

3D Mesh processing using GAMer 2 to enable reaction-diffusion simulations in realistic cellular geometries

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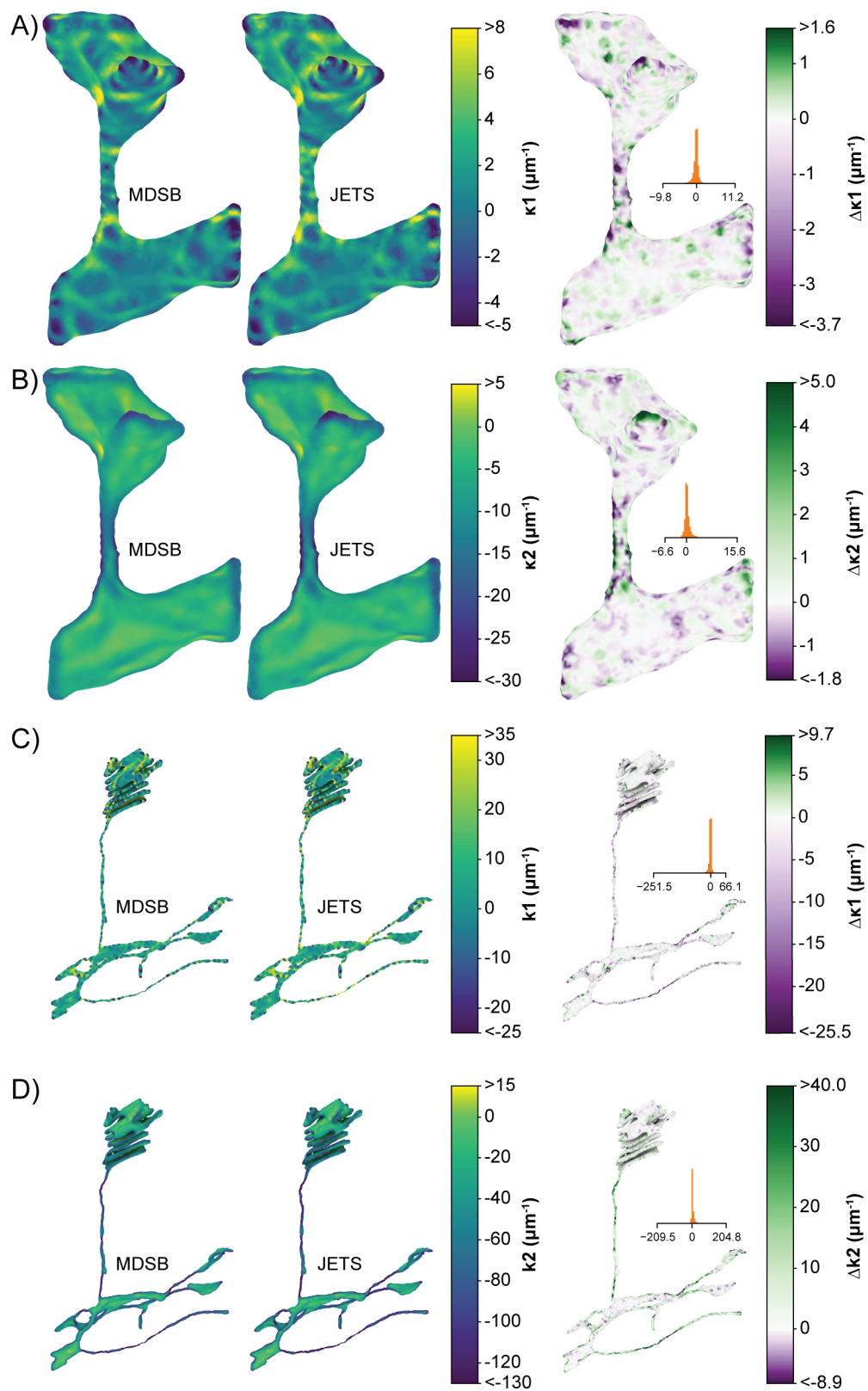


Fig S1. Comparison of Meyer-Desbrun-Schröder-Barr (MDSB) and Cazal-Pouget (JETS) curvature estimates for the single spine geometry. A) First principal curvature of the plasma membrane. B) Second principal curvature of the plasma membrane. C) First principal curvature of the endoplasmic reticulum. D) Second principal curvature of the endoplasmic reticulum. Shown on the left column are the estimated curvature values. On the right column the difference ($\Delta = \text{MDSB} - \text{JETS}$) between estimates is shown. The difference values are truncated at the 1st and 99th percentiles to improve color range. The distribution and full range of differences are plotted in the inset. Curvature estimates from both algorithms are qualitatively similar. Differences in quantitative value are the greatest at high curvature regions. For the JETS estimate, a jet of second degree was fit to six neighboring points for all meshes.