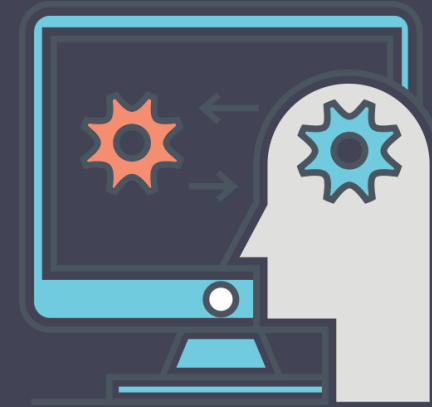# HMI course
Human-Machine Interaction
Introduction to HMI

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Human-Machine Interaction (HMI)

- Semester module, fondamental unit
  Credits :**5**,   Coefficient:**3**

- Level: 3rd Year Bachelor

- Evaluation: Exam + interrogation + TP + TD+ homework

- Responsible of the module: Dr. I. Ait Abderrahim

Chapter 1
Introduction to HMI

Objective

- In this module you will learn about Human-Machine Interface (Interaction) importance, its role in nowadays digital landscape, and what are the techniques and characteristics to design a good HMI.

Importance of HMI

- HMI plays a pivotal role in shaping the way we interact with technology and influences the success and adoption of digital products and systems

- HMI directly impacts how users interact with technology and can determine whether users find a technology accessible, intuitive, and valuable.

Outline

- Introduction to HMI

- History of HMI

HMI?

- HMI
  - **Human– Machine Interface**
  - **Human – Machine Interaction**

- Called also:
  - Human– Machine **Communication**
  - Human– Machine **Dialogue**
  - **Person** – Machine Interaction
  - Human – **Computer** Interface
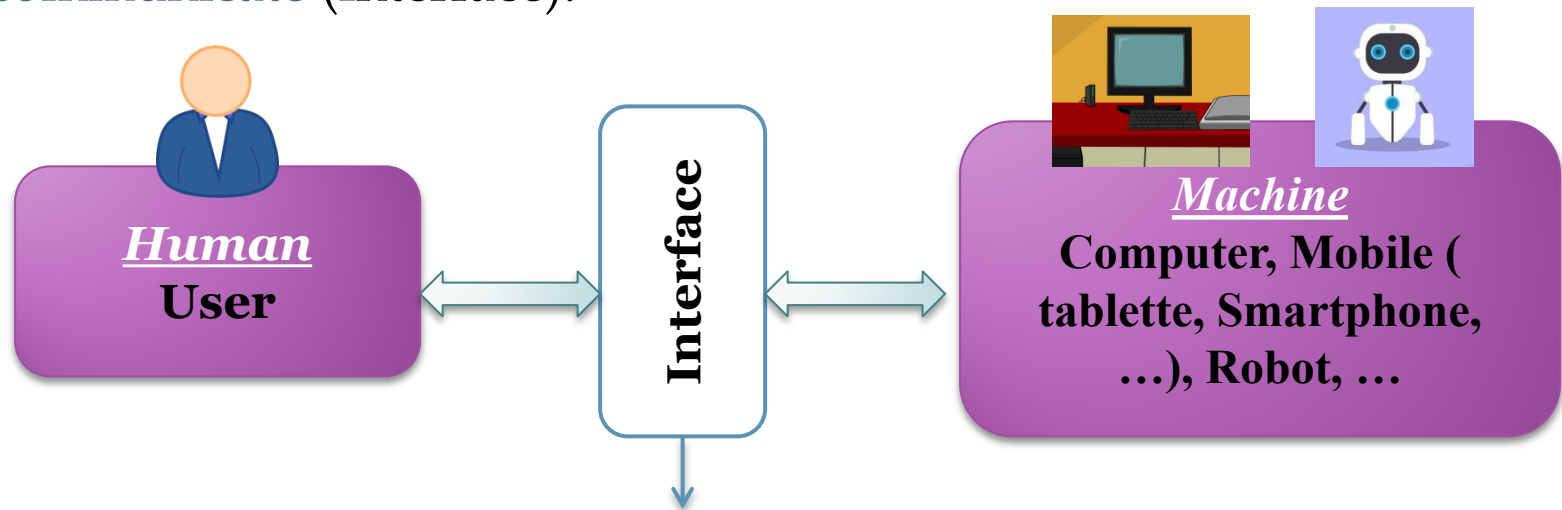
HMI -definitions

- **Human-Machine Interface :** A set of hardware and software devices (keyboard, mouse, touchscreen, software, web sites, screen ....) enabling a user to command, control and supervise an interactive digital system.

- **Interaction Homme-Machine** : Discipline devoted to the design, implementation and evaluation of interactive systems dedicated for human users, and to the study of the main phenomena that surround them.

HMI -definitions

- HMI (Human-Machine Interaction) is the study of all aspects related to the design, implementation, and evaluation of interactive systems to best meet user needs.

