ID de Contribution: **7**   Type: **Exposé de recherche sur invitation**

Coherent presentations of Artin groups

A coherent presentation of a monoid is an extension of a presentation of this monoid by a homotopy basis, making a natural cellular complex associated to the presentation contractible. In the case of Artin monoids, we show that the usual presentation defined by Artin, using braid relations, can be completed in a coherent presentation that we give in an explicit way. Since any Artin monoid embeds in its Artin group, the coherent presentation of the monoid gives a coherent presentation of the group. I will show that our procedure gives a new proof of a theorem of Deligne concerning the action of an Artin monoid on a category in terms of a presentation based on the Garside structure. This is a joint work with Stéphane Gaussent and Yves Guiraud.

Mots Clés / Keywords

Artin groups, rewriting, actions on categories

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Classification de thématique: Topologie algébrique et applications