

MONDAY July 17th

09.00-10.00: Sam Lomonaco Jr (UMBC, Maryland, US).

QPL TUTORIAL: A Rosetta Stone for Quantum Computing and Information Science: Cats, Kets, Cloisters, measurement, and quanglement.

10.00-10.15: break

10.15-11.15: Sam Lomonaco Jr (UMBC, Maryland, US).

QPL TUTORIAL: Introduction to Quantum Algorithms

11.15-11.30: break

11.30-12.30: Sam Lomonaco Jr (UMBC, Maryland, US).

QPL TUTORIAL: Topological Quantum Computing and the Jones Polynomial.

14.00-15.30: Samson Abramsky (University of Oxford, UK).

QPL TUTORIAL: Introduction to logics as type theories for quantum processes.

15.30-16.00: break

16.00-17.30: Simon Gay (University of Glasgow, UK).

QPL TUTORIAL: Computer Science Semantics

TUESDAY July 18th

09.00-09.45: Bob Coecke (University of Oxford, UK).

QPL accepted paper: Axiomatic description of mixed states from Selinger's CPM construction.

09.45-10.30: B. Coecke & E. O. Paquette (Oxford & University of Montreal).

QPL accepted paper: POVMs and Naimark's theorem without sums.

10.30-11.00: break

11.00-11.45: P. Jorrand & S. Perdrix (CNRS Grenoble, France).

QPL accepted paper: A Quantum Calculus.

11.45-12.30: A.S. Green & T. Altenkirch (University of Nottingham, UK).

QPL accepted paper: From reversible to irreversible computations.

14.00-14.45: P. Selinger & B. Valiron (Dalhousie & Ottawa, Canada).

QPL accepted paper: On a fully abstract model for a quantum linear functional language.

14.45-15.30: Yannick Delbecq (McGill University, Montreal, Canada).

QPL accepted paper: A Quantum Game Semantics for the Measurement Calculus.

15.30-16.00: break

16.00-16.45: M. Lampis, K.G. Ginis & N.S. Papaspyrou (National Technical University of Athens, Greece).

QPL accepted paper: Quantum Data and Control Made Easier.

16.45-17.30: J.K. Vizzotto, A.C. da Rocha Costa & A. Sabry (Rio Grande, Pelotas and Indiana).

QPL accepted paper: Quantum Arrows in Haskell.

WEDNESDAY July 19th

09.00-09.45: A. Di Pierro & H. Wiklicky (Pisa & Imperial College).

QPL accepted paper: Semantic Abstraction and Quantum Computation.

09.45-10.30: Peter Selinger (Dalhousie University, Canada).

QPL accepted paper: Idempotents in dagger categories.

10.30-11.00: break

11.00-12.30: **QPL discussion**

14.00-15.00: Keye Martin (Naval Research Lab, Washington, US).

SURVEY: Domain theory.

15.00-15.45: Peter Hines (University of York, UK).

Coherent Halting Schemes for Quantum Iteration.

15.45-16.15: break

16.15-17.45: **Poster presentations**

THURSDAY July 20th

09.00-10.00: Richard Jozsa (University of Bristol).

PLENARY: Simulating certain classes of quantum computations.

10.00-10.30: O. Dahlsten, R. Oliveira & M. B. Plenio (Imperial College, London, UK).

Efficient Generation of Generic Entanglement.

10.30-11.00: break

11.00-11.30: Y. Feng & M. Ying (Tsinghua University, Beijing, China).

Quantum Loop Programs.

11.30-12.30: Dan Browne (University of Oxford, UK).

SURVEY: Measurement Based QC.

14.00-15.00: Rick Blute (University of Ottawa, Canada).

SURVEY: Linear Logic.

15.00-15.45: M. Van den Nest, A. Miyake, W. Duer & H.-J. Briegel (Innsbruck, Austria).

Universal resources for measurement--based quantum computation.

15.45-16.15: break

16.15-17.00: E. Kashefi & V. Danos (Oxford & Paris 7).

Flow in the one-way model.

17.00-18.00: Samson Abramsky (University of Oxford, UK).

SURVEY: Temperley-Lieb Algebra.

