# Compositional Methods for Modeling Health & Infectious Disease 2022

# Instructors

- Instructors
  - Sophie Libkind
  - Evan Patterson
  - James Fairbanks
  - Xiaoyan Li
  - Nathaniel Osgood
- TA: Xiaoyan Li

# Resources

- Bootcamp material [https://github.com/AlgebraicJulia/CANMOD-2022](https://github.com/AlgebraicJulia/CANMOD-2022)
- Algebraic Julia resources
  - General project materials [https://www.algebraicjulia.org](https://www.algebraicjulia.org)
  - Github materials [https://github.com/AlgebraicJulia](https://github.com/AlgebraicJulia)
  - Relevant publications [https://www.algebraicjulia.org/#publications](https://www.algebraicjulia.org/#publications)
- [https://www.youtube.com/c/ToposInstitute](https://www.youtube.com/c/ToposInstitute)

# Protocol

- Please keep microphones off during presentations, except for invited questions
- Use Zoom chat for questions -- often they will be answered by other instructors than the speaker
- Questions requiring speaker resolution will be raised by a designated session chair
- There is time at the end of the day for broader questions & discussions with instructors
- Please honour the diversity of backgrounds in the room

# Hackathon

- The final day of the bootcamp is devoted to instructor-facilitated hackathon projects
- Participants are encouraged to pursue Hackathon projects
- Team members & instructors can choose the methods that they
- We are seeking at least 3 people per team
- If you have project ideas, please put them forward at https://tinyurl.com/ACT4ID2022Projects
- If you do not have project ideas, we invite you to join one of the other teams, or to discuss with instructors

# Video Recordings

- We will make screencast recordings in the bootcamp
- Questions & answers sessions & Hackathon activities will not be recorded
- Following editing, videos will be posted on the Topos Institute Youtube Channel (https://www.youtube.com/c/ToposInstitute )

# Example Application Benefits of Compositional Technologies

- Model reuse, modularity, verifiability: **Compositionality**
- Capacity to create rich multi-scale models: **Operads & Operad algebras**
- Stakeholder transparency & added insight from diverse model analyses: **Separation of syntax & semantics**
- Rapid & scalable modeling, ease in evolving a model with changing understanding, maintaining provenance information: **Models as data**