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## Why new fractional calculus?

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### Abstract

Fractional calculus is an emerging field of mathematics and it has many valuable applications in several branches of science and engineering [1]. Recently, the new fractional calculus was proposed and it was based on the Mittag-Leffler kernel [2] instead of the traditional one. In this talk, I will present the advantages of this new type of fractional calculus and well as some related applications in Mathematical Biology.

**Key Words:** Fractional calculus, New fractional operators, Atangana-Baleanu fractional derivative.

## References

- [1] D. Baleanu, K. Diethelm, E. Scalas, J.J. Trujillo, Fractional Calculus: Models and Numerical Methods, Second Edition, World Scientific, New Jersey, 2017.
- [2] A. Atangana, D. Baleanu, New Fractional Derivatives with Nonlocal and Non-Singular Kernel: Theory and Application to Heat Transfer Model, Thermal Science, 20 (2016), 763-769.