



## SEMINARIO DE FÍSICA Y MATEMÁTICAS

### *Summability of formal solutions for some linear moment partial differential equations*

Maria Suwińska  
Cardinal Stefan Wyszyński University, Poland

Miércoles, 15 de noviembre de 2023, a las 10.30h.

Seminario de Física, Facultad de Ciencias.

### **ABSTRACT:**

In this talk we shall consider a certain class of moment partial integro-differential equations in two complex variables of the form:

$$(1) \quad \left( 1 - \sum_{i \in \mathcal{K}} \sum_{q=0}^{p_i} a_{iq}(z) \partial_{m_1, t}^{-i} \partial_{m_2, z}^q \right) u(t, z) = \hat{f}(t, z),$$

with  $\mathcal{K} \subset \{1, 2, \dots, \kappa\}$  for a certain  $\kappa \geq 1$ , all  $a_{ij}(z)$  holomorphic in a certain neighborhood of the origin and  $\partial_{m_1, t}$ ,  $\partial_{m_2, z}$  denoting moment differential operators.

Using the usual tools from the summability theory and the fixed-point method we will obtain summability results for the formal power series solution of (1).

Seminario organizado por el Grupo de Investigación Análisis Funcional: teoría asintótica y ortogonalidad (AnFAO) de la Universidad de Alcalá (Ref.CT-CE2023/876)