## THE FIELDS INSTITUTE

ABSTRACTS 1.2

FOR RESEARCH IN MATHEMATICAL SCIENCES

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The Auslander Algebra of a simple plane curve singularity (25-30 minutes)

Let R be a simple hypersurface singularity and  $\mathcal{CM}(R)$  the category of maximal Cohen-Macaulay R-modules. In the Kleinian case, the Auslander algebra of  $\mathcal{CM}(R)$  has been described by M.Auslander, and R.O. Buchweitz has shown that the stable Auslander algebra has periodic Hochschild cohomology of period 2. We give an explicit description of the Auslander algebra A of  $\mathcal{CM}(R)$  when R is a simple plane curve singularity. We show that A is smooth of dimension 2 and explain why the Hochschild cohomology of the stable Auslander algebra is periodic of period 2 in this case as well.