

ACT 2019 Programme

	Monday	Tuesday	Wednesday	Thursday	Friday
9:00-9:30	Registration				
9:30-10:00	(Pinzani, Gogioso, Coecke) Categorical Semantics for Time Travel	(Garner) Hypernormalisation, Linear Exponential Monads and the Giry Tricocycloid	(Fong, Johnson) Functorial Backpropagation and Symmetric Lenses	(Bonchi, Piedeleu, Sobocinski, Zanasi) Graphical Resource Algebra, from Linear to Affine	(Carette, Jeandel, Perdrix, Vilmart) Completeness of Graphical Languages for Mixed States Quantum Mechanics
10:00-10:30	(Ghani, Kupke, Lambert, Forsberg) Compositional Game Theory with Mixed Strategies: Probabilistic Open Games	(Fritz, Perrone, Rezagholi) The Support is a Morphism of Monads	(Gavranović) Learning Functors using Gradient Descent	(Abramsky, Barbosa, Karvonen, Mansfield) A Comonadic View of Simulation and Quantum Resources	(Delpeuch) A Complete Language for Faceted Dataflow Programs
10:30-11:00	coffee	coffee	coffee	coffee	coffee
11:00-11:30	(Fong, Spivak) Graphical Regular Logic	(Zwart, Marsden) No-Go Theorems for Distributive Laws	(Diskin) Evolving Bidirectional Transformations, Compositional Supervised Learning, and Parameterized Delta Lenses	(Coecke, Wang) ZX-Rules for 2-qubit Clifford+T Quantum Circuits, and Beyond	(Wetering) An Effect-theoretic Reconstruction of Quantum Theory
11:30-12:00	(Johnson-Freyd, Aytac, Hulette) Topos Semantics for Higher-order Temporal Logic of Actions	(Baez, Williams) Enriched Lawvere Theories for Operational Semantics	(Clarke) Internal Lenses as Functors and Cofunctors	(Miller-Bakewell) Conjecture Intuition and Verification for Diagrammatic Languages	(Péchoux, Perdrix, Rennela, Zamdzhiev) Inductive Datatypes for Quantum Programming
12:00-13.30	lunch	lunch	lunch	lunch	lunch
13:30-14:00	(Coecke) The Mathematics of Text Structure	(Tholen) Approximate Composition	Business Cases (15'/slot): NIST-team (Breiner, Pollard and Subrahmanian) CONEXUS (Spivak/Wisnesky) CQC-Cambridge (Duncan) CQC/CI-Oxford (Coecke) StateBox (Herold)	(Halter, Herlihy, Fairbanks) A Compositional Framework for Scientific Model Augmentation	(Gallagher, Cruttwell, MacAdam) Towards Formalizing and Extending Differential Programming Using Tangent Categories
14:00-14:30	(Felice, Meichanetzidis, Toumi) Montague Semantics for Lambek Pregroups	(Lewis) Modelling Hyponymy for DisCoCat		(Sarazola, Fong) A Recipe for Black Box Functors	(Díaz-Caro, Malherbe) A Categorical Construction for the Computational Definition of Vector Spaces
14:30-15:00	(Delpeuch) Autonomization of Monoidal Categories	(Pastor, Beurier, Ehresmann, Waldeck) Interfacing Biology, Category Theory and Mathematical Statistics		(Breiner, Marie-Rose, Pollard, Subrahmanian) Operadic Diagnosis in Hierarchical Systems	(Lindenhovius, Mislove, Zamdzhiev) Categorical Semantics for Dual Intuitionistic/Linear Recursive Types
15:00-16:00	coffee	coffee	coffee	coffee	coffee
16:00-16:15	(Zwanziger) Natural Model Semantics for Comonadic and Adjoint Modal Type Theory	(Tsampas, Nuyts, Devriese, Piessens) A Summary on Categorical Contextual Reasoning	(Zamdzhiev) Reflecting Algebraically Compact Functors	ACT Discussion	(Wisnesky, Spivak) Fast Left Kan Extensions Using the Chase
16:15-16:30		(Genovese, Gryzlov, Herold, Perone, Post, Videla) idris-ct: A Library to Do Category Theory in Idris			(Spivak, Fong) Abelian Calculi Present Abelian Categories
16:30-16:45	(Collins, Duncan) Hopf-Frobenius Algebras and a Simpler Drinfeld Double	Poster Session	(Beurier, Pastor, Spivak) Memoryless Systems Generate the Class of all Discrete Systems		(Gogioso) Fantastic Quantum Theories and Where to Find them
16:45-17:00	(Behr) Tracelets and Tracelet Analysis Of Compositional Rewriting Systems		(Nolan, Pollard, Breiner, Anand, Subrahmanian) Compositional Models for Power Systems		
17:00-17:30					