# Diagrams, Logic and Cognition 2013
# Preface to the proceedings

Our world is increasingly visual, and diagrams are an essential aspect of many of the fields that try to make sense of it. These fields include demography, cartography, medical imaging, aviation, and so on. In particular, diagrammatic logic is gaining ground in logic and mathematics as an alternative to or when used in parallel with symbolic logics; recent years have seen the appearance of increasingly expressive diagrammatic systems.

The success of such systems depends not only on an understanding of their formal properties. Diagrammatic logics must appeal to their users and provide identifiable benefits over the use of traditional, symbolic alternatives. That is, the notations used must be designed so as to be easily understood and to exploit any potentially intuitive features they may have, without misleading the viewer by false intuitions. Furthermore, in order to encourage the uptake of diagrams, accessible software tools are required; the designers of these tools need to address open problems in information visualisation, graph theory and automated diagram generation.

Thus, research into diagrams brings together logicians, software engineers and computer scientists, artists and philosophers. This research community is well-established in many parts of the world, but is at an early stage in others. In particular, although Indian researchers have made important contributions to our knowledge of diagrams, research events on this topic are rare in that region.

It was in this context that the first international workshop on Diagrams, Logic and Cognition (DLAC) was held on the $28^{\text{th}}$ and $29^{\text{th}}$ of October 2013 in Kolkata, India. The scope of the workshop was broad, but can be summarised as focusing on original research related to *the history of diagrams*, *inference in diagrammatic logics*, *diagrams and cognition*, and *aesthetics and visual complexity*. We were fortunate enough to attract submissions covering the majority of these topics. Each submission was reviewed by two members of the Program Committee, which was comprised of the following expert researchers:

- Dave Barker Plummer, Stanford University, US,
- Mihir Kumar Chakraborty, Jadavpur University, India,
- Mark Minas, Universität der Bundeswehr München, Germany,
- Kim Marriott, Monash University, Australia,
- Peter Rodgers, University of Kent, UK, and
- Ryo Takemura, Keio University, Japan.

We were also fortunate to have a keynote speech delivered by a leading researcher in our field, Gem Stapleton of the University of Brighton. Gem's talk presented an overview of her research interests, including the formal properties of Euler-based visual logics, the design of new notations and automatic diagram generation.

We are indebted to the program committee and our keynote speaker for helping to make DLAC 2013 a successful and highly stimulating event. We must also thank the staff and students of Jadavpur University who made all visitors feel exceptionally welcome, not least by providing a fascinating Cultural Programme of entertainment which featured poetry, dance and music.

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Jim Burton
Lopamudra Choudhury