

Diagrams 2018 Program: Overview <i>for registration times each day, see the detailed schedule</i>		
Start	End	Day 1: June 18, 2018
09:00	10:30	Tutorial room 2.D.04 Workshop room 1.D.04
10:30	11:00	Refreshment Break
11:00	12:30	Tutorial room 2.D.04 Workshop room 1.D.04
12:30	14:00	Lunch
14:00	15:30	Tutorial room 2.D.04 Tutorial room 2.D.05
15:30	16:00	Refreshment Break
16:00	17:30	Tutorial room 2.D.04 Tutorial room 2.D.05
Day 2: June 19, 2018		
09:15	09:30	Welcome
09:30	10:30	Opening Keynote room 1.D.02
10:30	11:00	Refreshment Break
11:00	12:30	Paper Session 1 room 1.D.02 Paper Session 2 room 1.D.04
12:30	14:00	Lunch
14:00	15:30	Paper Session 3 room 1.D.02 Paper Session 4 room 1.D.04
15:30	16:00	Refreshment Break
16:00	17:40	Paper Session 5 room 1.D.02 Paper Session 6 room 1.D.04
Day 3: June 20, 2018		
09:00	10:00	Paper Session 7 room 1.D.04 Paper Session 8 room 1.D.02
10:00	11:00	Refreshments and Poster Session 1 including Graduate Symposium posters
11:00	12:30	Paper Session 9 room 1.D.04 Paper Session 10 room 1.D.02
12:30	14:00	Lunch
14:00	15:30	Paper Session 11 room 1.D.04 Paper Session 12 room 1.D.02
15:30	16:00	Refreshment Break
16:00	17:00	Town Hall Meeting <i>all welcome.</i> room 1.D.02
19:00	00:00	Conference Dinner <i>joint with ICCS</i>
Day 4: June 21, 2018		
09:00	10:30	Paper Session 13 room 1.D.04 Paper Session 14 <i>joint with ICCS,</i> room 1.D.02
10:30	11:00	Refreshment Break
11:00	12:30	Paper Session 15 room 1.D.04 Paper Session 16 room 1.D.02
12:30	14:00	Lunch
14:00	15:30	Paper Session 17 room 1.D.04 Paper Session 18 <i>joint with ICCS</i> room 1.D.02
15:30	16:30	Refreshments and Poster Session 2 including ICCS posters
16:30	17:30	Closing Keynote <i>joint with ICCS,</i> room 1.D.02
17:30	17:45	Closing Remarks room 1.D.02
Day 5: June 22, 2018		
09:00	10:30	Graduate Symposium Session 1 <i>all welcome,</i> room 2.D.04
10:30	11:00	Refreshment Break
11:00	12:30	Graduate Symposium Session 2 <i>all welcome,</i> room 2.D.04

Start	End	Day 1: June 18, 2018	
08:00	09:00	Registration	
09:00	10:30	Tutorial: Picturing Quantum Processes: A First Course in Quantum Theory and Diagrammatic Reasoning Presenters: Aleks Kissinger and Bob Coecke Room: 2.D.04	Workshop: Set Visualization and Reasoning Chairs: Yuri Sato and Zohreh Shams Room: 1.D.04
10:30	11:00	Refreshment Break	
11:00	12:30	Tutorial: Diagrams in Kant's Philosophy of Mathematics: Image and Intuition Presenter: Ofra Rechter Room: 2.D.04	Workshop: Set Visualization and Reasoning Chairs: Yuri Sato and Zohreh Shams Room: 1.D.04
12:30	14:00	Lunch	
14:00	15:30	Tutorial: Carroll diagrams: design and manipulation Presenter: Amirouche Moktefi Room: 2.D.04	Tutorial: Were "super-turing" diagrammatic reasoning competences ancient products of biological evolution? Presenter: Aaron Sloman Room: 2.D.05
15:30	16:00	Refreshment Break	
16:00	17:30	Tutorial: Using verbal protocols to support diagram design Presenter: Thora Tenbrink Room: 2.D.04	Tutorial: Peirce on Diagrammatic Reasoning and Semeiotic Presenters: Javier Legris and Cassiano Rodrigues Room: 2.D.05

