

Submittee: John Lauchie MacDonald
Date Submitted: 2017-08-26 21:39
Title: CT2017 International Category Theory Conference
Event Type: Conference-Workshop

Location:
Earth Sciences Building
University of British Columbia
Vancouver, Canada

Dates:
July 16-22, 2017

Topic:
Category Theory and its Applications

Methodology:
All presentations were given in the form of lectures, including one lecture skyped in from Brazil.

Objectives Achieved:
The main objective of presenting cutting edge research in all areas of category theory was successfully achieved. The idea of having graduate students from the U.S.A., Canada, Brazil and France make a combined presentation as part of the Kan Seminar for CT2017 was a novel approach designed to encourage young graduate students to participate in a high level conference of established researchers and was very well received.

Scientific Highlights:
CT2017 was an outstandingly successful conference, bringing together the top researchers in the field from all over the world, including participants from North America, South America, Europe, Asia, Africa and Australia. There were 46 participants from outside of North America.

Organizers:
Organizers:
Scientific Committee
George Janelidze (chair), University of Cape Town (South Africa)
Maria Manuel Clementino, Universidade de Coimbra (Portugal)
Marino Gran, Universite catholique de Louvain (Belgium)

Peter Johnstone, University of Cambridge (UK)
J. Lauchie MacDonald, UBC, Vancouver (Canada)
Sandra Mantovani, Università degli Studi di Milano (Italy)
Ross Street, Macquarie University, Sydney (Australia)
Walter Tholen, York University, Toronto (Canada)

Organizing Committee

Maret Christiansen (chair), Vancouver (Canada)
J. Lauchie MacDonald, UBC, Vancouver (Canada)
Jorge Picado, Universidade de Coimbra (Portugal)

Speakers:

Monday July 17, 2017

8:30am - 8:55am Registration and Check-in (ESB Atrium)

9:00am - 9:25am Opening

9:30am - 10:25am Matias Menni, Universidad Nacional de La Plata, Argentina

On a problem in Objective Number Theory

10:30am - 11:00am Coffee Break (ESB Atrium)

11:00am - 11:25am Francisco Marmolejo, Universidad Nacional Autónoma de México

The canonical intensive quality of a pre-cohesive topos

11:30am - 11:55am Fabio Pasquali, University of Padova, Italy

Quasi-toposes as elementary quotient completions

12:00pm - 12:25pm Jacopo Emmenegger, Stockholms Universitet, Sweden

On the local Cartesian closure of exact completions

12:30pm - 2:00pm Lunch- Own (See list of Campus eateries online at

<http://www.food.ubc.ca/feed-me/>)

2:00pm - 2:25pm Juan Pablo Quijano, University of Lisbon, Portugal

Functoriality and topos representations for quantales of coverable groupoids

2:30pm - 2:55pm Guilherme Frederico Lima, University of Cambridge, UK

Duality theorems for essential inclusions of Grothendieck toposes

3:00pm - 3:30pm Coffee Break (ESB Atrium)

3:30pm - 5:25pm Kan Extension Seminar (organized by Emily Riehl)

Tuesday July 18, 2017

9:00am - 9:55am Rory Lucyshyn-Wright, Mount Allison University, Canada

Algebraic duality and the abstract functional analysis of distribution monads

10:00am - 10:25am Alexander Campbell, Macquarie University, Sydney, Australia

Enriched algebraic weak factorization systems

10:30am - 11:00am Coffee Break (ESB Atrium)

11:00am - 11:25pm Martin Szyld, Universidad de Buenos Aires, CONICET, Argentina

A general limit lifting theorem for 2-dimensional monad theory

11:30pm - 11:55pm Maria Emilia Descotte, Universidad de Buenos Aires, CONICET, Argentina

On flat 2-functors

12:00pm - 12:25pm Christina Vasilakopoulou, Université Libre de Bruxelles, Belgium

Hopf categories as Hopf monads in enriched matrices

12:30pm - 2:00pm Lunch- Own (See list of Campus eateries online at

<http://www.food.ubc.ca/feed-me/>)

