

**APPROXIMATION PROPERTIES OF THE  
CLASS OF FLAT MITTAG-LEFFLER MODULES**

JAN ŠAROCH

Charles University, Prague

Some recent results concerning the class  $\mathcal{D}$  of all flat Mittag-Leffler modules will be presented. In particular, it will be shown that  $\mathcal{D}$  is always a Kaplansky class, although it is never deconstructible (unless we are working over a right perfect ring); the latter, much harder result is due to Jan Trlifaj and Dolors Herbera. Further, the possibility of  $\mathcal{D}$  being a precovering class will be discussed. Here, the conjecture is, again, that it can happen only over a right perfect ring. Some particular results and a conceivable strategy for general solution will be presented.

This is a joint work with Jan Trlifaj.