Start	End	Day 2: June 19, 2018	
08:15	09:15	Registration	
09:15	09:30	Welcoming Remarks Presenter: Peter Chapman, General Chair Room: 1.D.02	
09:30	10:30	Opening Keynote: <i>The Beauty of Graphs</i> Ahti Pietarinen Chair: Amirouche Moktefi Room: 1.D.02	
10:30	11:00	Refreshment Break	

11:00	12:30	<p>Session 1: Logic, Euler and Venn Diagrams Chair: Atsushi Shimojima Room: 1.D.02</p> <p><i>Euler Diagrams Through the Looking Glass: From Extent to Intent</i> Gem Stapleton, Amirouche Moktefi, John Howse and Jim Burton, <i>Long Paper</i></p> <p><i>Rigor and the Context-Dependence of Diagrams: The Case of Euler Diagrams</i> David Waszek, <i>Short Paper</i></p> <p><i>Sequent Calculus for Euler Diagrams</i> Sven Linker, <i>Short Paper</i></p> <p><i>Investigating Diagrammatic Reasoning with Deep Neural Networks</i> Duo Wang, Mateja Jamnik and Pietro Lio <i>Short Paper</i></p> <p><i>Diagrammatically Formalising Constraints of a Privacy Ontology</i> Aidan Delaney and Shan Chen <i>Short Paper</i></p>	<p>Session 2: Design and Cognition Chair: Cathy Legg Room: 1.D.04</p> <p><i>Unveiling Darwin's Theory of Evolution through the Epistemological Study of his Diagram</i> Fabien Ferri <i>Long Abstract</i></p> <p><i>Otto Neurath's Isotype and C. K. Ogden's Basic English</i> James McElvenny <i>Long Abstract</i></p> <p><i>Rediscovering Isotype from a Cognitive Perspective</i> Guenther Schreder, Nicole Hynek, Florian Windhager and Eva Mayr <i>Long Paper</i></p> <p><i>Exploring the Relationship Between Visual Context and Affect in Diagram Interpretation</i> Matthew Wood and Susan Stocklmayer <i>Short Paper</i></p>
12:30	14:00	Lunch	
12:30	14:00	Steering Committee Meeting Invitation Only Room: 2.D.04	
14:00	15:30	<p>Session 3: Reasoning with Diagrams Chair: Mateja Jamnik Room: 1.D.02</p> <p><i>Using Diagrams to Reason about Biological Mechanisms</i> William Bechtel, Adele Abrahamsen and Benjamin Sheredos <i>Long Paper</i></p> <p><i>A Survey and Evaluation of Diagrams for Navya-Nyaya</i> Jim Burton, Lopamudra Choudhury and Mihir Chakraborty <i>Long Paper</i></p> <p><i>Operations on Single Feature Indicator System</i> Atsushi Shimojima and Dave Barker-Plummer <i>Long Paper</i></p> <p><i>'Diagrams': A Hybrid Visual Information Representation and Reasoning Paradigm Towards Video Analysis</i> Chayanika Deka Nath and Shyamanta M. Hazarika <i>Short Paper</i></p>	<p>Session 4: Abstraction, Proof and Reasoning Chair: Javier Legris Room: 1.D.04</p> <p><i>Syllogistic with Jigsaw Puzzle Diagrams</i> José Martín Castro-Manzano <i>Long Paper</i></p> <p><i>Pictures, Proofs and Mathematical Structure</i> Janet Folina <i>Long Abstract</i></p> <p><i>Abstraction in Diagrams and Explanation</i> Daniel Burnston <i>Long Abstract</i></p>
15:30	16:00	Refreshment Break	
16:00	17:40	<p>Session 5: Diagrams in Mathematics Chair: Jessica Carter Room: 1.D.02</p> <p><i>The Epistemology of Mathematical Necessity</i> Catherine Legg <i>Long Abstract</i></p> <p><i>A Typology of Mathematical Diagrams</i> Mikkel Willum Johansen, Morten Misfeldt and Josefine Lomholt Pallavicini <i>Long Paper</i></p> <p><i>The Classificatory Function of Diagrams: Two Examples from Mathematics</i> Christophe Eckes and Valeria Giardino <i>Long Paper</i></p> <p><i>Mathematical Pictures</i> Axel Barceló <i>Long Paper</i></p>	<p>Session 6: Graphs and Maps Chair: Sven Linker Room: 1.D.04</p> <p><i>Metro Map Colour-Coding: The Effect on Usability in Route Tracing</i> Peter Lloyd, Peter Rodgers and Maxwell Roberts <i>Long Paper</i></p> <p><i>Edge Label Placement in Layered Graph Drawing</i> Christoph Daniel Schulze, Nis Wechselberg and Reinhard Von Hanxleden <i>Short Paper</i></p> <p><i>How Users Transform Node-Link Diagrams to Matrices and Vice Versa</i> Simone Kriglstein, Margit Pohl and Johanna Doppler Haider <i>Short Paper</i></p> <p><i>Diagrammatic Maps of the New York City Subway: An Historical Perspective</i> Peter Lloyd <i>Short Paper</i></p> <p><i>Diagrammatic Definitions of Causal Claims</i> Dean McHugh <i>Short Paper</i></p>

