

## RESEARCH ANNOUNCEMENTS

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### A CORRESPONDENCE THEOREM FOR PROJECTIVE MODULES AND THE STRUCTURE OF SIMPLE NOETHERIAN RINGS<sup>1</sup>

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One of the tasks confronting ring theorists is the classification problem for simple noetherian rings. The Goldie theorems [1958], [1960] and the Lesieur-Croisot theorems [1959], provided the first structure theory for the non-artinian ones; and more generally, semiprime noetherian rings. The author [1964] showed that every simple right noetherian ring<sup>3</sup> is isomorphic to the endomorphism ring of a torsionfree module of finite rank  $U$  over a right Ore domain  $B$ , and Hart [1967] showed that  $U$  could be chosen to be finitely gen-

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<sup>1</sup> Submitted January 15, 1970 under the title, *On Noetherian simple rings*, and April 20, 1970 under the present title; this paper was presented at the Conference in Associative Algebras sponsored by the Istituto Nazionale di Alta Matematica, Città Universitaria, Roma, November 23–26, 1970. Full details, generalizations, and extensions of this research announcement will appear in the Proceedings of the Conference, and also in Chapter 4 of the author's forthcoming book to appear in 1972.

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<sup>3</sup> More generally, any simple ring with a uniform right ideal.