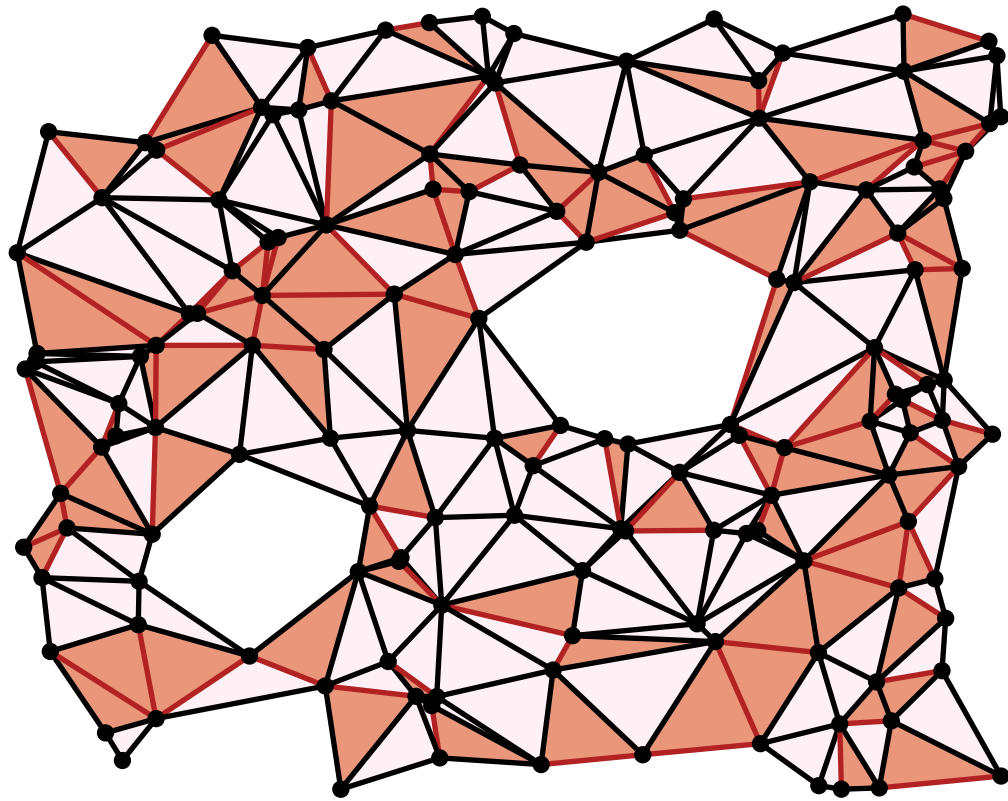


**A** Random up-matching  $\mathcal{V}'$



**B** Projection of  $s$  and  $\phi_{\mathcal{V}'}\psi_{\mathcal{V}'}s$  on the Hodge decomposition

