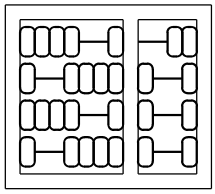

MC936B/MO826R
Introduction to Biometrics

Institute of Computing — UNICAMP
2ND Semester, 2015
Prof.: Anderson Rocha
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Course Description

Days and Times

Class	Day	Time	Room
Every	Thursdays	19 – 20:40	CB17
	Fridays	21 – 22:40	CB02

Extra-class aid

Students whom need extra-class help from the professor must send an e-mail with 24 hours in anticipation. However, every week an extra-class option will be available and broadly released to the class. Normally, this extra-class aid will take place on Wednesdays @18:00 through @20:00.

Evaluation

This class will be evaluated according to the following criteria:

1. **Individual practical assignments** in which the professor gives the problems and specs to the students. Short technical reports must be turned in. The solved problems in the practical assignments may be part of the final evaluation (written) test. Do not miss them.

   Weight: $3 \times 20\%$ of the final grade. The implementation language is free of choice.

2. **Class discussions** in which the professor and students discuss problems in Biometrics.

   Weight: 10% of the final grade.

3. **One seminar**. **Weight**: 30% of final grade.

   - This assignment must be done in groups of two people and refers to the presentation of a biometric topic/paper to the class.

Exam

- **This discipline does not have an extra exam after the end of the semester.**

Syllabus

1. Introduction to Biometrics
2. Verification vs. Identification
3. Error types
4. Applications
5. Face Localization
6. Face Recognition

7. Fingerprint Recognition
8. Iris Recognition
9. Additional Biometric Treats (ears, gait, hand, soft biometrics)
10. Spoofing
11. Multibiometrics

Programming Language

It is recommended that the students use a Machine Learning friendly language such as R, Python or Matlab to make the development easier and faster. However, the implementation language is free of choice.

Webpage

http://www.ic.unicamp.br/~rocha/teaching/2015s2/mo826

Bibliography

There is no specific book/reference for this discipline. All necessary materials will be recommended according to the subject of interest. However, the list below may be of interest.

Books

1. *Introduction to Biometrics.* Anil K. Jain, Arun A. Ross, and Karthik Nandakumar. Springer. (2012)
2. *Advanced Studies in Biometrics.* Massimo Tistarelli and Josef Bigun and Enrico Grosso. Springer. (2003)
3. *Advances in Biometrics: Sensors, Systems and Algorithms.* Nalini Ratha and Venu Govindaraju. Springer. (2008)
4. *Biometric Systems: Technology, Design and Performance Evaluation.* James Wayman and Anil K. Jain and Davide Maltoni and Dario Maio. Springer. (2005)
5. *Biometrics: Personal Identification in Networked Society.* Anil K. Jain and Ruud Bolle and Sharath Pankanti. Kluwer Academic Publishers. (2002)
6. *Handbook of Biometrics.* Anil K. Jain and Patrick Flynn and Arun A. Ross. Springer. (2008)
7. *Handbook of Multibiometrics.* Arun A. Ross and Karthik Nandakumar and Anil K. Jain. Springer. (2006)

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