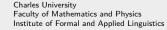
Course Logistics

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Goals of the Course

1. Make you able to read the newest MT papers

2. Give you some intution on how the models behave

Course Logistics 1/6

What We Expect You to Know

- Basics of deep learning
 - basic neural architectures
 - training by backpropagation
- Be familiar with machine translation
 - data we use and how do we get them
 - MT evaluation
 - main problems of MT and why they are difficult

Enrolling NPFL087 Statistical Machine Translation and NPFL114 Deep Learning is recommended.

Course Logistics 2/6

First Part: Lectures

- 1. Discussion on a reading assignment (20 minutes)
- **2.** Lecture (70 minutes)

Preliminary Syllabus

- Introductory notes on deep learning and machine translation
- Neural architectures for NLP
- Sequence-to-sequence learning with attention mechanism using RNNs
- Sequence-to-sequence learning using self-attention networks
- Dealing with limited vocabulary (character-based methods, sub-word units)
- Algorithmic tricks to improve model performance (beam search, ensembling)

The topics may change based on your interests.

ourse Logistics 3/ 6

Second Part: Paper Presentations

Every student will:

- Present a paper (or a group of papers) to the others
- Prepare interesting questions to kick-off the discussion

Papers will cover recent research topics including: unsupervised translation, interpretability, alternative decoding schemes (non-autoregressive NMT, Levenshtein Transformers).

Course Logistics 4/6

Formal Requirements

To pass the course, you need to:

- read the papers assigned for the seminar and submit an answer to a question for each paper before the seminar (via a Google Form),
- present a paper to your fellow students,
- write a test at the end of the semester.

The seminar is an **optional** course, awarded by **3 credits**.

Course Logistics 5/6

Course Logistics

- The course materials & reading questions will be available on the course webpage.
- If you have questions, drop us a line:
 - Jindřich Helcl (helcl --at-- ufal.mff.cuni.cz)
 - Jindřich Libovický (libovicky --at-- ufal.mff.cuni.cz)