#### THE UNIVERSITY



### OF HONG KONG

## Institute of Mathematical Research Department of Mathematics

## COLLOQUIUM

# On the Capacity of 2-Dimensional Channels

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#### **Abstract**

For a 2-dimensional (2D) Gaussian intersymbol-interference (ISI) channel with discrete input and a 2D discrete memoryless channel with a special class of irreducible constraints, we show that the stationary and ergodic capacity is equal to the information capacity. As a byproduct, the operational capacity is shown to be equal to the information capacity and the stationary capacity.

Date: March 1, 2018 (Thursday)

Time: 4:00 – 5:00pm

Venue: Room 210, Run Run Shaw Bldg., HKU