

THE DEPARTMENT OF MATHEMATICAL SCIENCES PROUDLY PRESENTS

COLLOQUIUM

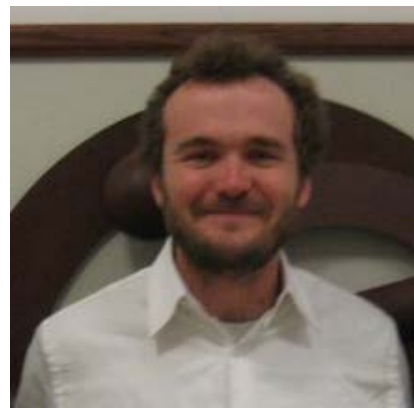
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Torsion and Tensor products over commutative domains.

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ABSTRACT



It is often the case that the tensor product of two modules over a commutative domain has a non-trivial torsion submodule. This was first noted by Maurice Auslander. Since then there have been many developments in the area showing that over certain rings the absence of torsion from a tensor product can be used to characterize projective modules. This has led to several open conjectures, most notably the Huneke-Wiegand Conjecture and the Auslander-Reiten Conjecture. After a brief overview of the topic I will show new criteria for determining when the tensor product of two modules has torsion. I also give constructive formulas for producing a module in the same isomorphism class as the torsion submodule. Lastly, we focus on the case of semigroup rings with the goal of making progress on the Huneke-Wiegand Conjecture.

Monzón Building, Room 201, 10:45 AM
Refreshments will be served
15 minutes before the colloquium, M213

