



# Seminario Rubio de Francia

## Conferencia

por

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Título:

*Weighted Jordan homomorphisms on certain Banach algebras*

*Resumen:*

Let  $A$  and  $B$  be Banach algebras. A weighted Jordan homomorphism is a map  $T = W\Phi$  where

- $\Phi: A \rightarrow B$  is a Jordan homomorphism, i.e.,  $\Phi(ab + ba) = \Phi(a)\Phi(b) + \Phi(b)\Phi(a)$  ( $a, b \in A$ ),
- and  $W: B \rightarrow B$  is a centralizer, i.e.,  $W(ab) = aW(b) = W(a)b$  ( $a, b \in B$ ).

A weighted Jordan homomorphism  $T$  satisfies the following properties:

- Under some assumptions over  $B$ ,  $T$  preserves two-sided zero products, i.e.,  $ab = ba = 0 \implies T(a)T(b) = T(b)T(a) = 0$ .
- In general,  $T$  satisfies a weaker condition:  $ab = ba = 0 \implies T(a)T(b) + T(b)T(a) = 0$ .

We show that these properties characterize weighted Jordan homomorphisms on several contexts including group algebras and  $C^*$ -algebras, respectively.

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Hora: 12:00 horas.

Lugar: Seminario Rubio de Francia. Primera planta, Edificio B, Facultad de Ciencias.

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