

数学与系统科学研究院

计算数学所学术报告

报告人: **Dr. Jonas Adler**

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报告题目:

**Deep Learning for Image  
Reconstruction**

邀请人: 陈冲 博士

报告时间: **2018 年 10 月 19 日 (周五)**

**下午 15:00-16:00**

报告地点: 科技综合楼三层

**311 报告厅**

## **Abstract:**

**Deep learning has shown tremendous success in solving various tasks in several fields of science such as in image and natural language processing. Recently, it has also been applied to solve inverse problems and empirical evidence in image reconstruction points to exponential improvements in both performance and run-time over classical approaches. In this talk we outline some of these recent developments.**

**In particular, we'll introduce "Learned Iterative Reconstruction", a method which relies on a fusion of model- and data-driven approaches for solving inverse problems.**

**We'll also show how these methods can be extended to "Deep Bayesian Inversion", a family of methods that allows us to perform uncertainty quantification using deep learning.**

## **CV:**

Jonas Adler holds a MSc in Engineering Physics. Since 2013, he is a Research Scientist with Elekta and since 2015 he is also pursuing a PhD in applied mathematics at KTH - Royal Institute of Technology under the supervision of Prof. Ozan Öktem.

His research is on inverse problems, machine learning and their intersection. He is also an active open source developer, contributing to several packages.

See his web page for more information: [jonasadler.com](http://jonasadler.com)

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