

Information for the Pattern Recognition Seminar

Spring and Autumn Semester

Notes:

- The seminar will only take place if **at least three students** participate..
- The **maximum number of students** attending the seminar is **12**.
- BSc do not need to register on KSL.
- MSc students need to register on Academia.
- We distinguish between two groups of students:
 - (A) BSc / MSc students who write their BSc / MSc thesis in our group
 - (B) MSc students who want the seminar to count towards their JMCS only (without writing a thesis in our group).

Spring semester:

- The seminar in **spring semesters** is only for students from group (A).
- Exceptions are possible under certain circumstances, but must be discussed with the lecturer in advance (please enquire by email *before* the first session).

Autumn semester:

- The seminar in **autumn semesters** is open to students of both groups (A) and (B).

Lecturer

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Description

The pattern recognition seminar can be seen as a general platform for students interested in pattern recognition and related fields. The general goal of the seminar is to introduce students to current research in the field. The main topics are: artificial intelligence, pattern recognition, and machine learning. In agreement, also topics from the field of human-computer interaction are possible. Furthermore, it is also about receiving a general introduction to academic writing and presenting academic content.

Dates

- Wednesdays at 2:15 p.m.
- The first session of the seminar takes place in the first week of the semester.
- The scheduling depends on the actual number of participants. The table below shows generic variants for the scheduling depending on the number of participants.

	Semester Weeks														
Participants n	Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Date	tbd	tbd	tbd	tbd	tbd	tbd	tbd	tbd	tbd	tbd	tbd	tbd	tbd	tbd
[3, 4]	Content	Admin	Self-Study: Academic Writing*			Presentations of PhDs/Postdocs			No Seminar				Presentations of BSc/MSc Students		Social Event
[5, 6]	Content	Admin	Self-Study: Academic Writing*			Presentations of PhDs/Postdocs			No Seminar				Presentations of BSc/MSc Students		Social Event
[7, 8]	Content	Admin	Self-Study: Academic Writing*			Presentations of PhDs/Postdocs			No Seminar			Presentations of BSc/MSc Students			Social Event
[9, 10]	Content	Admin	Self-Study: Academic Writing*			Presentations of PhDs/Postdocs			No Seminar		Presentations of BSc/MSc Students				Social Event
[11, 12]	Content	Admin	Self-Study: Academic Writing*			Presentations of PhDs/Postdocs			Presentations of BSc/MSc Students						Social Event

* Students who write their thesis in our group **must** work on the contents of *Academic Writing* in self-study and submit all related tasks via ILIAS. For the other students, the completion of this part is optional.

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- The actual dates of the respective presentations of the participating BSc and MSc students will be discussed and determined in the first session of the seminar (and then published on ILIAS).

Content

The content of the seminar partly differs for students of group (A) and (B).

BOTH GROUPS OF STUDENTS (A) AND (B)

- PhD students and postdoctoral researchers of the *Pattern Recognition Group* present their current state of research in talks of about 45' duration (three sessions marked in yellow in the schedule above).
- Students of both groups (A) and (B) have then the opportunity to discuss the current research with the PhD students and postdoctoral researchers.

BSc / MSc STUDENTS WHO WRITE A THESIS IN OUR GROUP (A)

- Using the "Academic Writing" document (available on ILIAS), students of group (A) will spend three weeks of self-study working on the basic pillars required for writing a BSc or MSc thesis (marked in light blue in the schedule above)¹. In particular, the document "Academic Writing" covers the following three topics:

1. Purpose and Elements of Academic Writing
2. Language and Structure
3. Citing and Describing

On ILIAS, students will also find two practice sheets for these three topics including mandatory and optional tasks. Students who write a thesis in our group need to upload their solutions for the mandatory tasks on ILIAS. Please note the submission deadlines on the practice sheets and also that each student must submit individually.

- Students of group (A) present their *own* BSc or MSc project in a talk of about 30' duration plus discussion (marked in red in the schedule above). BSc students can present in English or German (but the slides should be in English in any case) while MSc students have to present in English. Students should consult and use the checklist for presentations available on ILIAS.

¹For the students of group (B), the completion of this part is optional.

BSC / MSC STUDENTS WHO DO **NOT** WRITE A THESIS IN OUR GROUP (**B**)

- Students of group (**B**) can either (1) write a review article on a certain topic or (2) carry out a small research project (but not both).
- Students who choose path (1) write a review article that comprehensively describes existing research on the chosen topic. Students who choose path (2) implement and research a practical solution for the given research problem and evaluate their solution on a suitable data set.
- On ILIAS, a list of topics as well as a list of small research projects from the field of pattern recognition and related areas is available.
- Students choose a topic or a project from these two lists by sending an eMail with their decision to kaspar.riesen@unibe.ch – the rule is: first come, first served.
- Students can specify several topics/projects at the same time in their eMail (e.g. with descending priority), so that we can assign the second or third choice directly if the first choice is already taken.
- Students present the content of their review article or their research project and their implemented and evaluated solution in a talk of about 30' duration (plus discussion) – marked in red in the schedule above. Students should consult and use the checklist for presentations available on ILIAS.
- Students who choose path (1) must upload the review article and the slides for the presentation on ILIAS. Students who choose path (2) must upload the slides for the presentation – including a link to the implemented solution on Github or similar – on ILIAS.

Learning Outcomes

Upon successful completion of this seminar, you will have acquired basic skills in academic writing and moreover will be able to:

- Develop, prepare, and deliver presentations of your own scientific research project.
- Independently read and understand research papers stemming from pattern recognition and related fields.
- Deepen your understanding of current research in pattern recognition by discussing it with your peers.
- Analyze current research in pattern recognition and develop your own research questions and research ideas.

Expectations

We expect ...

- ... a motivated, clearly explained, and clearly structured talk that is just right to follow without assuming inappropriate prior knowledge and allows a knowledge transfer and encouraged participation.
- ... participants of the seminar to be present at each session (we maintain an attendance list). In order for the seminar to be considered attended, a maximum of two *justified* absences are permitted (e.g. illness or examination in another subject). Unjustified and unannounced absences generally lead to exclusion from the seminar.
- ... students to actively participate in discussions by speaking up – we maintain an open, respectful, and polite atmosphere.
- ... written submissions (to the content of the academic writing) to be of solid quality, clearly demonstrating that students have engaged with the material.

Assessment

BSc / MSc STUDENTS WHO WRITE A THESIS IN OUR GROUP (A)

- The grade of the seminar results exclusively from the evaluation of the presentation.

BSc / MSc STUDENTS WHO DO **NOT WRITE A THESIS IN OUR GROUP (B)**

- The grade of the seminar is based 50% on the evaluation of the presentation and 50% on the evaluation of the submitted product (i.e. either the review article or the implemented solution).

We apply the following evaluation scheme:

- A grade of 5.0 means that the presentation/product is exactly as expected. This corresponds to the default grade.
- A grade of 5.5 or 4.5 means that several parts of the presentation/product are better or worse than expected.
- A grade of 6.0 or 4.0 means that all or almost all aspects of the presentation/product are significantly above or below our expectations.
- A score of 3.5 means that all aspects of the presentation/product fall well short of our expectations *and/or* that even the basic formal requirements are not met.