**Summary**

The course will cover perceptual modalities in computers, models for analyzing people (representation, detection and localization, segmentation, tracking, recognition).

**Content**

1. Perceptual modalities in computers. Vision, hearing, touch, smell. basic fusion principles.
3. Analyzing people. fundamental tasks.

**Keywords**

Artificial perception, human representation, multi-modalities, audio, video, probabilistic model, graphical models.

**Learning Prerequisites**

**Recommended courses**

Undergraduate-level knowledge of linear algebra, statistics, image and signal processing.
Assessment methods

- written exam
- homeworks (includes practical work)
- paper presentation

Resources

Bibliography

- C. Bishop, Pattern Recognition and Machine Learning, Springer, 2008
- B. Gold and N. Morgan, Speech and Audio Processing, Wiley, 1999
- M. I. Jordan (ed.), Learning in Graphical Models, MIT Press, 1999

The library recommends:


Ressources en bibliothèque

- Pattern Recognition and Machine Learning / Bishop
- Microphone Arrays / Brandstein
- Computer Vision: a Modern Approach / Forsyth
- Learning in Graphical Models / Jordan
- Speech and Audio Processing / Gold