2:00pm - 2:25pm Lauchie MacDonald, University of British Columbia, Vancouver, Canada

Two dimensional algebra and natural distributive laws

2:30pm - 2:55pm Timmy Fieremans, Vrije Universiteit Brussel, Belgium

Frobenius and Hopf V-categories

3:00pm - 3:30pm Coffee Break (ESB Atrium)

3:30pm - 3:55pm Parallel Sessions

ESB 1012: Paolo Perrone, Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany

The Wasserstein monad in categorical probability

ESB 1013 : Nelson Martins-Ferreira, Polytechnic Institute of Leiria, Portugal

Triangulations, triangulated surfaces and the multiplicative structure of internal groupoids

4:00pm - 4:25pm Parallel Sessions

ESB 1012: Partha Pratim Ghosh, University of South Africa, Gauteng, South Africa

Internal neighbourhood spaces

ESB 1013: Michael Lambert, Dalhousie University, Canada

Generalized principal bundles

4:30pm - 5:30pm Discussion

Wednesday July 19, 2017

9:00am - 9:25am Jiri Adamek, Technical University Braunschweig, Germany

Codensity and double-dualization monads

9:30am - 9:55am Michael Barr, McGill University, Montreal, Canada

Simplicial acyclic models

10:00am - 10:25am Susan Niefield, Union College, New York, USA

Topological groupoids and exponentiability

10:30am - 11:00am Coffee Break (ESB Atrium)

11:00am - 11:25am Dorette Pronk, Dalhousie University, Canada

The orbifold construction for join restriction categories

11:30am - 11:55am Robin Cockett, University of Calgary, Canada

General Ehresmann connections and torsor bundles

12:00pm - 12:25pm Geoffrey Cruttwell, Mount Allison University, Canada

Differential equations in tangent categories

12:30pm - 1:15pm Lunch- Own (See list of Campus eateries online at

<http://www.food.ubc.ca/feed-me/>)

1:15pm - 1:25pm Excursion to Granville Island

(Please assemble at the registration table by 1:15pm. We will then board Lynch Buses at 2175 West Mall)

5:30pm - 9:00pm Harbor Dinner Cruise

Boarding Vessel from Granville Island: Dock A, 1698 Duranleau St. Vancouver BC V6H 3S4

Point of contact: Maret Christiansen- 604-319-1448

9:15pm Bus pick-up back to UBC conference venue

Thursday July 20, 2017

9:00am - 9:55am Tim Van der Linden, Universite catholique de Louvain, Belgium

Categorical-algebraic methods in group cohomology

10:00am - 10:25am Julia Goedecke, University of Cambridge, UK

Hopf formulae for Tor

10:30am - 11:00am Coffee Break (ESB Atrium)

11:00am - 11:25am Marino Gran, Universite catholique de Louvain, Belgium

A characterization of central extensions in the variety of quandles

11:30am - 11:55am Pierre-Alain Jacqmin, Universite catholique de Louvain, Belgium

An embedding theorem for regular Maltsev categories

12:00pm - 12:25pm Diana Rodelo, CMUC & Universidade do Algarve, Faro, Portugal

Stability properties for n-permutable categories

12:30pm - 2:00pm Lunch- Own (See list of Campus eateries online at

<http://www.food.ubc.ca/feed-me/>)

2:00pm - 2:25pm Alan S. Cigoli, Universite catholique de Louvain, Belgium

A relative monotone-light factorization system for internal groupoids

2:30pm - 2:55pm Xabier Garcia-Martinez, University of Santiago de Compostela, Spain

A characterization of Lie algebras amongst alternating algebras

3:00pm - 3:30pm Coffee Break (ESB Atrium)

3:30pm - 3:55pm Parallel Sessions

ESB 1012: Jonathon Gallagher, Dalhousie University, Canada

Coherently closed tangent categories and the link between SDG and the differential -calculus

