

# MATH COLLOQUIUM SERIES



SCHOOL OF MATHEMATICAL SCIENCES  
UNIVERSITI SAINS MALAYSIA



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## FRACTIONAL CALCULUS AND ITS APPLICATIONS

Fractional Calculus (FC) is a generalization of classical calculus concerned with operations of integration and differentiation of non-integer (fractional) order. The concept of fractional operators has been introduced almost simultaneously with the development of classical ones. The first known reference can be found in the correspondence of Leibniz and l'Hospital in 1695 where the question on the meaning of the semi-derivative has been raised. This seminar introduces fractional calculus and presents the basic definitions of fractional order derivatives and integrations. Furthermore, this talk will explain the notations of fractional order derivatives and integral operators, applications of the Riemann-Liouville fractional order derivative operator for algebraic functions, and also, a general property for algebraic functions will be derived.

 **LIVE** • matematikUSM

**Friday, 9 June 2023**  
**9:00 – 10:00 am (Malaysia)**  
**<https://bit.ly/MCS9-06-2023>**

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