



UNIVERSIDAD  
DE LA FRONTERA

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## SEMINARIO CRUZ DEL SUR

DEPARTAMENTO DE MATEMÁTICA Y ESTADÍSTICA – UFRO

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### EXISTENCE OF SOLUTIONS FOR THE 3D-MICROPOLAR FLUID SYSTEM WITH INITIAL DATA IN BESOV-MORREY SPACES

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**Sala I-105**

RESUMEN.

We show a local-in-time existence result for the 3D micropolar fluid system in the framework of Besov-Morrey spaces with time fractional differential operator of order  $\alpha \in (0, 1]$ . The kind of solution involves a family of operators called Mittag-Leffler, which arises naturally in the abstract theory of fractional calculus. The initial data class is larger than the previous ones and contains strongly singular functions and measures.

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