

# 中央研究院數學研究所

Institute of Mathematics, Academia Sinica

## Taipei Postdoc Seminar

**Speaker** : Dr. Nobuo Sato

(National Center for Theoretical Sciences)

**Title** : **Confluence relations for the multiple zeta values**

**Abstract** :

In this talk, we consider iterated integrals on a projective line minus generic four points and introduce a new class of linear relations among the MZVs, which we call confluence relations. We start with Goncharov's notation for iterated integrals, review some basic notions and properties of iterated integrals, and define a class of relations among iterated integrals, which naturally arise as "solving differential equations step by step". Confluence relations are defined as the limits of these relations when merging two out of the four punctured points. One of the significance of the confluence relations is that it is a rich family and seems to exhaust all the linear relations among the MZVs. As a good reason for this, we show that confluence relations imply the extended double shuffle relations as well as the duality relations. This is a joint work with Minoru Hirose at Kyushu University.

**Time** : 11:00 – 12:30, Wednesday, Oct. 25, 2017

**Venue** : Room 638, Astro-Math. Buidling (NTU Campus)

**Organizer** : Chih-Wei Chen (NCTS), Jyun-Ao Lin (Academia Sinica)

**Refreshment** : 10:30

中央研究院數學研究所 敬上

2017.10.19