



Applied **Mathematics** Workshop

# Deep Learning in Imaging Sciences

Innsbruck, July 19-20, 2018

## Invited Speakers

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■ **Housen Li**

MPI for Biophysical Chemistry  
Göttingen, Germany

■ **Andreas Hauptmann**

University College London,  
United Kingdom

■ **Aviv Gibali**

ORT Braude College of Engineering  
Karmiel, Israel

■ **Robert Nuster**

University of Graz, Austria

The development of fast and accurate algorithms is a central mathematical aspect of image reconstruction. Examples include various kinds of medical imaging applications, compressed sensing, deconvolution, or super-resolution microscopy. Recently, a new class of algorithms based on deep learning for such type of problems appeared. With deep learning, image reconstruction is performed with artificial neural networks, whose weights can be adjusted on appropriate training data. While still in their infancy, these techniques already show astonishing performance.

In this workshop, leading experts will report on recent progress towards using deep learning for various imaging applications.

### Organizing committee

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Markus Haltmeier  
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