Future Paths

DGGML and Beyond.

- Extending the expanded cell complex to 3D.
- Including reaction diffusion equations.
- Upgrading DGGML to a compiler for the DGG language, including automatic parallelization and more sophisticated grammar analysis.
- Theoretical bounding of the commutator error.
- Mutliscale modeling and DGG meta-rules.

- As a future modeling path, we could instead simulate the top periclinal face of the cell using different domain shapes.
- More experiments can also be added with different variations of parameters and rules.
- Machine Learning DGG(ML)²
- And much more!

Acknowledgements

- This work was funded in part by U.S. NIH NIDA Brain Initiative grant 1RF1DA055668-01, U.S. NIH National Institute of Aging grant R56AG059602, Human Frontiers Science Program grant HFSP—RGP0023/2018. This work was supported in part by the UC Southern California Hub, with funding from the UC National Laboratories division of the University of California Office of the President.
- We would also would also like to acknowledge valuable conversations with Jacques Dumais, Olivier Hamant, and Elliot Meyerowitz and others.