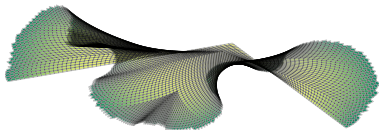


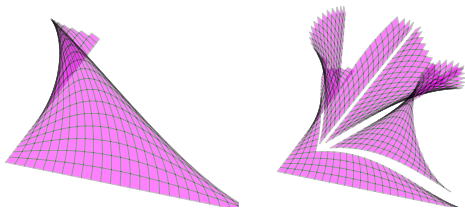
# Discrete Leaves: The Role of $C^{1,1}$ Isometries, Hyperbolic Elastic Sheets and the Föppl-von Kármán Model

Questions:

- ▶ When & why do buckles occur
- ▶ Wrinkles  $\iff$  Nonsmoothness  
 $\iff$  Minimizers?
- ▶ Convex energy  $\mathcal{E}$ , nonconvex  
admissible set  $\mathcal{W}_{iso}^{2,2}$



Answers:



- ▶ Balance of principal curvatures
- ▶ Asymptotic parameterization
- ▶ Introduction of branch points  
( $C^{1,1}$  singularities)
- ▶  $\mathcal{C}_{iso}^2$  is *not* dense in  $\mathcal{W}_{iso}^{2,2}$   
(Degree of normal map)
- ▶ Energy gap between  $\mathcal{C}_{iso}^{1,1}$  &  $\mathcal{C}_{iso}^2$ ?