

MATH COLLOQUIUM SERIES

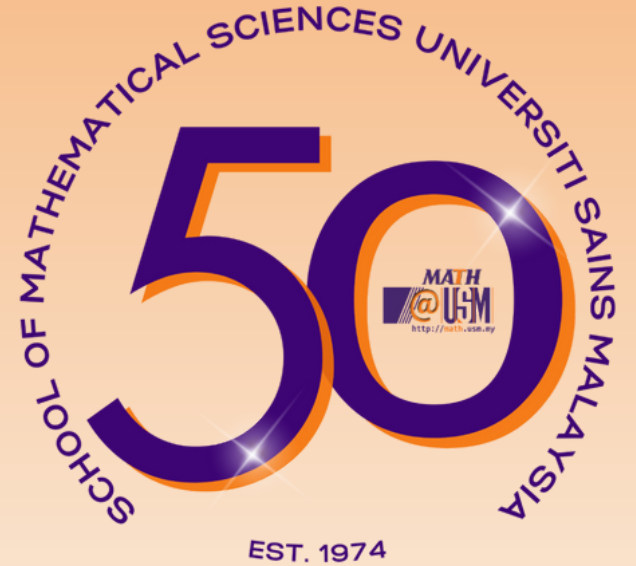


SCHOOL OF MATHEMATICAL SCIENCES
UNIVERSITI SAINS MALAYSIA



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UNIVERSITEIT VAN AMSTERDAM
NETHERLANDS



DESCRIPTIVE SET THEORY VIA ANALYSIS, AND ITS GENERALISATIONS TO HIGHER CARDINALS

This talk has two parts. In the first, more established part, an outline of some main motivations, ideas, and results in classical descriptive set theory is given. Throughout, the historical roots in real analysis are closely followed, notably the (classical) analysis of Baire functions. Borel and analytic sets, and their regularity properties are mentioned as well. In the second part, it is gestured toward more recent work in generalised real analysis. The generalisation of descriptive set theory to higher cardinals is discussed, and one option to do the same for the real number ordered field will be explored. Some generalisations, or lack thereof, of classical theorems of real analysis to these generalised real numbers, using various generalisations of continuity are to be stated.

Friday, 15 March 2024

9:00 – 11:00 am

**Venue: Meeting Room, School of
Mathematical Sciences, USM**

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