Start	End	Day 3: June 20, 2018	
08:30	09:00	Registration	
09:00	10:00	<p>Session 7: Peirce and Existential Graphs Chair: Jim Burton Room: 1.D.04</p> <p><i>Peirce and Proof: A View From the Trees</i> Dave Beisecker Long Paper <i>On the Transformation Rules of Erasure and Insertion in the Beta Part of Peirce's Existential Graphs</i> Shigeyuki Atarashi Short Paper <i>Existential Graphs as a Basis for Structural Reasoning</i> Javier Legris Short Paper</p>	<p>Session 8: Empirical Studies and Cognition Chair: Jean-Michel Boucheix Room: 1.D.02</p> <p><i>Visualizing Conversational Structure: Effects of Conversation-Analytical Knowledge and Social Media Experience</i> Leonie Bosveld-De Smet and Anne-Roos Bakker Short Paper <i>The Role of Top-Down Knowledge in Spatial Cueing Using Hierarchical Diagrams</i> Takeshi Sugio Short Paper <i>Visualising Latent Semantic Spaces for Sense-Making of Natural Language Text</i> Ana Šemrov, Advait Sarkar and Alan Blackwell Short Paper <i>Pickup of Causal Language and Inference During and After Reading Illustrated Text</i> Jennifer Cromley, Shufeng Ma, Martin Van Boekel and Aygul Dane Short Abstract</p>
10:00	11:00	Refreshments and Poster Session 1 including Graduate Symposium posters <i>details of the posters in session 1 are given below</i>	
11:00	12:30	<p>Session 9: Generating and Drawing Diagrams Chair: Peter Rodgers Room: 1.D.04</p> <p><i>Variational Pictures</i> Martin Erwig and Karl Smeltzer Long Paper <i>Concentric Circles Maps: Data and Implications</i> Elizabeth Newton and Maxwell Roberts Long Abstract <i>Generating Effective Euler Diagrams</i> Almas Baimagambetov, John Howse, Gem Stapleton and Aidan Delaney Long Paper <i>Generation of Floor-designs based on Contextual Array P Systems</i> Ibrahim Venkat, Thamburaj Robinson, Kg Subramanian and Philippe De Wilde Short Paper</p>	<p>Session 10: Diagrams in Mathematics Chair: Silvia De Toffoli Room: 1.D.02</p> <p><i>Impact and Prevalence of Diagrammatic Supports in Mathematics Classrooms</i> Bryan Matlen, Lindsey Richland, Ellen Klostermann Wallace and Emily Lyons Long Paper <i>The Role of Diagrams in Contemporary Mathematics: Tools for Discovery?</i> Jessica Carter Long Abstract <i>Can a Picture Prove a Theorem? Using Empirical Methods to Investigate Diagrammatic Proofs in Mathematics</i> Josephine Relaford-Doyle and Rafael Nunez Long Abstract <i>Interpreting Diagrammatic Reasoning in Mathematics - Between Empiricism and Realism</i> Michal Sochanski Short Paper</p>
12:30	14:00	Lunch	
14:00	15:30	<p>Session 11: Reasoning with Diagrams Chair: Peter Cheng Room: 1.D.04</p> <p><i>Accessible Reasoning with Diagrams: from Cognition to Automation</i> Zohreh Shams, Yuri Sato, Mateja Jamnik and Gem Stapleton Long Paper <i>The Observational Advantages of Euler Diagrams with Existential Import</i> Gem Stapleton, Atsushi Shimojima and Mateja Jamnik Long Paper <i>Arcform</i> Benjamin B. Allsopp Short Paper</p>	<p>Session 12: Empirical Studies and Cognition Chair: James Corter Room: 1.D.02</p> <p><i>The Effect of Graphical Format and Instruction on the Interpretation of Three-Variable Bar and Line Graphs</i> Nadia Ali and David Peebles Long Paper <i>Can Spontaneous Diagram Use be Promoted in Math Word Problem Solving?</i> Hiroaki Ayabe and Emmanuel Manalo Long Abstract <i>Spatially Aligning Diagrams Facilitates Visual Comparison</i> Bryan Matlen, Dedre Gentner and Steve Franconeri Long Paper</p>

