

Introduction and structure of the lecture

Identification systems (IDFS)

Department of Control and Telematics
Faculty of Transportation Sciences, CTU in Prague

1st lecture



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Goal of the course

Goal of the course:

- To obtain **theoretical knowledge** of identification systems, their use, different technologies and how do they work.
- To get **practical experience** with identification systems recreating one as a part of semestral project.
- Web: <http://its.fd.cvut.cz/courses/identification-systems/>

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page 2

General information

- **Lecturers:** Petr Bureš (K620) and V. Frič (CEBIA)
- **Level:** Master studies
- **Study programme:** Transportation sciences
- **Course:** compulsory for ITS
- **Number of contact academic hours:** 28 (28 classroom, no labs)
- **Additional assignments:** 8 academic hours
- **Credits:** 2

Lectures 1/2

Identification in general (6-7 lectures)

- Identification by a token
 - What? Password, number, ... formats.
 - How? Bar codes, text, hash,
 - Means? Image processing, RFID, Internet.
- Authentication by a token – password, quantum authentication, cipherring, public key, ...
- Identification by a feature
 - What? List of biometric features
 - How? What is recognized and how it is stored (format)
 - Means? Image processing

Lectures 2/2

Automotive identification (2 lectures)

- Use of identification in telematics (AVI/AEI, EVI, Smart Plate, ...), Standards in telematics and identification (ASN.1, other standards)
- Vehicle identification, protection against fraud (CEBIA)
- Excursion, discussion on aspects of automatic identification (CEBIA)

Biometric identification project (2 lectures)

- Contact lectures devoted to consultation and work on the project

To get an assessment

In groups (3-5 students)

- Biometric data collection and recognition (hand geometry)
 - Proposal of HW and SW for recognition system
 - Design and implementation
 - Data collection (enrollment)
 - Identification of an individual
- **Individually**
 - Review and summarize a research paper related to the topic of IDFS, present its results to the group
 - Resources: online CTU catalogue, aleph.cvut.cz, [summon](#)

Conclusion and contacts

- More and updated information about course and interim results at <http://its.fd.cvut.cz/courses/identification-systems/>

Contacts

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