## Mathematical Programming Models for Solving Two Conference Planning Problems

## E. Kozan<sup>\*</sup> and R. L. Burdett

School of Mathematical Sciences, Queensland University of Technology, GPOBox 2434, Brisbane, Qld 4001, Australia

Received January 2006; Revised September 2006; Accepted March 2007

**Abstract**—Planning academic conferences is often a difficult, tedious and time-consuming task. This is because there are many possible designs that can be considered and created. Additionally many of the associated tasks are currently performed manually in an inefficient manner when they could easily be automated. The planning process is particularly important because high quality sessions can lose their value if the program is not planned properly. Similarly in the reviewing process each paper should be reviewed properly in order to achieve a high quality conference proceeding. For this reason, mathematical models are developed for the paper reviewing process and the program of presentations construction process. They involve the assignment of reviewers to papers, and the assignment of topics and papers to session and rooms, and papers to session slots. These two models are implemented and tested on real data associated with the Asia Pacific Industrial Engineering and Management Systems (APIEMS) 2004 conference.

Keywords-Conference planning activities, Course timetabling, Assignment problems

<sup>\*</sup> Corresponding author's email: e.kozan@qut.edu.au