		<i>Observational Advantages: A Philosophical Discussion</i> Francesco Bellucci <i>Short Paper</i>	<i>Comparing and Contrasting within Diagrams: An Effective Study Strategy</i> Jennifer Cromley and Kyle Mara <i>Short Paper</i>
15:30	16:00	Refreshment Break	
16:00	17:00	Town Hall Meeting All Welcome Leader: Peter Rodgers Room: 1.D.02	
19:00	00:00	Conference Dinner (joint with ICCS) Location: Murrayfield Stadium Room: President's Suite	
Delegates should make their own way to the dinner venue. Drinks will be available for purchase at the venue, where there is a cash bar .			

Start	End	Day 4: June 21, 2018	
08:30	09:00	Registration	
09:00	10:30	Session 13: Diagrams in Mathematics: Topology and Geometry Chair: Valeria Giardino Room: 1.D.04 <i>Fruitful Over-Determination in Knot Diagrams</i> Silvia De Toffoli <i>Long Abstract</i> <i>The Central Role of Diagrams in Algebraic Topology</i> Emily Grosholz <i>Long Abstract</i> <i>Visual Algebraic Proofs for Unknot Detection</i> Andrew Fish, Alexei Lisitsa and Alexei Vernitski <i>Long Paper</i> <i>What sort of information-processing machinery could ancient geometers have used?</i> Aaron Sloman <i>Short Paper</i>	Session 14: Empirical Studies and Cognition <i>joint with ICCS</i> Chair: Dominik Endres Room: 1.D.02 <i>Read It This Way: Scaffolding Comprehension for Unconventional Statistical Graphs</i> Amy Fox and James Hollan <i>Long Paper</i> <i>Diagrammatic Approaches in Computational Musicology: Some Theoretical and Philosophical Aspects</i> Moreno Andreatta, Carlos Agon, Alexandre Popoff and Andrée Ehresmann <i>Long Paper</i> <i>Drawing to Learn: Who Benefits?</i> Jennifer Cromley, Nora Newcombe and Julie Booth <i>Long Abstract</i> <i>Combining and Contrasting Formal Concept Analysis and APOS theory</i> Uta Priss <i>ICCS, Short Paper</i>
10:30	11:00	Refreshments	
11:00	12:30	Session 15: Peirce and Existential Graphs Chair: Janet Folina Room: 1.D.04 <i>A Weakening of Existential Graphs: Quasi-Boolean Algebras</i> Minghui Ma and Ahti-Veikko Pietarinen <i>Long Paper</i> <i>Assertive and Existential Graphs: A Comparison</i> Ahti-Veikko Pietarinen and Daniele Chiffi <i>Long Paper</i> <i>Multiple Readings of Existential Graphs</i> Takashi Sasaki <i>Short Paper</i> <i>Depicting the redundancy of fourth figure using Venn-Peirce framework</i> Sumanta S. Sharma <i>Short Paper</i>	Session 16: Graphics and Linguistics Chair: Mikkel Willum Johansen Room: 1.D.02 <i>Picturing Science: Design Patterns in Graphical Abstracts</i> Jessica Hullman and Benjamin Bach <i>Long Paper</i> <i>Sonifying Napoleon's March by Identifying Sonic Correlates of the Graphic-Linguistic Distinction</i> Peter Coppin and Richard Windeyer <i>Short Paper</i> <i>A Framework for Analysing and Designing Diagrams and Graphics</i> Yuri Engelhardt and Clive Richards <i>Short Paper</i> <i>A Classification of Infographics</i> Helen Purchase, Katherine Isaacs, Thomas

