

Learning methods in computational mechanics

Setting:

Recently, learning methods have been successfully applied to mechanical simulations. This approach already good results in non-linear examples including fluid dynamics and hyper-elasticity, promising to deliver accurate results in much shorter time.

Project Characteristics

Modeling: ★☆☆☆☆
Mathematics: ★★★★★
Programming: ★★★★★
Science: ★★★★★

Your Tasks:

- Gain an understanding of the basic ideas of different existing approaches,
- Choose and implement one method,
- Produce some 1D examples,
- Implement and compare a second method.