Universität Wien

Fakultät für Mathematik

<u>**ANTRITTSVORLESUNG**</u>
Mathematisches Kolloquium

Mittwoch, 15. Jänner 2020
Sky Lounge

EINLADUNG

Philipp Petersen
(Uni Wien)

„Deep neural networks in numerical analysis"

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Abstract:
We will discuss some recent applications of deep learning and deep neural networks in classical fields of applied mathematics. We will concentrate mostly on their capability to serve as trial functions in the numerical solution of PDEs. In this context, we will present a couple of aspects of deep neural networks that suggest that these approaches are potentially far superior to classical methods. On the other hand, we will identify several properties of neural networks that seem to prohibit their application in problems where one is interested in provably convergent algorithms. Finally, I will present a list of most pressing issues in these approaches as a call to arms for all numerical analysts in the room.

15.45 Uhr: Kaffeejause

16.15 Uhr: Vortrag

Kleines Buffet im Anschluss

Roland Donninger
Christian Krattenthaler