Conférence
« ARTA III : Avancées en théorie des représentations des algèbres »
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Meeting
"ARTA III. Advances in Representation Theory of Algebras"
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Cluster categories of type A double infinity

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Cluster categories have been introduced about 8 years ago by Buan, Marsh, Reiten, Reineke and Todorov with the hope of understanding some of the combinatorics of the famous cluster algebras. Given any finite acyclic quiver Q, the cluster category $C(Q)$ attached to Q is defined. This is a nice hom-finite 2-Calabi—Yau triangulated category. This construction actually works for any infinite quiver that is locally finite without infinite paths. In this talk, we will consider the cluster category attached to a quiver of type A double infinity and show that this category has a geometric realization. Indecomposable objects, morphisms, extensions and cluster-tilting subcategories will all be described.

Joint work with Shiping Liu.

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