▸ ANTHONY MORPHETT, *Prompt enumerations and relative randomness.*
University of Leeds, UK.
E-mail: awmorp@gmail.com.

Prompt simplicity is an important and useful dynamic property of c.e. sets, with strong connections with structural properties in the c.e. Turing degrees. For example, a set A is promptly simple iff its degree cannot be capped to the 0 degree in the c.e. Turing degrees.

LR-reducibility is a generalisation of Turing reducibility arising from studies of relative Martin-Löf randomness. We say that $A \leq_{LR} B$ if the class of Martin-Löf randoms relative to B is contained in the class of Martin-Löf randoms relative to A; informally, B can detect patterns or compress data at least as well as A. The least LR-degree consists exactly of the low-for-random sets.

We consider notions of promptness in connection with relative randomness. In particular, we define a notion of 'prompt non-low-for-randomness' and examine the connections between this notion and prompt simplicity. The promptly non-low-for-random sets are properly contained in the promptly simple sets. We investigate connections between this promptness notion and structural properties of the c.e. Turing and LR-degrees, particularly capping and cupping properties.