- **Design:** Creative aspects.
- **Implementation:** Technical aspects of realization (Programming).
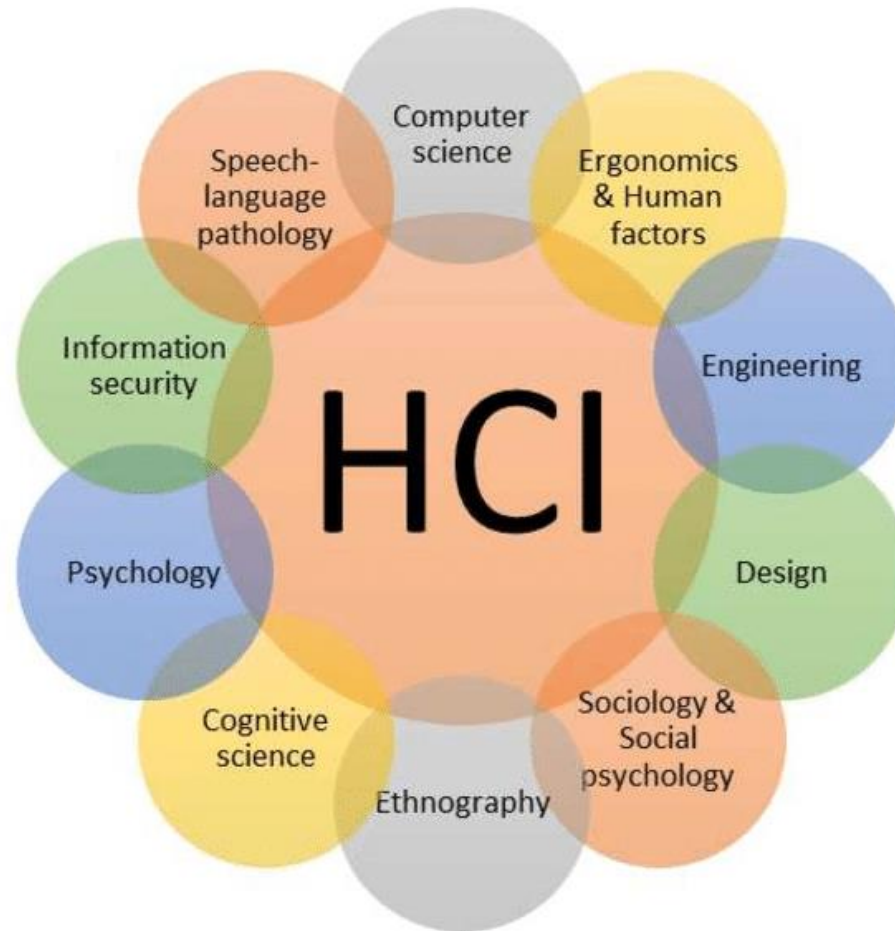- **Evaluation:** Aspects related to the validation of ergonomics (testing).

HMI -definitions

- There are three elements to consider in an HMI system: the user (Human), the interactive system (Machine) and the way they communicate (Interface).
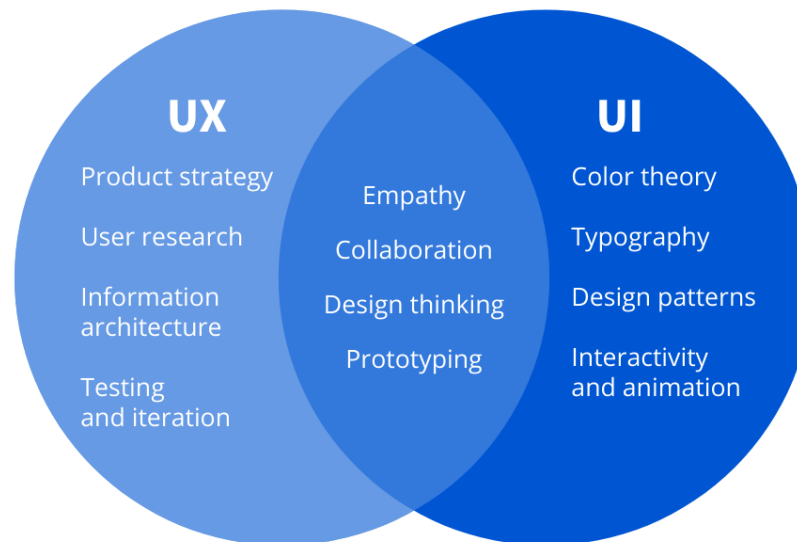

Human - Machine Interface: is used as a **language (way) of communication** between the two elements (H-M)

HMI –multidisciplinary field

UI design vs. UX design

➢ **Ergonomy** vs **design**

    ➢ Design : modes dependent

    ➢ Ergonomy : constant

➢ **User Interface (UI) design** /User eXperience (UX) design

Questions?