			Bueti, Ben Hastings, Aadam Kassam, Allen Kim and Steffan van Hoesen <i>Short Paper</i> <i>Towards a Typology of Diagrams in Linguistics</i> Hans Smessaert and Lorenz Demey <i>Short Paper</i>
12:30	14:00	Lunch	
14:00	15:30	<p style="text-align: center;">Session 17: Logic and Diagrams Chair: John Howse Room: 1.D.04</p> <p><i>Towards a Proof Theory for Heterogeneous Logic Combining Sentences and Diagrams</i> Ryo Takemura <i>Long Paper</i> <i>Aristotelian and Duality Relations Beyond the Square of Opposition</i> Lorenz Demey and Hans Smessaert <i>Long Paper</i> <i>Iconic Logic and Ideal Diagrams: The Wittgensteinian Approach</i> Timm Lampert <i>Long Paper</i> <i>On Diagrams and General Model-Checkers</i> Sheila Veloso, Paulo Veloso, Mario Benevides and Isaque Lima <i>Short Paper</i></p>	<p style="text-align: center;">Session 18: Empirical Studies and Cognition joint with ICCS Chair: Alan Blackwell Room: 1.D.02</p> <p><i>Cognitive Control as an Underpinning of Relational Reasoning from Diagrams</i> Leonidas Dourmas, Lindsey Richland and Robert Morrison <i>Long Abstract</i> <i>Perceptual Processing and the Comprehension of Relational Information in Dynamic Diagrams</i> Richard Lowe, Jean-Michel Boucheix and Marilyne Menant <i>Long Paper</i> <i>Strategic and Inferential Processing in Text, Diagrams, and Text+Diagram Representations</i> Jennifer Cromley <i>Long Abstract</i> <i>Empirically Evaluating the Similarity Models of Geist</i>, Moritz Schubert and Dominik Endres <i>ICCS, Short Paper</i></p>
15:30	16:30	Refreshments and Poster Session 2 joint with ICCS <i>details of the posters in session 2 are given below</i>	
16:30	17:30	Closing Keynote: <i>Diagrams and Non-Monotonic Logic: What is the Cognitive Relation?</i> Keith Stenning <i>joint with ICCS</i> Chair: Peter Chapman Room: 1.D.02	
17:30	17:45	Closing Remarks Presenter: Peter Chapman, General Chair Room: 1.D.02	

Start	End	Day 5: June 22, 2018
08:30	09:00	Registration
09:00	10:30	<p style="text-align: center;">Graduate Symposium All Welcome Room: 2.D.04</p> <p><i>Welcoming Remarks</i> Andrew Blake (5 minutes) Guest Speaker: <i>Preparing for Academia: How to have a Successful Career</i> Richard Burns (35 minutes) <i>The Effects of Prompts to Draw Diagrams in Engineering</i> Sally Wu <i>The Relative Efficacy of Diagrams, Textual and Symbolic Logics on User Interpretation of Axioms</i> Eisa Alharbi</p>
10:30	11:00	Refreshments
11:00	12:30	<p style="text-align: center;">Graduate Symposium Room: 2.D.04</p>

