

# 國立交通大學應用數學系

## 學術演講公告

主講人：張志鴻教授(國立高雄大學應用數學系)

講題：Topologically Mixing Properties of Multiplicative Integer System

時間：109年5月12日(星期二) 下午 14:00 –15:00

地點：(光復校區) 科學一館 223 室

### Abstract

Motivated from the study of multiple ergodic average, the investigation of multiplicative shift spaces has caused researcher's interests. In this talk, I will introduce the relations of topologically mixing properties of multiplicative shift spaces and traditional shift spaces, which are additively invariant. Suppose that  $\mathsf{X}_{\{\Omega\}^{\{1\}}}$  is the multiplicative subshift comes from the shift space  $\Omega$  with given  $l > 1$ . We show that  $\mathsf{X}_{\{\Omega\}^{\{1\}}}$  is (topologically) transitive/mixing if and only if  $\Omega$  is extensible/mixing. After introducing  $l$ -directional mixing property, we derive the equivalence between  $l$ -directional mixing property of  $\mathsf{X}_{\{\Omega\}^{\{1\}}}$  and weakly mixing property of  $\Omega$ .

**\*\*\*本演講為遠距同步演講\*\*\***

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