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# SEMINARIO

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### ***SIM 124. Formal solutions to singularity perturbed $q$ -difference equations.***

**Abstract:** We establish the existence, uniqueness and  $q$ -Gevrey character of formal power series solutions of  $q$ -analogues of analytic doubly-singular equations. Using a new family of Nagumo norms adapted for  $q$ -differences we find new types of optimal divergence associated with these problems. We also provide some examples to illustrate our results. This is a joint work with S. A. Carrillo.

**Seminario A-125. Facultad de Ciencias.  
2 de Febrero de 2024 (12:30)  
Organiza: GIR ECSING - AFA**

