# 國立交通大學應用數學系
# 學術演講公告

主講人：何南國 教授 (國立清華大學 數學系)

講　　題：Kostant, Steinberg, and the Stokes matrices of the tt*-Toda equations

時　　間：107 年 5 月 29 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)

## Abstract

We propose a Lie-theoretic definition of the tt*-Toda equations for any complex simple Lie algebra $\fg$, based on the concept of topological-antitopological fusion which was introduced by Cecotti and Vafa. Our main result concerns the Stokes data of a certain meromorphic connection, whose isomonodromic deformations are controlled by these equations. Exploiting a framework introduced by Boalch, we show that this data has a remarkable structure, which can be described using Kostant's theory of Cartan subalgebras in apposition and Steinberg's theory of conjugacy classes of regular elements. A by-product of this is a convenient visualization of the orbit structure of the roots under the action of a Coxeter element. As an application, we compute canonical Stokes data of certain solutions of the tt*-Toda equations in terms of their asymptotics.

This is a joint work with Martin Guest.

敬請公告　　歡迎參加

應用數學系　啟