國立交通大學應用數學系
學術演講公告

主講人：彭勇寧　教授 (國立中央大學數學系)

講題：Branching rule, Gelfand-Tsetlin basis and 01-sequence

時間：105 年 4 月 26 日 (星期二) 下午 2:00-3:00

地點：(光復校區) 科學一館 223 室

茶會：當天下午 1:30 (科學一館 205 室)

摘要：

　　In this talk, we will recall and explain the classical branching rule of the finite dimensional irreducible $\mathfrak{gl}_m$-module $L_m(\lambda)$, which is about how to decompose the $L_m(\lambda)$ into a direct sum of irreducible $\mathfrak{gl}_{m-1}$-modules. Repeating this process, a linear basis for $L_m(\lambda)$ is obtained, called the *Gelfand-Tsetlin basis* for $L_m(\lambda)$. We will explain an analogue of the above phenomenon when we consider the $\mathfrak{gl}_{m|n}$-module $L_{m|n}(\lambda)$. It is a well-known fact obtained by Berele and Regev 1987 by careful calculations and combinatorial techniques. We have an alternative proof based on the representation theory of the Lie superalgebra $\mathfrak{gl}_{m|n}$. As a consequence, some interesting combinatorial identities are obtained. This talk is based on a joint work with Sean Clark and Kuang Thamrongpairoj.

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