

# Rational canonical form for algebraic elements in general rings

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## **Abstract.**

Following the ideas of the work [1] in which we built the Jordan canonical form for nilpotent elements whose last nonzero power was von Neumann regular, in this work we study when algebraic elements can admit representations as companion matrices with respect to certain matrix unit elements. This is joint work in progress together with M. Gómez Lozano and S. Balda.

## **References**

- [1] E. García, M. Gómez Lozano, R. Muñoz Alcázar and G. Vera de Salas, *A Jordan canonical form for nilpotent elements in an arbitrary ring*, *Linear Algebra and its Applications* (2019), no. 581, 324–335.