## Fractional Calculus in Magnetic Resonance

Guest Editors:

**Prof. Dr. Richard L. Magin**
Department of Bioengineering,
University of Illinois at Chicago,
Chicago, IL, USA

**Dr. David Reiter**
Department of Radiology and
Imaging Sciences and the
Department of Orthopedics,
Emory University, Atlanta, GA,
USA

Deadline for manuscript
submissions:
**closed (31 December 2021)**

### Message from the Guest Editors

The applications of fractional calculus in the field of magnetic resonance are widespread and growing. In particular, we can extend the capabilities of nuclear magnetic resonance (NMR), electron spin resonance (ESR), and magnetic resonance imaging (MRI) by the generalization of the integer-order derivatives found in the governing equations (Bloch, and Bloch–Torrey equations). Solutions obtained using fractional calculus illuminate the structure and dynamics of materials at the molecular, cellular, and tissue length scales.

The purpose of this Special Issue is to gather articles reflecting the latest developments of fractional calculus in the fields of nuclear magnetic resonance (NMR), electron spin resonance (ESR), and magnetic resonance imaging (MRI). Applications employing fractional calculus in the sub-disciplines of NMR/ESR spectroscopy, relaxation, diffusion, and MRI are encouraged.

## Keywords

- Fractional calculus
- Magnetic resonance
- Magnetic resonance imaging
- Nuclear magnetic resonance
- Electron spin resonance
- Spectroscopy
- Relaxation
- Diffusion

# Special Issue

## Editor-in-Chief

**Prof. Dr. Francisco Chiclana**
School of Computer Science and Informatics, De Montfort University, The Gateway, Leicester LE1 9BH, UK

## Message from the Editor-in-Chief

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