

## Special Issue

# Fractional Signal Processing

### Message from the Guest Editor

People involved in the activities of signal processing (SP) know that it has recovered, reinterpreted, reformulated and given meaning to many mathematical theories and tools, and, in parallel, introduced new ones. However, SP has been almost absent in the fractional calculus (FC) world and the reverse is also true, although we know that fractional behavior is present in many of SP's traditional areas. This is astonishing given that FC has been adopted in recent years to model many natural and human-made phenomena since traditional tools are unable to provide accurate descriptions of their behavior. This is the case, for example, in physics, viscoelasticity, biomedical engineering, electrochemistry, and electromagnetics. Well-known applications include the long-range processes,  $1/f$  noise, fractional chaos, fractional Gaussian noise, and fractional Brownian motion (fBm). In the last 15 years, many applications have been described and important topics such as analysis, modeling, and synthesis considered. However, a closer look reveals that there are many traditional tools that need to be extended to the fractional frame while...

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### Message from the Editor-in-Chief

Our primary goal is to encourage scientists and engineers to publish their theoretical results and developed methods in as much detail as possible. There is no limit to the maximum length of papers. Whenever possible, authors are encouraged to provide relevant data and developed code so that the results can be reproduced. Our goal is to provide a platform for scientists and engineers to share new approaches to signal processing in various application domains.

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