1120-05-280   **Emily Gunawan*** (`egunawan@umn.edu`), 206 Church St SE, Vincent Hall, Minneapolis, MN
55455. *Notched arcs and atomic bases of cluster algebras from twice-punctured polygons and other punctured surfaces.* Preliminary report.

Cluster algebras, introduced by Fomin and Zelevinsky at the beginning of this century, are commutative rings which are defined combinatorially by an iterated process. An important class of cluster algebras arise from triangulations of surfaces with marked points. We generalize Ralf Schiffler and Hugh Thomas' combinatorial T-path formula to tagged arcs (possibly with decorations called notchings at their endpoints) of punctured surfaces. We use this to investigate the existence of atomic bases for cluster algebras arising from twice-punctured disks and other punctured surfaces. (Received February 23, 2016)

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