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Mutation finite Jacobian algebras

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Felikson, Shapiro and Tumarkin classified the mutation finite quivers. These are precisely the quivers associated to triangulations of surfaces plus 9 mutation classes of quivers of E-types and the two small mutation classes of the quivers X_6 and X_7.

We show that for these quivers a non-degenerate potential is unique up weak right equivalence in most cases: the quivers associated to triangulations of closed surfaces with at least 3 punctures, the sphere with at least 5 punctures, surfaces with non-empty boundary (except the dreaded torus) and the mutation class X_6. Remarkably, also most of the corresponding Jacobian algebras turn out to be tame.

Finally, we present briefly the pioneering work of Alim, Cecotti, Córdova, Espahbodi, Rastogi and Vafa on maximal green sequences for mutation finite quivers in terms of discrete stability conditions.

This is joint work with D. Labardini—Fragoso and J. Schroeer.

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