Seminar Series #2

Collective Impact in Transportation Systems

(170th TAOYAKA Program Seminar)

Date: Feb. 16 (Tue), 2021
Time: 13:30 - 15:30 (JST)
Place: online (zoom)
Language: English

13:30-14:30 Invited talk:

Multiple discrete-continuous choice models with ordered preferences and bounds on consumption: An application to episode-level activity participation model with upper bounds on time allocation

By Dr. Abdul Rawoof Pinjari (Indian Institute of Science, Bangalore)

Abstract: This talk will delve into a multiple discrete-continuous (MDC) choice model formulation with constraints that specify upper bounds on consumption. To do so, considering the conventional utility maximization problem of a consumer, first the Karush-Kuhn-Tucker (KKT) conditions are laid out for the MDC model with a general set of linear constraints that include inequalities. Subsequently, a model will be derived with constraints that accommodate upper bounds on consumptions and an additive utility structure that accommodates lower bounds on consumptions. Furthermore, the formulation is extended to impose bounds on an MDC choice model with activity episode-level choice alternatives while accommodating a logical ordering among different episodes of an activity. That is, the model should not predict a higher numbered episode without predicting a lower numbered episode (for example, second episode should not occur without the occurrence of the first episode). To do so, the episode-level baseline utility parameters of any activity are specified to be in a non-increasing order. The proposed formulation is applied to an empirical context to analyze episode-level activity participation and time allocation while considering bounds on time allocations.

14:30-15:30 Research talks:

Crowding in Metro Systems: Case studies on its impact on multitasking and equilibrium flow from Tokyo and Dhaka

By Dr. Varun Varghese (Hiroshima University)

A Flexible MDCEV Approach to Visiting Place and Staying Time Analysis in Downtown Kumamoto

By Hajime Watanabe (Kumamoto University)

Registration:
https://cutt.ly/2j8BxW4

Contact:
Makoto Chikaraishi
E-mail: chikaraishim@hiroshima-u.ac.jp

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