



SEMINARIO DE ANÁLISIS COMPLEJO

*One-parameter semigroups and commuting univalent  
self-maps of the unit disk*

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(día y hora no habituales)

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**Resumen:**

This talk is based on a joint work with Manuel D. Contreras and Santiago Díaz-Madrigal, the University of Seville ([CDG23] and another work in preparation). We deal with the following problems:

- (1) to investigate the structure of the centralizer of a univalent (i.e. holomorphic and injective) self-map, which by definition consists of all univalent self-maps of the unit disk commuting with the given one;
- (2) to explore relationships between the structure of the centralizer and possibility to embed the given self-map into a one-parameter semigroup;
- (3) under which additional condition a univalent self-map commuting with an element from a one-parameter semigroup commutes with all elements of the semigroup?

We study these problems for non-elliptic (i.e. fixed-point free) univalent self-maps.

[CDG23] M.D. Contreras, S. Díaz-Madrigal, P. Gumenyuk, Centralizers of non-elliptic univalent self-maps and the embeddability problem in the unit disc, preprint, arXiv:2311.04134.