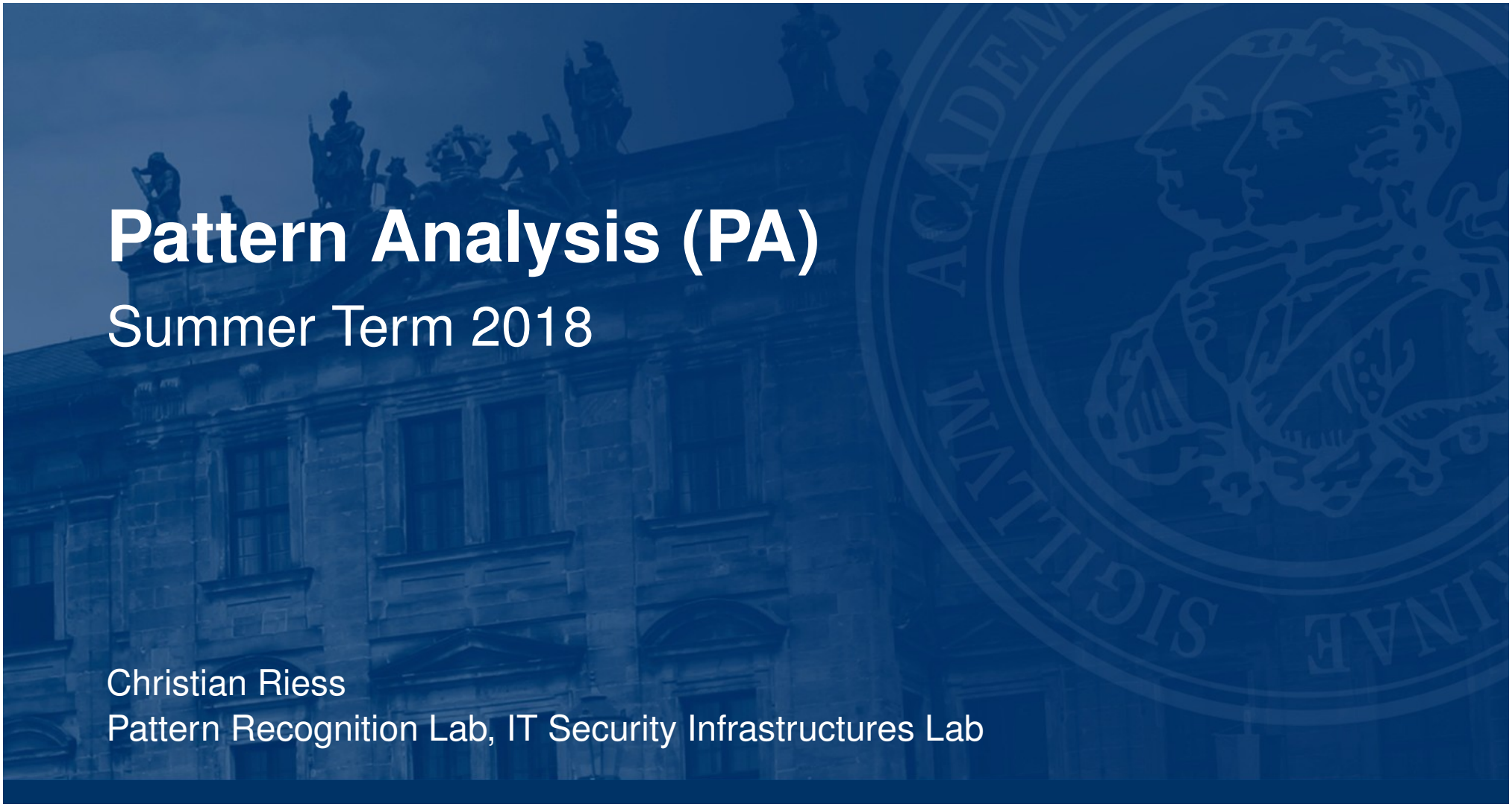

Pattern Analysis (PA)

Summer Term 2018

Christian Riess
Pattern Recognition Lab, IT Security Infrastructures Lab

FRIEDRICH-ALEXANDER
UNIVERSITÄT
ERLANGEN-NÜRNBERG
TECHNISCHE FAKULTÄT

This is a printable version of the slides of the lecture

Pattern Analysis (PA)
Summer term 2018
Friedrich-Alexander University of Erlangen-Nuremberg.

Erlangen, April 9, 2018
Dr. Christian Riess

Lecturer and Teaching Assistants

Christian Riess

Daniel Stromer

Dalia Rodriguez

Welcome to Pattern Analysis!

- (“Hello PA!”)

What is Going to Happen in PA?

- Unsupervised methods
- Graphical methods

- A better understanding of statistics applications
- Fun

- The previous two points might sound weird, but they are important:
  - With curiosity in statistics applications, PA can be your fun maximum — there is no better thing than PA!
  - Otherwise PA can be your fun minimum — better pick something else!

Lecture and Exercises

- Master course *Pattern Analysis*
- 3h lectures/week, 1h exercise/week on average
- 5 ECTS

- Lecture (check also schedule!):
  - Tue, 12:00-14:00, H16
  - Thu, 12:00-14:00, H16

- Programming Exercises (check also schedule!):
  - Tue, 14:00-16:00, 02.151-113 (“Huber-CIP”)
  - Wed, 10:00-12:00, 02.151-113 (“Huber-CIP”)
  - Start: April 17, 2018

Schedule

Tue. Lecture	Thu. Lecture	Tue. Exercise	Wed. Exercise
April 10	April 12	-	-
(travelling)	*(travelling)*	April 17	April 18
April 24	April 26	April 24	April 25
(Labor Day)	May 3	*(Labor Day)*	May 2
May 8	*(Ascension Day)*	May 8	May 9
May 15	May 17	May 15	May 16
(Berg)	May 24	*(Berg)*	May 23
May 29	*(Corpus Christi)*	May 29	May 30
June 5	June 7	June 5	June 6
June 12	June 14	June 12	June 13
June 19	June 21	June 19	June 20
June 26	June 28	June 26	June 27
July 3	*(reserve)*	July 3	July 4

Exercise Schedule

- Sign up for one exercise within a block of two weeks
- Work in groups of two students
- One worksheet takes roughly 2 weeks
- Show and discuss your solution in the exercise two weeks after publication
- The details are communicated by the supervisors of the exercises, Daniel Stromer and Dalia Rodriguez

Certificates and Exams

- 5 ECTS points
- To pass the class, it is necessary to pass
  - a 30 minutes oral exam
  - the programming exercises
- Exercise registration through studOn (Inf 5 $\rightarrow$ Pattern Analysis)
- Exam registration in meinCampus
- Exam appointments will be made in class in June (details tba)

How to Excell in the Exam

- Make sure you are roughly familiar with the concepts in IntroPR and PR
- The topics in PA are relatively special, and complement IntroPR and PR
  - Which method can be used where in the pattern recognition pipeline?
  - Do unsupervised methods fit into the pattern recognition pipeline?
    If not, what is the “grander scheme of things” to fit them in?
  - If there are multiple alternatives for an algorithm, what are tangible differences between the methods?
  - For which application might one algorithm be preferable to another?
  - What prior knowledge or what test would we need to do to decide for one algorithm over another?
- Look at the supplementary material (papers and book chapters)
- Make sure that we can have a meaningful conversation about the topics of the lecture, beyond a mere reproduction of my words.

Let's Get Started

- The organizatorial part is over now — whatever your organizatorial questions are now, please ask them now.

- Afterwards, let us discuss some concepts and tools to establish some necessary context