

Slides, videos, links and more:

<https://github.com/physicell-training/00-Welcome-to-training>



Module 00: Welcome to PhysiCell Training!

Paul Macklin, Ph.D.

 @MathCancer

PhysiCell Project

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LUDDY

SCHOOL OF INFORMATICS, COMPUTING, AND ENGINEERING

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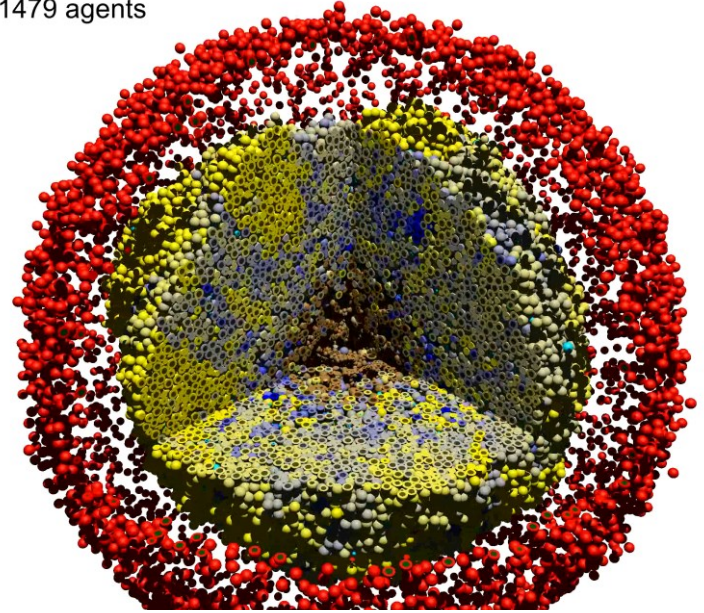
PhysiCell.org

 @PhysiCell

Welcome to PhysiCell!

- PhysiCell is an agent-based modeling platform for multicellular systems biology and biological systems engineering.
- It's designed to balance flexibility and performance and work on many operating systems, like Linux, OSX, and Windows.
- We're excited that you're using PhysiCell for your own projects. We made these training materials to help get you started.

Current time: 14 days, 0 hours, and 3.00 minutes
111479 agents



Cancer immunology demo

[\[View on YouTube \(4K\)\]](#)

Training goals

- Introduce the core concepts behind PhysiCell
- Gain intuition and experience in key PhysiCell elements with interactive, cloud-hosted mathematical models (educational "microapps")
- Show programming tips and tricks
- Show best practices
- Provide easy reference materials to supplement user documentation
- Highlight additional references and resources

About these training materials

- The training materials are divided into a series of short modules.
- Each module is about 10-15 minutes long.
- Each module has:
 - a video recording (distributed on multiple platforms)
 - downloadable slides (as PDF)
 - open licensed source material (MIT licensed, open education resources)
- We will supplement the slides with interactive ***educational microapps***:
 - cloud-hosted interactive models designed to illustrate specific PhysiCell concepts

General themes

- **Introductory materials:**
 - Learn the basic structure of PhysiCell
- **Greater depth materials:**
 - Dig into the details of cell phenotype and other key components
- **Advanced and additional topics:**
 - Learn best tricks and preferred code practices
 - Unlock "hidden" features
- **PhysiCell Community:**
 - Learn about the broader PhysiCell community and resources
 - Learn how to contribute to the PhysiCell software ecosystem

Choose your own adventure

Super short

Target audience:

- Users who are familiar with other agent-based modeling frameworks who want to get running very quickly.

Approach:

- Skip more detailed modules. Refer back to modules as references.

Intermediate

Target audience:

- Users who are familiar with other agent-based modeling frameworks who want better introductions to the code.

Approach:

- Skip some intro details.

Full training

Target audience:

- Users who are new to agent-based modeling, or want fuller background

Approach:

- Enjoy everything. :-)



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Getting help

- For help, please visit the PhysiCell ticket system:
 - <https://sourceforge.net/p/physicell/tickets>
- Please see <http://PhysiCell.org> for other support options.
- Visit [@PhysiCell](https://twitter.com/PhysiCell) on Twitter for up-to-date news.
- Please note that direct emails to project staff may receive delayed responses compared to the official channels above.

Next steps

Super fast: Please proceed to 01 (What you need for PhysiCell)

Intermediate: Please proceed to 01 (What you need for PhysiCell)

Full training: Please proceed to 01 (What you need for PhysiCell)

Link: <https://github.com/physicell-training/01-What-you-need>

Credits and acknowledgements

| | |
|-------------------------|---|
| Module Planning: | Paul Macklin |
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| Microapps: | not applicable |

* denotes undergraduate researcher

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NATIONAL
CANCER
INSTITUTE



PhysiCell Development:

- Breast Cancer Research Foundation
- Jayne Koskinas Ted Giovanis Foundation for Health and Policy
- National Cancer Institute (U01CA232137)
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Training materials:

* Administrative supplement to NCI U01CA232137 (Year 2)



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