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Lucas A David-Roesler* (roesler@lvc.edu), Mathematics Department, 101 N. College Avenue, Lebanon Valley College, Annville, PA 17003, and **Ralf A Schiffler**. *A method to calculate an invariant of Avella-Alaminos and Geiss using surface triangulations.*

In 2008 Avella-Alaminos and Geiss introduced a combinatorial invariant for gentle algebras which is invariant under derived equivalences. This invariant comes from a calculation on the presentation of the algebra by a quiver with relations. We are interested in quivers with relations that arise from triangulations of surfaces with boundary. The algebras corresponding to these triangulations are gentle and play an important role in the cluster algebra that may be associated to the surface. We will show how to calculate this invariant using only the information coming from the triangulation. Further, we will show how this calculation can also be extended to two other classes of algebras: the m -cluster tilted algebras and surface algebras. (Received September 21, 2012)