Joint Proceedings of 4th International Workshop on Euler Diagrams and the 1st International Workshop on Graph Visualization in Practice

In 2014 two workshops ran alongside the *Diagrams* conference, held that year in Melbourne, Australia. These were the *4th International Workshop on Euler Diagrams* (ED2014) and the *1st International Workshop on Graph Visualization in Practice* (GraphViP2014). The complementary scopes of the events prompted the organisers to issue a joint proceedings.

Euler Diagrams

Euler diagrams have become the foundation of various visual languages and have facilitated the modelling of, and logical reasoning about, diverse complex systems. Over the years, they have been extensively used in areas such as biosciences, business, criminology and national security to intuitively visualize relationships and relative cardinalities of sets. This workshop of peer-reviewed submissions gave the growing Euler diagrams community the opportunity to present and discuss new research, and to share multi-interdisciplinary expertise. This was the second time the workshop has run as part of the Diagrams conference series and follows on from successful workshops in 2012, 2005 and 2004. It was an event which brought together researchers from both academia and industry, including those with expertise in mathematics, computer science, artificial intelligence, information design, visualization, human-computer interaction, as well as end-users from various application areas.

Each submission to ED2014 was reviewed by at least two members of the Program Committee, which was made up of the following expert researchers:

- Francesco Bellucci (Tallinn University of Technology),
- Peter Chapman (University of Brighton),
- Rosario de Chiara (Poste Italiane),

- Renata de Freitas (Universidade Federal Fluminense),
- Tim Dwyer (Monash University),
- Jean Flower (Autodesk),
- Mateja Jamnik (University of Cambridge),
- Luana Micallef (University of Kent),
- Mitsuhiro Okada (Keio University),
- Peter Rodgers (University of Kent),
- Frank Ruskey (University of Victoria), and
- Sun-Joo Shin (Yale University).

We are indebted to the Program Committee for helping to make ED2014 a success, and to our keynote speaker, Professor Atsushi Shimojima, whose work is seminal in the diagrams field. Professor Shimojima spoke on Euler diagrams as "Single Feature Indicator Systems" (SFISs), using an analytical method which identifies the affordances Euler diagrams have in common with other SFISs, such as railway timetables.

Graph Visualization in Practice

Graphs provide a versatile model for data from a large variety of application domains, including biology, finance, information security, telecommunication, software engineering, and social sciences. Graph visualization helps scientists and engineers to understand critical issues in these domains. However, the depth of understanding depends on the quality of the visualization and the interactive interface. Graph visualization techniques need to be intuitive for domain experts to facilitate exploration of networks within the expert's work flow, and have to take into account application semantics or user-defined constraints.

This workshop provided the graph visualization community a forum to exchange and discuss challenges, trends, and experiences in practical graph visualization. It was the first time such a workshop was held, and we expect that this event can be established in the future not only to discuss challenges and advances in research, but to further investigate how to facilitate the transfer of research results into practical applications.

Each submission to GraphViP2014 was reviewed by at least two members of the Program Committee, which consisted of the following expert researchers:

- Markus Chimani (Osnabrück University)
- Walter Didimo (University of Perugia)
- Carsten Gutwenger (Technical University Dortmund)

- Yifan Hu (Yahoo Labs)
- Ilir Jusufi (University of California Davis)
- Quang Vinh Nguyen (University of Western Sydney)
- Martin Nöllenburg (Karlsruhe Institute of Technology)
- Petr Novak (Institute of Plant Molecular Biology, Ceske Budejovice)
- Michael Wybrow (Monash University, Melbourne)

We are grateful to all members of the Program Committee and all authors for their excellent work. We would like to thank the invited speakers Tim Dwyer, Tim Pattison, and Falk Schreiber, for their very interesting talks that provided the audience insight into quite different areas of application: Tim Dwyer shared his experience in building a useful software dependency visualization tool, CodeMaps, Tim Pattison presented an approach for the interactive visualization of formal concept lattices, and Falk Schreiber gave a survey on current approaches and challenges in biological network visualization. Our thanks equally go to the Organizing Committee for the local arrangements.

Organisers of ED2014 and co-editors of the joint proceedings:
Jim Burton, University of Brighton, and
Gem Stapleton, University of Brighton.
Organisers of GraphViP2014 and co-editors of the joint proceedings:
Karsten Klein, Monash University, and
Steve Kieffer, Monash University.

Brighton, UK, and Melbourne, Australia, September 2014