# NTU Mathematics Colloquium

歡迎參加　　敬請公告

演講者：Prof. Akira Sakai (Hokkaido University, Japan)

講　題：Hyperscaling for oriented percolation in

1+1 space-time dimensions

時　間：2017年11月27日 (星期一) 14:10-15:00

地　點：臺灣大學天數館 202 室

摘　要：Consider nearest-neighbor oriented percolation in $d+1$ space-time dimensions. Let $\rho,\,\eta,\,\nu$ be the critical exponents for the survival probability up to time $t$, the expected number of vertices at time $t$ connected from the space-time origin, and the gyration radius of those vertices, respectively. We prove that the hyperscaling inequality $d\nu\ge\eta+2\rho$, which holds for all $d\ge1$, becomes an equality for $d=1$, i.e., $\nu=\eta+2\rho$, provided existence of $\rho$ and at least one of the other two exponents. The key to the proof is the recent result on the critical box-crossing property by Duminil-Copin, Tassion and Teixeira (2017).

茶　會：15:00-15:30

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