The Plant Cell Periclinal Cortical Microtubule Array (PCMA) DGG

Overview and Motivation

The Plant Cell Periclinal Cortical Microtubule Array (PCMA) DGG

- The PCMA DGG builds on the CMA DGG, and uses DGGML, which is more flexible and efficient.
- We test the effect boundary conditions and boundary shape may have on alignment.
- Key results:

  1. The array orientations of square of the square domains indicate multi-modal behavior.

  2. Arrays in rectangular domains reorient with a change of boundary conditions.

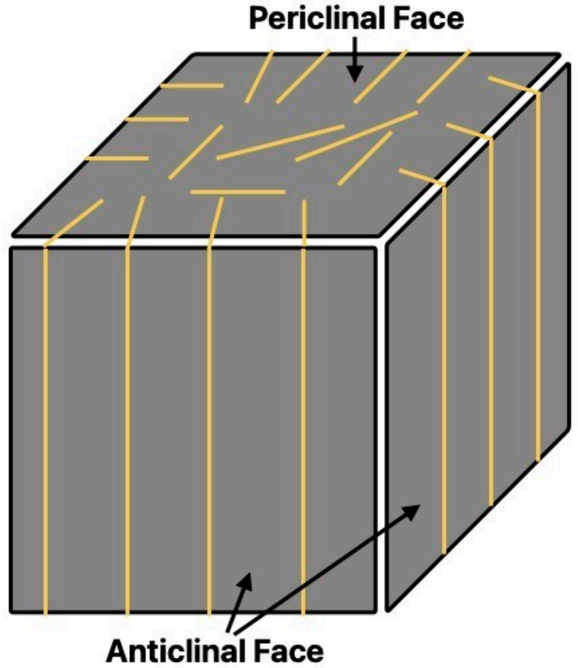

Figure 39: Visualization of our approximation of the cell as a polyhedral prism, where we restrict our simulations to the periclinal face and have a “picket fence” idealization[1].

1. (Shaw, 2013)