

SICSA Research Theme Activity Report

Please complete all sections of this reporting template and submit within 3 months of your event or activity taking place. This report will allow the SICSA Directors to provide detailed information about the progress of the SICSA Research Themes to the Pool funders, SFC, and your cooperation is appreciated.

Name of event organiser: Chris Heunen
Email address: chris.heunen@ed.ac.uk
Institution: University of Edinburgh, School of Informatics

Title of event: Categories, Logic, And Physics, Scotland
Location of the event: University of Edinburgh, School of Informatics
Date of event: April 14, 2016
From which SICSA Research Theme was this event funded? Complex Systems Engineering
Total funds claimed for event: 100 pounds

Please outline in brief what took place at the event, providing details of speakers and titles of talks:

The workshop provided room for discussion on use of categories and logic in computer science and physics, led by the following speakers:

- S. Gogioso (Oxford): "Fully graphical treatment of the Hidden Subgroup Problem"
- S. Tull (Oxford): "Operational physics, logic and categories"
- S. Uijlen (Nijmegen): "Indefinite causal structures using diagrammatic methods"
- N. Behr (Edinburgh): "Graph rewriting and combinatorial Hopf algebra"
- M. Lawson (Heriot-Watt): "Inverse semigroups and etale groupoids"
- B. Atkey (Strathclyde): "From parametricity to conservation laws, via Noether's theorem"
- C. Saemann (Heriot-Watt): "Categorical description of gauge theory"
- G. Barnes (Heriot-Watt): "A category theoretic framework for noncommutative and nonassociative geometry"

Please provide details of how many attended and if possible, information about which institutions were represented:

There were around 30 participants, from institutions including: University of Edinburgh, Heriot-Watt University, University of Glasgow, University of Strathclyde, University of Oxford, University of Durham, Radboud University Nijmegen, University Paris Diderot, Ecole Polytechnique Federale de Lausanne

Outcomes:

Please give details of any research papers that have come or are pending as a result of this activity:

N/A

Please provide details of any grant applications that have come or are pending as a result of this activity:

N/A

Please provide details of any further outcomes that have come as a result of this activity:

Connections between different research groups have been established, hopefully leading to collaborations in the longer term.

Do you have any plans to bid for further SICSA Theme Funding in the future?

We plan to organise a next meeting in this series in roughly half a year.