Auslander–Reiten theory in extriangulated categories

Osamu Iyama

Nagoya University

This is a joint work with Hiroyuki Nakaoka and Yann Palu [INP]. Auslander–Reiten theory has been studied independently for two classes of categories. One is Quillen's exact categories, and the other is Grothendieck–Verdier's triangulated categories. Recently, the class of *extriangulated categories* was introduced by Nakaoka–Palu [NP] as a simultaneous generalization of these two classes. This gives a suitable framework for Auslander–Reiten theory. We study Serre duality [AR2, RV] and stable module theory [AR1] for extriangulated categories. We also show that the stable categories of extriangulated categories form τ-categories [I]. This fact is useful to study extriangulated categories by using their Auslander–Reiten quivers.

References

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