

Lecture Series of the Research Institute for Supply Chain Management

Friday, May 14, 2021. Beginning 9:00 am



PHILIP KILBY:

CASE STUDIES IN TRANSPORT: SOLVING REAL-WORLD PROBLEMS WITH ARTIFICIAL INTELLIGENCE AND MATHEMATICS

Transport systems underpin our modern way of life: without effective transport systems, we cannot live the way we do. So, making these systems more efficient is an important area for research, and for application of artificial intelligence and mathematical optimisation techniques.

New technologies – like drones, self-driving cars, and ride-sharing apps - are presenting us with new challenges. In this talk, I will look at 3 case studies, from public transport, mining and agriculture, to first look at the surprising diversity of applications that “transport” can cover, and then to look at a few of the methods that can be used to solve practical transportation problems (constraint programming, game theory, meta-heuristics, benders decomposition). We will necessarily only be able to have a shallow dive into these methods, but I hope the talk will encourage further interest.

Dr Philip Kilby is a Principal Research Scientist at CSIRO's Data61 in Canberra, Australia. His research interests are in applying artificial intelligence and metaheuristics to solve real-world discrete optimisation problems - particularly problems in transportation. Applications of interest include fleet logistics, public transport, traffic systems, and patrol boat scheduling to name just a few.

For further information, please contact sekretariat.itl@wu.ac.at