		<p><i>Analysing properties of representations for automated heterogeneous reasoning</i> Aaron Stockdill</p> <p><i>Innovative Use of Diagrams and Inference in Wallis</i> Erika Rita Ortiz</p> <p><i>Break Out Session: Meet your mentor</i></p> <p><i>Closing Remarks</i> Andrew Blake</p>
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Start	End	Day 3: June 20, 2018
10:00	11:00	<p>Refreshments and Poster Session 1 (including Graduate Symposium posters)</p> <p>Graduate Symposium Posters</p> <p><i>Automated Visualization of Grouped Networks</i> Almas Baimagambetov</p> <p><i>The Effects of Prompts to Draw Diagrams in Engineering</i> Sally Wu</p> <p><i>Overcoming Graphical Fixedness: Scaffolding Comprehension for Unconventional Graphs</i> Amy Fox</p> <p><i>The Relative Efficacy of Diagrams, Textual and Symbolic Logics on User Interpretation of Axioms</i> Eisa Alharbi</p> <p><i>Diagrammatic Definitions of Causal Claims</i> Dean Mchugh</p> <p><i>Analysing properties of representations for automated heterogeneous reasoning</i> Aaron Stockdill</p> <p><i>Investigating diagrammatic reasoning with artificial and biological neural networks</i> Duo Wang</p> <p><i>'Diagrams': A Hybrid Visual Information Representation and Reasoning Paradigm Towards Video Analysis</i> Chayanika Deka Nath</p> <p><i>Using Diagrammatic Proofs to Investigate High-Level Mathematical Thinking</i> Josephine Relaford-Doyle</p> <p><i>Diagrammatic Metro Maps: Navigational Problems and their Detection and Remediation</i> Peter Lloyd</p> <p>Main Conference Posters</p> <p><i>Teaching Argument Diagrams to a Student who is Blind</i> Marc Champagne</p> <p><i>Wrapping Layered Graphs</i> Ulf Rüegg and Reinhard Von Hanxleden</p> <p><i>Making Sense of Schopenhauer's Diagram of Good and Evil</i> Jens Lemanski and Amirouche Moktefi</p> <p><i>Effect of Handedness on Mental Rotation</i> Gunta Krumina, Jurgis Skilters, Annija Gulbe and Vsevolod Liakhovetskii</p> <p><i>Transforming Design Thinking Storyboards into Diagrammatic Models</i> Elena-Teodora Miron, Christian Muck, David Götzinger and Dimitris Karagiannis</p> <p><i>A Review of Murner's Cards for Syllogistic</i> Jorge Medina-Delgadillo, Juan Manuel Campos-Benítez and José Martín Castro-Manzano</p>

Start	End	Day 4: June 21, 2018
15:30	16:30	<p align="center">Refreshments and Poster Session 2 (including ICCS posters)</p> <p>ICCS Posters</p> <p><i>Visualizing Conceptual Structures Using FCA Tools Bundle</i> Levente Lorand Kis, Christian Săcărea, and Diana-Florina Șotropa Babeș-Bolyai (ICCS)</p> <p><i>Node-Link Diagrams as Lenses for Organizational Knowledge Sharing on a Social Business Platform</i> Anne-Roos Bakker and Leonie Bosveld-de Smet (ICCS)</p> <p>Main Conference Posters</p> <p><i>Calculus CL as Ontology Editor and Inference Engine</i> Jens Lemanski</p> <p><i>Scanning the Invisible. Framing Diagrammatic Cognition in Experimental Particle Physics</i> Javier Anta</p> <p><i>Moded Diagrams for Moded Syllogisms</i> José Martín Castro-Manzano and José Roberto Pacheco-Montes</p> <p><i>Towards Executable Representations of Social Machines</i> Dave Murray-Rust, Alan Davoust, Petros Papapanagiotou, Max Van Kleek, Areti Manataki, Nigel Shadbolt and David Robertson</p> <p><i>Venn Diagram and Evaluation of Syllogisms with Negative Terms: A New Algorithm</i> Mehdi Mirzapour and Christian Retoré</p> <p><i>Towards Diagram-based Editing of Ontologies</i> Peter Chapman and William Roberts</p> <p><i>Diagrams Including Pictograms Increase Stock-and-Flow Performance</i> Friederike Brockhaus and Peter Sedlmeier</p> <p><i>Euler Box Diagrams to Represent Independent and Non-Independent Events</i> James Corter</p> <p><i>How Cross-Representational Signaling Affects Learning From Texts and Pictures: An Eye-Tracking Study</i> Juliette Désiron, Mireille Betrancourt and Erica de Vries</p> <p><i>Logical Reasoning with Object Diagrams in a UML and OCL Tool</i> Khanh-Hoang Doan and Martin Gogolla</p> <p><i>A Symmetry Metric for Graphs and Line Diagrams</i> Roman Klapaukh, Stuart Marshall and David Pearce</p> <p><i>Diagrams, Musical Notation, and the Semiotics of Musical Composition</i> Vinicius de Aguiar</p> <p><i>A Simple Decision Method for Syllogistic</i> Frank Thomas Sautter and Gisele Dalva Secco</p> <p><i>Wallis's Use of Innovative diagrams</i> Erika Rita Ortiz</p> <p><i>Intersemiotic Translation: Transcreation and Diagrams</i> Leticia Vitral and João Queiroz</p>