1106-05-1879   **Emily Gunawan*** (`egunawan@umn.edu`) and **Gregg Musiker** (`musiker@umn.edu`). *T-Path Formula and Atomic Bases for Cluster Algebras of Type D.*

Cluster algebras, introduced by Fomin and Zelevinsky in 2000, are integral domains equipped with a set of generators, called *cluster variables*, which can be constructed recursively starting from an initial set of n cluster variables. We investigate the existence of *atomic bases* for cluster algebras arising from certain surfaces with marked points. Our results thus far are an extension of a T-path formula for cluster variables and a combinatorial proof that *cluster monomials* (i.e. products of compatible cluster variables) form the atomic basis of a cluster algebra coming from a once-punctured polygon (type D). (Received September 15, 2014)

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