

**Publicacions més rellevants de la línia de recerca:  
Teories estables i teories simples**

**Referència:** Casanovas, E., and Peláez, R.  $|T|^+$ -resplendent models and the Lascar group. *Mathematical Logic Quarterly*, **51(6)** (2005), pp. 626–631.

**Abstract:** In this paper we show that in every  $|T|^+$ -resplendent model  $N$ , for every  $A \sqsubseteq N$  such that  $|A| \leq |T|$ , the group  $\text{Aut } f(N/A)$  of strong automorphisms is the least very normal subgroup of the group  $\text{Aut}(N/A)$  and the quotient  $\text{Aut}(N/A)/\text{Aut } f(N/A)$  is the the Lascar group over  $A$ . Then we generalize this result to every  $|T|^+$ -saturated and strongly  $|T|^+$ -homogeneous model.

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**Referència:** Barbina, S.. Reconstruction of classical geometries from their automorphism group. *Journal of the London Mathematical Society*, **75(2)** (2007), pp. 298–316.

**Abstract:** Let  $V$  be a countably infinite-dimensional vector space over a finite field  $F$ . Then  $V$  is  $\omega$ -categorical, and so are the projective space  $\text{PG}(V)$  and the projective symplectic, unitary and orthogonal spaces on  $V$ . Using a reconstruction method developed by Rubin, we prove the following result: let  $\mathcal{M}$  be one of the above spaces, and let  $\mathcal{N}$  be an  $\omega$ -categorical structure such that  $\text{Aut}(\mathcal{M}) \cong \text{Aut}(\mathcal{N})$  as abstract groups. Then  $\mathcal{M}$  and  $\mathcal{N}$  are bi-interpretable. We also give a reconstruction result for the affine group  $\text{AGL}(V)$  acting on  $V$  by proving that  $V$  as an affine space is interpretable in  $\text{AGL}(V)$ .