

## Open Invited Track – Fractional calculus, special functions and applications

Fractional calculus represents one of the most interesting research field in contemporary mathematics. Several fractional operators found many real-world applications due to their properties of interpolation between operators of integer order. In addition, fractional function spaces have been widely applied for solving differential, integral, integro-differential equations both in pure and applies mathematics.

In the last years, considerable attention has been paid to the role of special functions in fractional calculus. Different publications showed the aforementioned interest, especially towards the case of zeta-like functions. Accordingly, fractional calculus of special functions plays nowadays a relevant role in nonlinear analysis. In particular, its link with wavelet analysis, fractal geometry and other different fields of science is of independent interest. These interconnections with different areas of the mathematics could open up new frontiers both in theory of special functions and fractional calculus.

This invited session is devoted to research topics in the field of fractional calculus in order to deal with recent results in fractional calculus of special functions, and from a more general point of view, all theoretical and practical studies in pure and applied mathematics focused on this topic.

The main topics of this invited session include (but are not limited to):

- Fractional calculus of holomorphic functions.
- Fractional function spaces.
- Commutators of fractional integral operators.



- Fractional calculus via Mittag-Leffler functions.
- Leibniz algebras and fractional calculus.
- Fractional differential and integral equations.
- Fractional calculus, special functions and entropy.
- Fractional models based on special functions in applied science.

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