

Kolloquium der Fakultät für Mathematik und Physik  
Leibniz Universität Hannover  
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Prof. Dr. Idun Reiten (NTNU, Trondheim):

## Cluster categories

The cluster categories were introduced in work with Buan, Marsh, Reineke and Todorov in order to "categorify" the essential ingredients in the definition of the cluster algebras introduced by Fomin-Zelevinsky. One of these ingredients is quiver mutation. We first discuss categorification of only quiver mutation. This was essentially done in the 70-s for a special case of quiver mutation. Trying to generalize this already motivates the definition of cluster categories. And through categorifying only quiver mutation we can more easily give an idea about what categorification means and why it can be useful.