

Maintenance of Perceptual Information in Speech Perception  
Wednesday Bushong, T. Florian Jaeger

It’s all in your head: Effects of expertise on real-time access to knowledge during written sentence processing  
Melissa Troyer, Marta Kutas

A case for systematic sound symbolism in pragmatics: The role of the first phoneme in question prediction in context  
Anita Slonimska, Sean Roberts

The Effect of expertise and biscriptalism on letter perception: The complexity benefit  
Robert Wiley, Brenda Rapp

Rational use of prosody predicts projection in manner adverb utterances  
Jon Stevens, Marie-Catherine de Marneffe, Shari Speer, Judith Tonhauser

**Sat 15:00 – Neural Modelling**

Learning to See People like People: Predicting Social Perceptions of Faces  
Amanda Song, Li Linjie, Chad Atalla, Gary Cottrell

Using single unit recordings in PDP and localist models to better understand how knowledge is coded in the cortex  
Jeffrey Bowers

Converting Cascade-Correlation Neural Nets into Probabilistic Generative Models  
Ardavan Salehi Nobandegani, Thomas R. Shultz

Simulating behavioural interventions for developmental deficits: When improving strengths produces better outcomes than remediating weaknesses  
Hala Alireza, Anna Fedor, Michael Thomas

Tracking Meaning Change Over Time: A Dynamic Field Theory Model  
Kenny Coventry, Harmen Gudde, Holger Schultheis

**Sat 15:00 – Symposium: Educating Spatial Thinking for STEM Success**

Educating Spatial Thinking for STEM Success  
Mary Hegarty, David Uttal, Mike Stieff, Tom Lowrie, Stella Vosniadou

**Sat 15:00 – Incremental Comprehension**
A Rational Constructivist Account of the Characteristic-to-Defining Shift
Francis Mollica, Shirlene Wade, Steve Piantadosi

An incremental information-theoretic buffer supports sentence processing
Francis Mollica, Steve Piantadosi

Comprehenders Rationally Adapt Semantic Predictions to the Statistics of the Local Environment: a Bayesian Model of Trial-by-Trial N400 Amplitudes
Nathaniel Delaney-Busch, Emily Morgan, Ellen Lau, Gina Kuperberg, Gina Kuperberg

Approximations of Predictive Entropy Correlate with Reading Times
Marten van Schijndel, William Schuler

An information-seeking account of eye movements during spoken and signed language comprehension
Kyle MacDonald, Aviva Blonder, Virginia Marchman, Anne Fernald, Michael Frank