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Zariski density and genericity. (English) Zbl 1207.20045

Int. Math. Res. Not. 2010, No. 19, 3649-3657 (2010).

The paper combines a number of results (some due to the author, some not) to show that Zariski density is, in a strong sense, a generic property of subgroups of $SL(n, \mathbb{Z})$ and $Sp(2n, \mathbb{Z})$. Theorem 4.1, stated as a joint result with Ilya Kapovich, asserts that a generic free group automorphism is hyperbolic.

The author is not careful with some statements. For example, in Remark 2.3, \mathbb{Z}_p probably means $G(\mathbb{Z}_p)$. In Theorem 2.6, g_p should not be a scalar matrix.

Reviewer: [L. N. Vaserstein \(University Park\)](#)

MSC:

- [20G35](#) Linear algebraic groups over adèles and other rings and schemes
- [22E40](#) Discrete subgroups of Lie groups
- [20H05](#) Unimodular groups, congruence subgroups (group-theoretic aspects)
- [20E07](#) Subgroup theorems; subgroup growth

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Keywords:

[Zariski dense subgroups](#); [special linear groups](#); [symplectic groups](#); [complex algebraic groups](#); [generic free group automorphisms](#)

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