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Karin Baur and **Eleonore Faber***, Department of Mathematics, 530 Church Street, Ann Arbor, MI 48109, and **Sira Gratz**, **Khrystyna Serhiyenko** and **Gordana Todorov**. *Mutation of A_n friezes*. Preliminary report.

A frieze is a grid of integers with a finite number of infinite rows satisfying a certain rule. Introduced in the 1970's by Conway and Coxeter, the interest in them gained fresh momentum in the last decade, when strong relations to cluster theory were discovered: in particular, there exists a bijection between friezes and cluster tilted algebras of type A .

In cluster theory, the key concept is that of mutation. In this talk we consider mutations of Conway-Coxeter friezes which are compatible with mutations of cluster-tilting objects in the associated cluster category of Dynkin type A . More precisely, we provide a formula, relying solely on the shape of the frieze, describing how each individual entry in the frieze changes under cluster mutation. We provide a combinatorial formula for the number of submodules of a string module, and with that a simple way to compute the frieze associated to a fixed cluster-tilting object in a cluster category of Dynkin type A in the sense of Caldero and Chapoton. (Received September 17, 2016)