

ALGORITHM TESTING FOR THE HYPERCYCLICITY OF FINITELY ABELIAN SUBGROUPS OF $GL(n, \mathbb{C})$

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Abstract. In this paper, we present an algorithm that tests the existence of dense orbits for finitely abelian subgroups of $GL(n, \mathbb{C})$. A test example is given.

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REFERENCES

- [1] A. AYADI AND H. MARZOUGUI, *Dense orbits for abelian subgroups of $GL(n, \mathbb{C})$* , *Foliations 2005*: World Scientific, Hackensack, NJ, (2006), 47–69.
- [2] ERIC JAFFE, *Linearly Independent Integer Roots over the Scalar Field \mathbb{Q}* , The University of Chicago, 2007 Summer VIGRE Program for Undergraduates.
- [3] M. ELGHAOUI AND A. AYADI, *Appl. Gen. Topol.* 16, no. 2 (2015), 127–139.
- [4] S. GOODWIN, *Algorithmic testing for dense orbits of Borel subgroups*, *Journal of pure and Applied Algebra* **197** (2005), 171–181.
- [5] S. H. WEINTRAUB, *Jordan Canonical form, Theory and Practice*, Morgan Claypool, C 2009.