

## · QGM

## CENTRE for QUANTUM GEOMETRY of MODULI SPACES

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## **MASTER CLASS**

- CLUSTER ALGEBRAS





## **ABSTRACT**:

Cluster algebras arise in various algebraic and geometric contexts, with combinatorics providing a unifying framework. These lectures will introduce the fundamental concepts and results of the theory of cluster algebras, emphasizing its combinatorial aspects, and its connections with total positivity and Teichmüeller theory. The presentation will be guided by two families of examples: cluster algebras arising in representation theory and in the study of classical algebraic varieties, and cluster algebras associated with bordered oriented surfaces with marked points. No prior knowledge of cluster theory will be assumed.







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