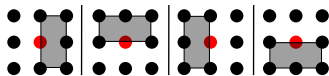


# Kernels for Curvature Filter



For the most left case in above figure, we have following kernels

Filter	Regularization	Prior Surface	Kernel
GC	$\int  \kappa_1 \kappa_2  d\vec{x}$	Developable	$\begin{bmatrix} 0 & \frac{1}{2} & 0 \\ 0 & -1 & 0 \\ 0 & \frac{1}{2} & 0 \end{bmatrix}$
MC	$\int  \kappa_1 + \kappa_2  d\vec{x}$	Minimal Surface	$\begin{bmatrix} 0 & \frac{5}{16} & \frac{-1}{8} \\ 0 & -1 & \frac{5}{8} \\ 0 & \frac{5}{16} & \frac{-1}{8} \end{bmatrix}$
Bernstein	$\int  \kappa_1 + \kappa_2  d\vec{x}$	Minimal Surface	$\begin{bmatrix} 0 & \frac{1}{2} & 0 \\ 0 & -1 & 0 \\ 0 & \frac{1}{2} & 0 \end{bmatrix}$
TV	$\int  \nabla U  d\vec{x}$	locally constant	$\begin{bmatrix} 0 & \frac{1}{5} & \frac{1}{5} \\ 0 & -1 & \frac{1}{5} \\ 0 & \frac{1}{5} & \frac{1}{5} \end{bmatrix}$