ESB 1013: Sean Moss, University of Cambridge, UK

The Diller-Nahm model of type theory

4:00pm - 4:25pm Parallel Sessions

ESB 1012: Jean-Simon Lemay, University of Calgary, Canada

Integration in tangent categories

ESB 1013: Evangelia Aleiferi, Dalhousie University, Canada

Towards a characterization of the double category of spans

4:30pm - 4:55pm Parallel Sessions

ESB 1012: Ben MacAdam, University of Calgary, Canada

Vector bundles and dependent linear logic in differential geometry

ESB 1013: Darien DeWolf, Dalhousie University, Canada

An element-based reformulation of restriction monads

Friday July 21, 2017

9:00am - 9:55am Dirk Hofmann, Universidade de Aveiro, Portugal

Duality theory, convergence, and enriched categories

10:00am - 10:25am Maria Manuel Clementino, Universidade de Coimbra, Portugal

On simple monads in ordered structures and the factorisations they induce

10:30am - 11:00am Coffee Break (ESB Atrium)

11:00am - 11:25am Walter Tholen, York University, Toronto, Canada

Topological theories

11:30am - 11:55am Lurdes Sousa, CMUC, University of Coimbra & Polytechnic Institute of Viseu, Portugal

Aspects of algebras of KZ-monads

12:00pm - 12:25pm Giulia Frosoni, University of Genoa, Italy

Properties of (-)-algebras in Equ

12:30pm - 2:00pm Lunch- Own (See list of Campus eateries online at <http://www.food.ubc.ca/feed-me/>)

2:00pm - 2:25pm Piotr Jedrzejewicz, Nicolaus Copernicus University, Toru, Poland

Towards a categorification of integers

2:30pm - 2:55pm George Janelidze, University of Cape Town, South Africa

Infinite addition, real numbers, and taut monads

3:00pm - 3:30pm Coffee Break (ESB Atrium)

3:30pm - 3:55pm Parallel Sessions

ESB 1012: Laura Scull, Fort Lewis College, Colorado, USA

Fundamental groupoids for orbifolds

ESB 1012: Jun Yoshida, The University of Tokyo, Japan

Graphical calculus in symmetric monoidal (-)categories with duals

4:00pm - 4:25pm Parallel Sessions

ESB 1012: Marzieh Bayeh, Dalhousie University, Canada

Orbit class and its application

ESB 1012: Daniel Cicala, University of California, Riverside, USA

Modeling graphical calculi with symmetric monoidal compact closed bicategories

4:30 - 4:55pm Parallel Sessions

ESB 1012: Jonas Frey, CMU Pittsburgh, USA

Modelling homotopy type theory in Cartesian cubical sets

ESB 1012: Francisco Rios, Dalhousie University, Canada

A categorical model for a quantum circuit description language

6:00pm CT 2017: Buffet Dinner:

University Golf Club

5185 University Blvd, Vancouver, BC V6T 1X5

(15 min walk or 5 min bus ride on the #4/ #14 trolley buses)

Point of contact: Maret Christiansen- 604-319-1448

Saturday July 22, 2017

9:00am - 9:55am Robert Pare, Dalhousie University, Canada

Hypercategories

10:00am - 10:25am David Jaz Myers, Oberlin College, USA

String diagrams for (virtual) proarrow equipments

10:30am - 11:00am Coffee Break (ESB Atrium)

11:00am - 11:25am Murray Bremner, University of Saskatchewan, Canada

Commutativity in double interchange semigroups

11:30am - 11:55am Emily Riehl, John Hopkins University, Baltimore, USA

A synthetic theory of n -categories in homotopy type theory

12:00pm - 12:25pm Robert Rosebrugh, Mount Allison University, Canada

Symmetric lenses and universality

12:25pm - 12:30pm Wrap- up

Links:

ct2017@mat.uc.pt

Comments / Miscellaneous:

There was an outstanding collection of contributed talks in addition to those by the following invited speakers: Dirk Hofmann, Universidade de Aveiro (Portugal) Rory Lucyshyn-Wright, Mount Allison University (Canada) Matias Menni, Universidad Nacional de La Plata (Argentina) Robert Pare, Dalhousie University (Canada) Tim Van der Linden, Universite catholique de Louvain (Belgium)
