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Leibniz  
Universität  
Hannover

# Oberseminar

zur

## Algebra und Algebraischen Kombinatorik

**Dr. Sophie Morier-Genoud**  
(Université Pierre et Marie Curie, Paris)

### "Friezes, moduli spaces and difference equations"

Frieze patterns of numbers are combinatorial objects introduced by Coxeter in the early 70's. The recent revival of friezes is due to connections with the theory of cluster algebras. After a short and elementary introduction to Coxeter's friezes and their generalizations, I will explain how the spaces of friezes are identified with the moduli spaces of points in projective spaces. In addition, the spaces of friezes are also isomorphic to certain spaces of periodic linear difference equations. This triality allows us to combine analytic, geometric and combinatorial approaches to study these spaces, and convert information from one to another. We will give applications of this triality. In particular, we will explain how to derive a notion of cluster superalgebras from friezes (Results based on a joint work with V. Ovsienko and S. Tabachnikov).

**Montag, 04.05.2015**  
**ab 14:15 Uhr, Raum a410**  
Hauptgebäude der Leibniz Universität Hannover

Alle Interessierten sind herzlich eingeladen.

Institut für Algebra, Zahlentheorie  
und Diskrete Mathematik