# ABSTRACT SUBMISSION FORM

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| **Paper title**  **(limited to 6 words)** | Location-Allocation Modelling for Goods' Last-Mile Travel | | | |
| **Overview of presentation** (300-word maximum)  The current and projected trends of growth in online shopping might change the activity and travel patterns in New Zealand. Online shopping might reduce the number of shopping trips, but it has substantially increased the number of trips to deliver parcels to the end-consumers. Unfortunately, a considerable proportion of parcels are often required to be redelivered due to consumers not being at home during the first delivery attempt, adding to the operational cost of courier companies. To mitigate issues associated with failed home deliveries, Collection-and-Delivery Points (CDPs) have recently been established in New Zealand. Results of studies done overseas have suggested that the density and location of CDPs, along with other factors (e.g. local demographics, shopping behaviour and hours of operation), play a major role in the success of CDPs.  This study aims to identify the optimal density and locations for CDPs in Christchurch using a Geographical Information System based Location-Allocation (LA) modelling method. Thus, a variety of deterministic LA methods will be reviewed in detail and the results will be used as a base for selecting an appropriate method to address the research objective. Socio-demographic characteristics of Christchurch’s residents and distances to/from CDPs will be taken into account in the model. Furthermore, the existing post shops, supermarkets, dairies and pharmacies will be considered as candidate locations for CDPs. The results will be used to estimate the total vehicle kilometres travelled by consumers and courier companies before and after the implementation of CDPs. However, it is of paramount importance to consider at the same time the likely increase in traffic around the facilities serving as CDPs. | | | | |