

# 中央研究院統計科學研究所

## 學術演講

講題：The fascinating world of transitivity

演講人：Prof. Bernard De Baets

KERMIT, Department of Data Analysis and Mathematical  
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時間：2024-08-05(Mon.) 10:30-12:00

地點：Auditorium, B1F, Institute of Statistical Science ; The tea  
reception will be held at 10:10.

備註：Lecture in English. Online live streaming through Cisco  
Webex will be available.

### Abstract

As a mathematician, I am fascinated with basic mathematical properties of functions and relations that may have a measurable impact in real applications. One such property is the transitivity of relations, the protagonist of my lecture. I will take a cursory glance at this property in various contrasting settings, including but not limited to: crisp versus fuzzy relations, binary versus ternary relations, fuzzy versus reciprocal relations, crisp versus stochastic transitivity. At the same time, I will discuss the role of transitivity in similarity measurement, preference modelling and aggregation theory, and, conversely, of aggregation theory in the study of transitivity. Moreover, I will point out some connections with preference structures, posets, lattices and trellises.



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