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(khrystyna.serhiyenko@berkeley.edu) and **Gordana Todorov**. *Mutation of A_n friezes*.

A frieze is a grid of positive integers with a finite number of infinite rows satisfying a certain rule. Introduced in 1970's, friezes gained fresh interest in the last decade in relation to cluster theory. In particular, there exists a bijection between friezes and cluster-tilted algebras of type A. An operation called mutation is the key notion in cluster theory, and we study mutations of friezes which are compatible with mutations of the associated cluster-tilted algebras.

We also provide an explicit formula for the number of submodules (up to isomorphisms) of a given module over a cluster-tilted algebra of type A. In this case, it coincides with the specialized Caldero Chapoton map applied to a given module, which in turn provides a way to pass from a cluster-tilted algebra to the associated frieze. (Received August 25, 2016)