Slides, videos, links and more:
https://github.com/physicell-training/00-Welcome-to-training

Lesson 00: Welcome to PhysiCell Training!

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PhysiCell Project

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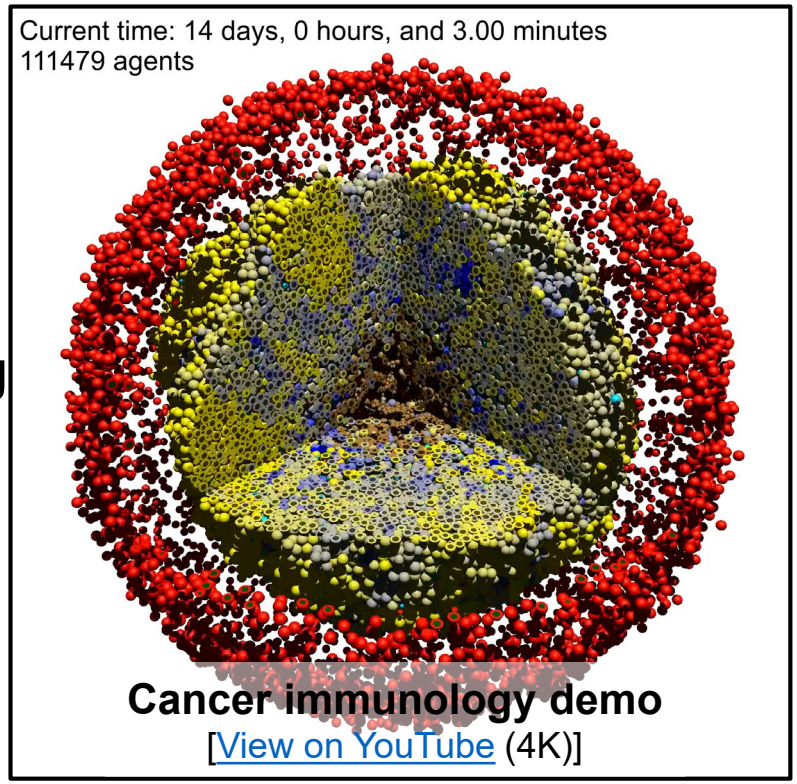
Welcome to PhysiCell!

- 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.



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 lessons.
- Each lesson is about 10-15 minutes long.
- Each lesson 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. :-)

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 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

More materials: https://github.com/physicell-training/master-list

Credits and acknowledgements

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Microapps: not applicable

* denotes undergraduate researcher

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- National Science Foundation (1720625)

Training materials:

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