

ABOUT SUMS OF COMPOSITIONS OF IRREDUCIBLE MORPHISMS

Nicolás Llodra Schat

Universidad Nacional de Mar del Plata, Argentina

nllodra@gmail.com

We consider A an artin algebra, and $\text{mod } A$ the category of finitely generated right A -modules.

In this talk, we present some results about sums of compositions of irreducible morphisms between indecomposable A -modules in relation with the powers of the radical of its module category.

The notion of degree of an irreducible morphism, introduced by S. Liu [L], played a fundamental role to obtain such results.

In particular, we give a characterization of when the sums of compositions of irreducible morphisms of length exactly n , for $n = 2, 3, 4$ and 5 belong to \mathfrak{R}^{n+1} .

References

[L] S. Liu, *Degree of irreducible maps and the shapes of Auslander-Reiten quivers*, Journal of London Math. Soc. 2, 45, (1992), 32-54.

Joint work with Claudia Chaio (Universidad Nacional de Mar del Plata, Argentina).