



Du  
**04**  
JUIL.  
2022

14h00  
-  
15h00

## **SÉMINAIRE D'ALGÈBRE**

### **S. Schroll: Recollements of derived categories of graded gentle algebras**

Zoom uniquement

<https://researchseminars.org/seminar/paris-algebra-seminar>

INSCRIPTION

Graded gentle algebras are classical objects in representation theory. They are quadratic monomial algebras making them particularly amenable to study and they appear in many different areas of mathematics such as in cluster theory, in  $N=2$  gauge theories and in homological mirror symmetry of surfaces. In this talk, we give a construction of a partial cofibrant dg algebra resolution of a graded quadratic monomial algebra inducing an explicit recollement of their derived categories. We show that for graded gentle algebras, both the left and the right side of such a recollement corresponds to cutting the underlying surface which can be associated to a graded gentle algebra. In the case of homologically smooth and proper graded gentle algebras this recollement can be restricted to the derived categories with finite total cohomology, thus inducing a recollement of the corresponding partially wrapped Fukaya categories. We give some consequences of this construction such as the existence of full exceptional sequences, silting objects and simple minded collections. This is joint work with Wen Chang and Haibo Jin [arxiv.org/abs/2206.11196](https://arxiv.org/abs/2206.11196).

URL de la page : <https://www.ihp.fr/fr/agenda/s-schroll-recollements-derived-categories-graded-gentle-algebras>



## **INSTITUT HENRI POINCARÉ - UAR839**

Sorbonne Université / CNRS  
11 rue Pierre et Marie Curie  
75231 Paris Cedex 05

### **HORAIRES**

L'institut :

- lundi au vendredi de 8h30 à 18h,
- fermé les jours fériés.

Le musée - Maison Poincaré :

- lundi, mardi, jeudi et vendredi de 9h30 à 17h30,
- samedi de 10h à 18h,
- fermé le mercredi et le dimanche.