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Dynamical Galois groups of trinomials and Odoni's conjecture. (English) Zbl 07094881
[Bull. Lond. Math. Soc.](#) 51, No. 2, 278-292 (2019).

Summary: We prove that for every prime p , there exists a degree p polynomial whose arboreal Galois representation is surjective, that is, whose iterates have Galois groups over \mathbb{Q} that are as large as possible subject to a natural constraint coming from iteration. This resolves in the case of prime degree a conjecture of Odoni from 1985. We also show that a standard height uniformity conjecture in arithmetic geometry implies the existence of such a polynomial in many degrees d which are not prime.

MSC:

[11R32](#) Galois theory
[37P15](#) Dynamical systems over global ground fields
[14G05](#) Rational points
[11D45](#) Counting solutions of Diophantine equations

Cited in 1 Review

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