



Contribution ID: 13

Type: **not specified**

TRA Colloquium: Symmetries in AI4Science

Tuesday, October 22, 2024 4:15 PM (45 minutes)

Symmetries are of fundamental importance in all of science and therefore critical for the success of deep learning systems used in this domain.

In this talk, I will give an overview of the different forms in which symmetries appear in physics and chemistry and explain the theoretical background behind equivariant neural networks.

Then, I will discuss common ways of constructing equivariant networks in different settings and contrast manifestly equivariant networks with other techniques for reaching equivariant models.

Finally, I will report on recent results about the symmetry properties of deep ensembles trained with data augmentation.

Presenter: Prof. GERKEN, Jan