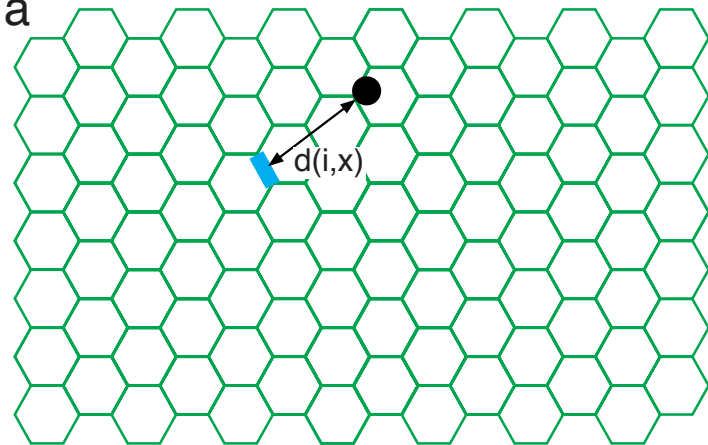


a



Edge i



Point x on mesoscale

 $d(i,x)$ = distance to edge i from point x

b

Convolution with gaussian kernel to obtain smooth myosin tensor at mesoscale

$$\overleftrightarrow{m}(\vec{x}) = \sum_i w(\vec{x}, i) \overleftrightarrow{m}(i)$$

$$w(\vec{x}, i) = \frac{1}{4\pi\sigma} e^{-\left(\frac{d(i, \vec{x})}{\sigma}\right)^2}$$

$$\sigma = 5 \text{ cell diameters}$$

Tensor decomposition in trace and traceless part, separates isotropic from anisotropic pool

$$\overleftrightarrow{m}(\vec{x}) = m(\vec{x})\mathbb{I} + \overleftrightarrow{\tilde{m}}(\vec{x})$$

$$m(\vec{x}) = \text{tr}(\overleftrightarrow{m}(\vec{x}))/2$$

$$\overleftrightarrow{\tilde{m}}(\vec{x}) = \overleftrightarrow{m}(\vec{x}) - m(\vec{x})\mathbb{I}$$