

ODL Training session

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Overview

ODL training session will give an introduction to the software package Operator Discretization Library (ODL). The course will focus on getting you started with ODL for your own problems, and will give an overview of the state of the art in both classical iterative/variational image reconstruction as well as new deep learning based methods. There will also be some social events to get everyone to know each other as well as a chance to present your own research in inverse problems!

Location

The course is held in the VIC LAB at KTH - Royal Institute of Technology. The address is Lindstedthvägen 7, floor 4, room 4450.



Food and drinks

Coffee will be provided at the venue and we will also sponsor a dinner at Stallmästareården on the 13:th. Lunch will sadly not be provided, but there are several good restaurants nearby. We also plan to have (optional) social events in the evenings for those who want to join.

Hardware and software

Since the course will be focused on ODL and deep learning for large scale problems, it is highly preferable if the attendants can bring their own GPU accelerated laptops or remote desktop capability to a computer with a NVidia GPU. For those that cannot do this, we'll have access to a limited set of computers with this capability, either locally or via remote desktop that can be used by the attendants. Most of the material will also be doable without a GPU, but the performance will be sub-optimal.

It is also preferable if the attendants have already installed ODL and the required packages (ASTRA for tomography and TensorFlow for deep learning). Due to the nature of the course, we will assume that the latest versions are installed (ODL master branch and tensorflow ≥ 1.3). Please see the [installation instructions](#).

All course material will be posted [online](#) (currently under construction) and if you have any questions, please [create an issue](#).

Type	Food/drinks	Lecture	Hands on	Social
Organizer	Jonas Adler (JA)	Holger Kohr (HK)	Ozan Öktem (OÖ)	
Location	VIC LAB at KTH. Lindstedtsvägen 7, floor 4, room 4450.			
Time	Tue 12/12	Wed 13/12	Thu 14/12	Fri 15/12
09:00		Machine Learning: Overview (JA)	ODL for large scale problems (HK)	Custom problems -- roundup
09:30				
10:00		Coffee	Coffee	Coffee
10:30		Intro to ML (JA)		
11:00		ML exercises (JA)	Solving custom problems using ODL -- getting started (HK)	Student presentations, results
11:30				
12:00				
12:30		Lunch	Lunch	
13:00	Welcome & Intro to IP & ML (OÖ)			
13:30		ML for IP (JA)	Student presentations, goals	
14:00	Coffee			
14:30		Exercise: Small problems		
15:00	ODL introduction (HK)		Solving custom problems using ODL	
15:30				
16:00		Coffee	Coffee	
16:30	Coffee			
17:00	ODL Exercise (HK)	Exercise: Small problems	Solving custom problems using ODL	
17:30				
18:00				
18:30				
19:00				
19:30				
20:00				
20:30	"After Work"			
21:00		Workshop dinner		
21:30				
22:00				
22:30				
23:00				