## Selected Modeling Choices

## Key Differences between the CMA DGG and PCMA DGG

- Originally, zippering was an attachment rule.
- Zippering now works to enforce a separation distance of  $\sigma_{sep}\approx 25nm$
- Addition of CLASP boundary rules.
- Added creation rules.
- Simplification of collision rules.

$$\begin{pmatrix} \bigcirc_{4} & \bigcirc_{5} & \bigcirc_{2} & \bigcirc_{3} \end{pmatrix} & \langle \langle (\boldsymbol{x}_{1}, \boldsymbol{u}_{1}), (\boldsymbol{x}_{2}, \boldsymbol{u}_{3}), (\boldsymbol{x}_{3}, \boldsymbol{u}_{3}), \\ & \langle (\boldsymbol{x}_{4}, \boldsymbol{u}_{4}), (\boldsymbol{x}_{5}, \boldsymbol{u}_{5}) \rangle \rangle \\ & \rightarrow & \begin{pmatrix} \bigcirc_{1} & \blacktriangle_{2} & \bigcirc_{3} \\ \bigcirc_{4} & & \end{pmatrix} & \langle \langle (\boldsymbol{x}_{1}, \boldsymbol{u}_{1}), (\boldsymbol{x}_{2}, \boldsymbol{u}_{2}), (\boldsymbol{x}_{3}, \boldsymbol{u}_{3}), \\ & \langle (\boldsymbol{x}_{4}, \boldsymbol{u}_{4}), \varnothing \rangle \rangle \end{pmatrix}$$

Figure 40: Previous Zippering Rule<sup>2</sup>.

$$(\bigcirc_{1} \longrightarrow lackbox{0}_{2}, \bigcirc_{3} \longrightarrow \bigcirc_{4}) \langle\!\langle (m{x}_{1}, m{u}_{1}), (m{x}_{2}, m{u}_{2}), (m{x}_{3}, m{u}_{3}), (m{x}_{4}, m{u}_{4}) \rangle\!\rangle$$
 $\longrightarrow \begin{pmatrix} \bigcirc_{3} & \bigcirc_{6} & \bigcirc_{6} & \bigcirc_{5} \\ lackbox{0}_{2} & \bigcirc_{6} & \bigcirc_{5} & \langle\!\langle (m{x}_{1}, m{u}_{1}), (m{x}_{2}, m{u}_{2}), (m{x}_{3}, m{u}_{3}), \\ (m{x}_{4}, m{u}_{4}), (m{x}_{5}, m{u}_{5}), (m{x}_{6}, m{u}_{6}) \rangle\!\rangle$ 

Figure 41: New Zippering Rule used in this model.

## **Methods of Analysis**

## **Interpreting the Correlation Results**

- Measurements:
  - 1. The correlation distance function is measured every 24 seconds of biological time.
  - Local correlation is the average over the first third.
  - Global correlation is the average of the entire distance.
  - The mean of all samples at each point of measurement is then curve-fit.

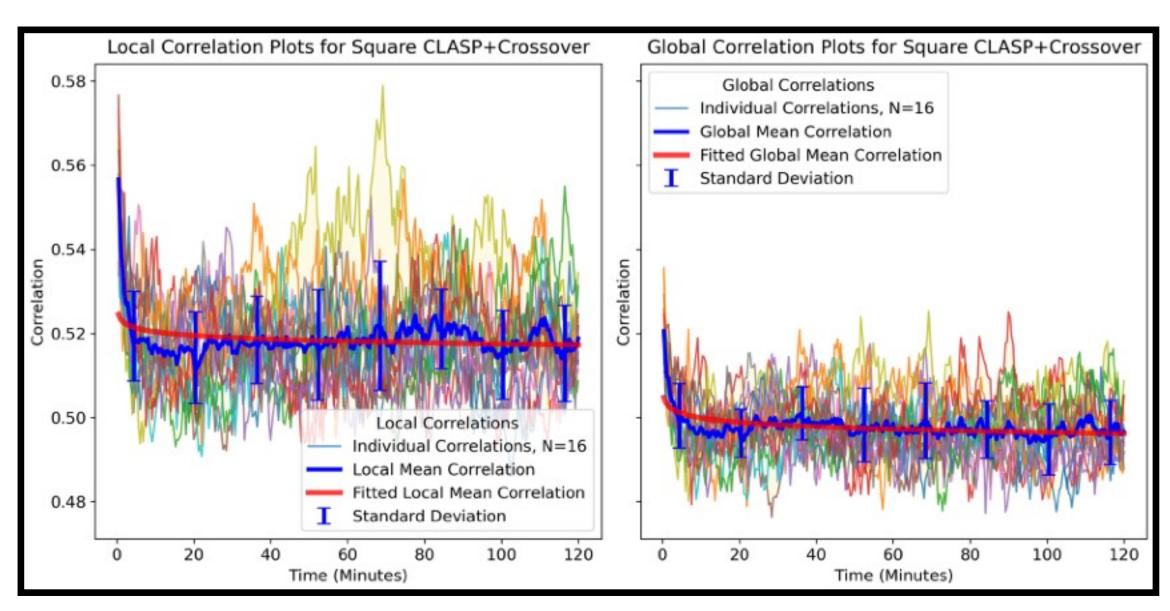


Figure 42: Plots of local correlations (left) and global correlations (right).