

Wasin Padungwech

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Research Interests

Developing heuristic and/or exact algorithms for solving combinatorial optimisation problems such as vehicle routing, scheduling, and rostering.

Education

- **Cardiff University, UK (2013 – 2018)**
Doctor of Philosophy (Mathematics)
Thesis title: Heuristic Algorithms for Dynamic Capacitated Arc Routing
- **Clare College, University of Cambridge, UK (2009 – 2013)**
Master of Mathematics (Merit) and Bachelor of Arts (First-Class Honours)
- **Cambridge Centre for Sixth-Form Studies, UK (2008 – 2009)**
A Level: Maths (Grade A), Further Maths (Grade A), Physics (Grade A)
University admission exams: STEP Maths 2 (Grade S – Outstanding) and STEP Maths 3 (Grade S – Outstanding)
- **Nawamintharachinuthid Horwang Nonthaburi School, Thailand (2002 – 2008)**
Secondary school with a major in maths and science

Scholarship

- Mathematical Olympiad Scholarship for studying mathematics in the UK from the A Level to Doctor of Philosophy, granted by the Institute for the Promotion of Teaching Science and Technology (IPST), Thailand (2008 – 2017)

Awards

- **Judge's Choice Award for Best Presentation**
Speaking of Science Conference
4 May 2017, Cardiff University, UK
- **Best Presentation Award**
The 4th Student Conference on Operational Research (SCOR14)
2 – 4 May 2014, University of Nottingham, UK
- **The Owst Prize for Mathematics**
(for being in the top 1/3 of first-class achievers)
Academic year 2011/2012, Clare College, University of Cambridge, UK
- **An Honorary Foundation Scholarship for One-Year**
(for achieving first-class in the 3rd year plus at least upper second-class in the previous year)
Academic year 2011/2012, Clare College, University of Cambridge, UK

Presentations

- "Route Planning: Strolling around a City in the Shortest Way"
Speaking of Science Conference
4 May 2017, Cardiff University, UK
- "Investigating Edge-Reordering Procedures in a Tabu Search Algorithm for the Capacitated Arc Routing Problem"
The 10th International Workshop on Hybrid Metaheuristics
8 – 10 June 2016, University of Plymouth, UK

- “A Strategic Edge-Reordering Procedure Based on Deadheading Cycles for the Capacitated Arc Routing Problem”
The 5th Student Conference on Operational Research (SCOR16)
8 – 10 April 2016, University of Nottingham, UK
- “The Capacitated Arc Routing Problem”
Wales Mathematics Colloquium 2015
18 – 20 May 2015, Gregynog, UK
- “An Overview of the Capacitated Arc Routing Problem: Lower Bounds and Heuristics”
The 4th Student Conference on Operational Research (SCOR14)
2 – 4 May 2014, University of Nottingham, UK

Publications

- Padungwech, W., Thompson, J., and Lewis, R. (2016). Investigating Edge-Reordering Procedures in a Tabu Search Algorithm for the Capacitated Arc Routing Problem. In *International Workshop on Hybrid Metaheuristics* (pp. 62-74). Springer, Cham. [conference paper]
- Padungwech, W., Thompson, J., and Lewis, R. A Dynamic Capacitated Arc Routing Problem with Arrival of New Demands, under review. [journal]

Teaching Experience

- Teaching assistant at School of Mathematics, Cardiff University, UK (2014 – 2017)
 - Assisting students in computer laboratory sessions for undergraduate and master’s courses (Microsoft Excel, VBA, and Xpress)
- Tutor at School of Mathematics, Cardiff University, UK (2013 – 2015)
 - Conducting tutorial classes for first-year undergraduate courses (titled “Algebra I” and “Vectors and Matrices”), checking students’ assignments and giving feedback
- Lecturer at Nawamintharachinuthid Horwang Nonthaburi School, Thailand (2013)
 - Giving lectures for university admission exams (O-NET mathematics and PAT1) to final-year (“Mathayom 6”) secondary school students

Activities

- Organising committee of the 5th Student Conference on Operational Research (SCOR16), held at University of Nottingham, UK (8 – 10 April 2016)
- Committee of Cambridge University Thai Society (academic year 2011/2012): organising social events, working as a PR officer to advertise events to the society members
- Production team of Thai Night (a cultural show) at University of Cambridge (2011): producing a “welcome” video for the night, working as part of the visual and sound team for the main show, designing event tickets

Computer/IT Skills

Programming: Python, C++, Visual Basic for Applications (VBA); LaTeX; Microsoft Word, Excel, PowerPoint; Website design (via Wix.com); MATLAB; Prezi; Video editing

References

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| <ul style="list-style-type: none"> • Dr Jonathan Thompson
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