Publ. Mat. **48** (2004), 397–408

RINGS WHOSE CLASS OF PROJECTIVE MODULES IS SOCLE FINE

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Abstract

A class $\mathcal{C}$ of modules over a unitary ring is said to be socle fine if whenever $M, N \in \mathcal{C}$ with $\mathrm{Soc}(M) \cong \mathrm{Soc}(N)$ then $M \cong N$. In this work we characterize certain types of rings by requiring a suitable class of its modules to be socle fine. Then we study socle fine classes of quasi-injective, quasi-projective and quasicontinuous modules which we apply to find socle fine classes in special types of noetherian rings. We also initiate the study of those rings whose class of projective modules is socle fine.

2000 *Mathematics Subject Classification.* Primary: 13C13; Secondary: 16D10.
Key words. Socle fine class, projective module, QI-module, QP-module.
Supported by the Spanish DGICYT with project numbers BFM 2001–2335 and BFM 2001–1886, by the Junta de Andalucía projects: FQM-336, FQM 0194, and 'Estudio analítico-algebraico de Sistemas Triples y de Pares en diferentes clases de estructuras no asociativas'.