

Addendum to “Discrete one-forms on meshes and applications to 3d mesh parameterization”, by Gortler Gotsman and Thurston.

Theorem 3.3 cited from the literature states: If  $G$  is a closed oriented manifold mesh of genus  $g$ , then the linear space of harmonic one-forms wrt some set of positive weights has dimension  $2g$ .

This theorem is only true if the chosen weights are symmetric. When they are not symmetric, the dimensionality of the space of harmonic one-forms is  $2g - 1$ . The reason is that, when the weights are not symmetric, then rank of the coclosed constraints is  $V$  instead of  $V - 1$ .

This does not effect any other theorem in the paper. as the dimensionality of  $2g$  is not needed in any of the proofs.

For the algorithm of section 6, then step 1 of the algorithm should read

1. Compute a basis of the  $2g$ -dimensional space of harmonic one-forms on  $G$ . ( $2g - 1$  for non symmetric weights)