Selected Topics of Pervasive Computing

Stephan Sigg

Georg-August-University Goettingen, Computer Networks

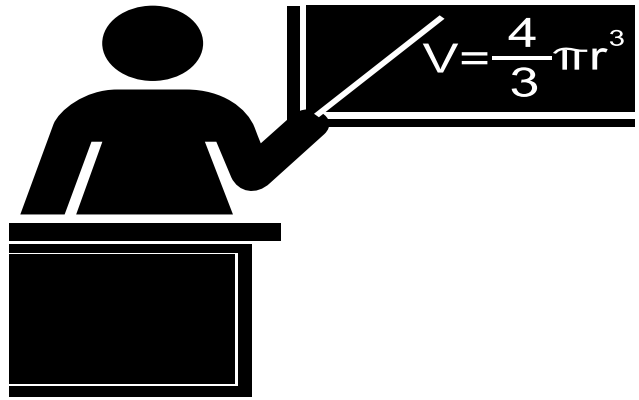
30.10.2013

Overview and Structure

30.10.2013	Organisational
30.10.3013	Introduction
06.11.2013	Classification methods (Basic recognition, Bayesian, Non-parametric)
13.11.2013	Classification methods (Linear discriminant, Neural networks)
20.11.2013	–
27.11.2013	–
04.12.2013	–
11.12.2013	Classification methods (Sequential, Stochastic)
18.12.2013	Activity Recognition (Basics, Applications, Algorithms, Metrics)
08.01.2014	Security from noisy data (Basics, Entity, F. Commitment, F. Extractors)
15.01.2014	Security from noisy data (Error correcting codes, PUFs, Applications)
22.01.2014	Context prediction (Algorithms, Applications)
29.01.2014	Networked Objects (Sensors and sensor networks, body area networks)
05.02.2014	Internet of Things (Sensors and Technology, vision and risks)

Objectives

- Acquire detailed knowledge on selected tools and methods in Pervasive computing
  - General principle
  - Algorithms and implementation
  - Various input data sources
- Practical experience of the lecture topics in hands-on projects



Requirements and lecture material

Requirements to successfully complete the lecture :

- Interest
- Ability to work self-employed but in teams
- Ask !!! when you do not understand something
  - In the lecture
  - In the exercise
  - Via Email

Material :

- https://wiki.net.informatik.uni-goettingen.de/wiki/Selected_topics_in_Pervasive_Computing_(Winter_2013/2014)
  - Lecture slides
  - Additional information

Organisation

Lecture : Wednesdays, 10:15 - 11:45

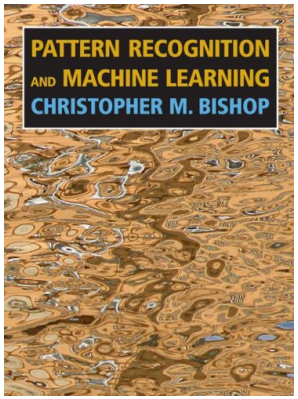
Exercises : Wednesdays, 16:15 - 17:45

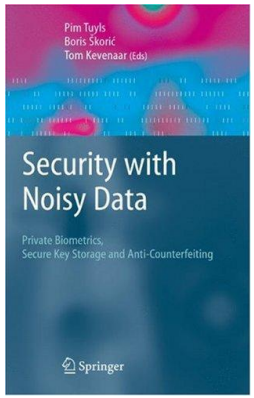
- Every two weeks
- First exercise on November, 13th, 2013

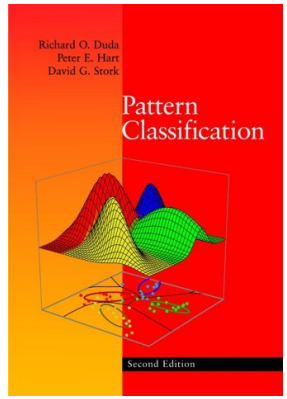
Oral examination : Please approach me for an appointment

Literature

- C.M. Bishop: Pattern recognition and machine learning, Springer, 2007.
- P. Tulys, B. Skoric, T. Kevenaar: Security with Noisy Data – On private biometrics, secure key storage and anti-counterfeiting, Springer, 2007.
- R.O. Duda, P.E. Hart, D.G. Stork: Pattern Classification, Wiley, 2001.







Questions?

Stephan Sigg
stephan.sigg@cs.uni-goettingen.de