

**COMPLETELY MONOTONE PROPERTY  
OF FRACTIONAL GREEN FUNCTIONS \***

**V.V. Anh and R. McVinish**

**Abstract**

In this paper it is proved that the Green function of a linear fractional differential equation is completely monotone. Further results on the behaviour of the Green function are obtained by exploring their connection with the Mittag-Leffler distribution. Application to the prediction and simulation of certain stochastic processes are considered.

*Mathematics Subject Classification:* Primary 26A33, Secondary 60M10

*Key Words and Phrases:* fractional differential equation, completely monotone functions, Mittag-Leffler distribution

---

\* Partially supported by Australian Research Council grant A10024117