Lecture 26: Physics-informed deep neural networks

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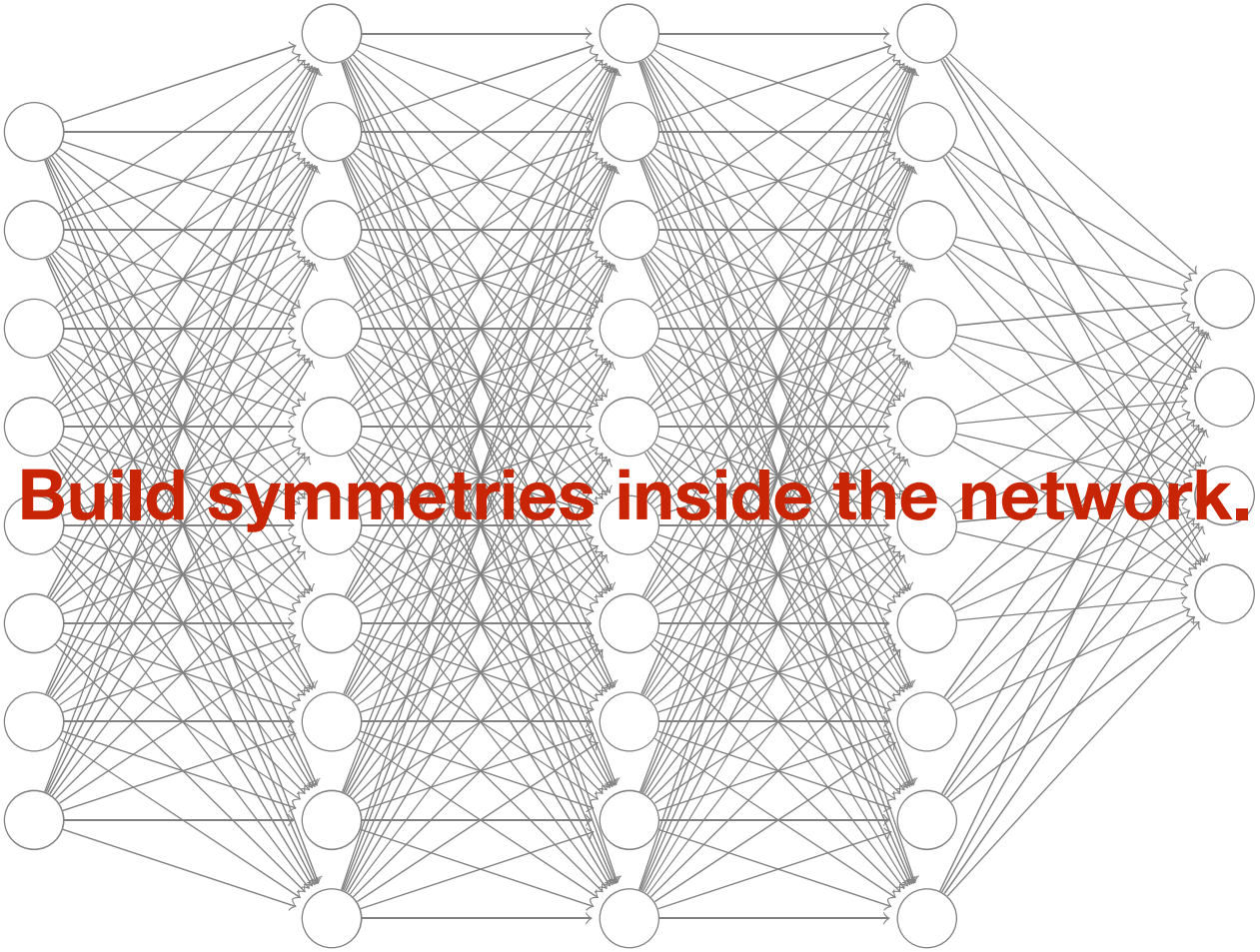
Overview of physics-informed deep neural networks

PREDICTIVE
SCIENCE LABORATORY

Physics-informed deep learning

- Exploiting symmetries, invariances, and equivariances.
- Exploiting available physical equations (differential equations, partial differentiation equations).

Ideas



Build symmetries inside the network.

$L(\theta) =$ **Data part** $+$ **Physics-informed regularization**