
Mealy automata: dynamic of the action, singular points and Wang tilings

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Résumé

diaporama Mealy automata are a powerful tool to generate (semi)groups. Since the 80's, they have been used to solve several major conjectures in (semi)group theory. Although, people started to study them from a (theoretical) computer science perspective only recently. This approach is rich and brought many interesting results and questions. In this talk, we focus on the dynamic of the action of the group on the regular tree and we show that classical tool from automata theory can be used to simplify and generalize known results and to provide information on this action. Then, we use a connection between Mealy automata and Wang tilings to obtain an undecidability theorem on the existence of certain points in the action.

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