

# Workshop on modelling and optimisation of real-world transportation problems

SICSA Complex Systems Engineering Theme sponsored event

Venue: University of Stirling (The Court Room, Cottrell Building), Date: 16 January 2015, 10am – 4:30pm

## Summary

Modelling and optimisation approaches to real-world transportation problems are seeing increasing uptake outside academic research. In this context, current research is focused on developing approaches more suited to the real world. This includes addressing the difficult challenges presented by large scale complex transportation systems with inherent uncertainty, dynamically changing optimisation objectives, and multiple conflicting constraints and objectives.

Several groups within SICSA are exploring applications in this area using a variety of techniques. The aim of this workshop is to bring together academics across SICSA to discuss current research in addressing real-world transportation problems, exploring future trends and possible collaborations.

## Call for talks and posters

Proposals for talks and posters are sought from SICSA researchers working in any area of real world transportation. We welcome works-in-progress, position statements and new ideas as well as more detailed results. Talks are proposed to last for 20 minutes. Please submit a title and abstract (up to 300 words) by Fri 12 December so we can assign enough time and poster boards. Topics can include (but are not limited to):

- More realistic modelling of transportation problems
- State of the art algorithms for routing and scheduling in transportation
- Handling uncertainty
- Dynamic problems
- Multi-objective problems
- Decision support
- Successful collaborations with industry
- Sourcing quality data and benchmark problems

## Outline programme

The workshop will comprise four sessions covering one day:

1. Keynote: Jason Atkin (ASAP Group, Univ. of Nottingham) on *Real-world airport operations optimisation*
2. Talks on current research by SICSA members (either side of lunch)
3. Poster session during lunch
4. Open discussion, initialised by open questions to the participants

## Organisers

- Alexander Brownlee ([CHORDS group](#), Univ. Stirling) – [sbr@cs.stir.ac.uk](mailto:sbr@cs.stir.ac.uk)
- Nadarajen Veerapen (CHORDS group, Univ. Stirling) – [nve@cs.stir.ac.uk](mailto:nve@cs.stir.ac.uk)

## Registration

Attendance is free: please register via our EventBrite page, <https://www.eventbrite.com/e/workshop-on-modelling-and-optimisation-of-real-world-transportation-problems-tickets-13851948551>