FRIDAY July 21th

09.00-10.00: Basil Hiley (Birkbeck College, London, UK).

PLENARY: tba

10.00-10.30: Vladimir Kisil (University of Leeds, UK).

p-Mechanics: Quantum and Classical Mechanics in One Bottle.

10.30-11.00: break

11.00-11.30: Ross Duncan (University of Oxford, UK).

An Abstract Approach to Entanglement.

11.30-12.30: T. Franz, H. Vogts, A. Gattner & R. F. Werner (Braunschweig TU, Germany).

SURVEY: Quantum Cellular Automata.

14.00-15.00: Sam Lomonaco Jr (UMBC, Maryland, US).

SURVEY: A Quantum Computing Knot Theoretic Mystery.

15.00-15.45: Bob Coecke (University of Oxford, UK).

In the beginning God created tensor, ... as a picture.

15.45-16.15: break

16.15-17.00: Matthew Leifer (Perimeter Institute, Canada).

Quantum State Causal Networks.

17.00-18.00: Peter Selinger (Dalhousie University, Canada).

SURVEY: Graphical Calculi.

SATURDAY July 22th

09.00-10.00: Jim Lambek (McGill University, Canada).

PLENARY. Compact Monoidal categories applied to English and to the Standard Model.

10.00-10.30: Yong Zhang (Chinese Academy of Sciences, Beijing).

Teleportation, Braid Group and Temperley-Lieb Algebra.

10.30-11.00: break

11.00-11.30: Philip Goyal (University of Cambridge, UK).

An information-theoretic approach to Quantum Theory.

11.30-12.30: Klaas Landsman (Nijmegen, Holland).

SURVEY: Between classical and quantum.

14.00-15.00: Phil Scott (University of Ottawa, Canada).

SURVEY: Geometry of Interaction.

15.00-15.45: Yasser Omar (ISEG, Lisbon, Portugal).
Indistinguishable particles in quantum mechanics: an introduction.

15.45-16.15: break

16.15-17.00: Jonathan Barrett (Perimeter Institute, Canada).
Information processing in generalized probabilistic theories.

17.00-17.45: Greg Meredith (Biosimilarity LLC, Virginia CU, US).
Knots as processes.

SUNDAY July 22th

09.30-10.15: Marcelo Fiore (University of Cambridge, UK).
The bicategory of generalised species.

10.15-10.45: Emmanuel Galatoulas (Athens).
Towards bicategorical quantum mechanics.

10.45-11.00: break

11.00-11.30: Robin Houston (University of Manchester, UK).
Finite Products are Biproducts in a Compact Closed Category.

11.30-12.30: Isar Stubbe (University of Coimbra, Portugal).
SURVEY: Abstract projective geometry & Piron's representation theorem.

14.00-14.45: Frank Valckenborgh (Macquarie University, Sydney, Australia).
Group representations and systems of imprimitivity.

14.45-15.30: Rob Spekkens (University of Cambridge, UK).
An epistemic constraint as an axiom for quantum theory.

15.30-15.45: break

15.45-16.30: Jiannis Pachos (University of Cambridge, UK).
Quantum computation with abelian anyons on the honeycomb lattice.

16.30-17.15: Jens Eisert (Imperial College, London, UK).
The classical complexity of finding ground states of many-body systems: if I search for ground states, how much paper do I need?

POSTERS

* Ross Duncan (University of Oxford, UK). Quantum Processes and Proof Normalisation.

* Ellie D'Hondt (Free University of Brussels, Belgium). Quantum Knowledge.

* Hynek Mlnarik (University of Brno, Czech Republic).

* Mehrnoosh Sadrzadeh (University of Southampton, UK). Compact Closure in Persian Grammar.

* Mehrnoosh Sadrzadeh (University of Southampton, UK). Quantum Mud: Classical Epistemic Puzzles within a Quantum Structure.

* Anya Taffioviich (University of Toronto, Canada). Quantum Predicative Programming.

* H. Vogts, A. Gattner, T. Franz & R.F. Werner (Braunschweig TU, Germany). Reversible Quantum Cellular Automata.

* Yaroslav Volovich (Vaxjo University, Sweden).