

MASTER DEGREE

# Internet of Things

## IoT Master Degree Presentation

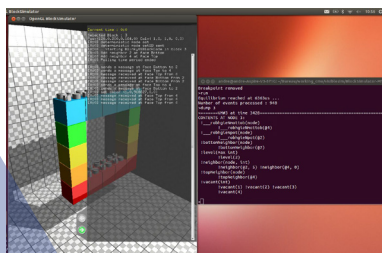
IoT is an EIPHI graduate school Master focusing on Research & Innovation in network of smart devices containing electronics, software or actuators and able to connect, interact and exchange data over the internet.

IoT Master contributes to structure a high-level international offer in computer science in North Bourgogne Franche-Comte. By focusing on the Internet of Things, the IoT master program will offer a whole set of courses aimed at training high-level specialists in embedded distributed computing, network technologies, big data, cloud computing, positioning techniques and development of mobile applications. The program also leaves an important place for complementary courses (management, entrepreneurship...) to prepare students for future careers in either industry or research laboratories.

The IoT master program is strongly supported by the FEMTO-ST Institute and by the CIAD Lab. Students will be immersed in the laboratory environment. The proposed Master's degree will also benefit from strong relationships with local and national industrial partners, relationships forged over many years.

## PROGRAM (Belfort-Montbéliard Campus)

Y E A R  1	Core Courses with Research Project 24 ECTS		Crossdisciplinary Courses 6 ECTS
	Core Courses with Research Project 18 ECTS	Soft Skills Courses 6 ECTS	Crossdisciplinary Courses 6 ECTS
Y E A R  2	Specialized Courses with Research Project 24 ECTS		Soft Skills Courses 6 ECTS
	Research Internship 30 ECTS		



### Core Course List: 42 ECTS

ADVANCED ALGORITHMIC MOBILE DEVELOPMENT  
DATA MINING  
INFRASTRUCTURE AND ROUTING FOR CONNECTED OBJECTS  
POSITIONING SYSTEMS: TECHNIQUES AND APPLICATIONS  
CLOUD INFRASTRUCTURE AND VIRTUALIZATION  
RESEARCH PROJECTS

### Cross-disciplinary Course List: 12 ECTS

EMBEDDED SYSTEMS  
RADIO NETWORKS...

### Specialized Course List: 24 ECTS

DEEP LEARNING FOR IOT  
MODULAR ROBOT PROGRAMMING  
AGENT-BASED MODELING AND SIMULATION FOR IOT  
PERCEPTION AND INTERACTIONS FOR IOT  
SECURITY FOR CONNECTED OBJECTS  
MOBILITY IN SMART CITIES  
ADVANCED RESEARCH PROJECTS

### Soft Skills Course List: 12 ECTS

FOREIGN LANGUAGE  
TEAM MANAGEMENT  
INNOVATION & ENTREPRENEURSHIP...

RESEARCH

**MOBILE NETWORKS, DISTRIBUTED SYSTEMS,  
EMBEDDED DEVICES, ARTIFICIAL INTELLIGENCE,  
SMART GRIDS ...**

## 2 RESEARCH DEPARTMENTS



FEMTO-ST DISC Dpt : Computer Science and Complex Systems



CIAD: Distributed Artificial Intelligence & Knowledge (EA 7533)

## 3 RESEARCH TEAMS

### AND

Digital simulation and grid computing  
Sensor networks, chaos and discrete dynamic systems  
Biocomputing

### OMNI

Operation research, Combinatorial Optimization, Mobility  
Modeling and Analysis, Wireless Networks, Mutliscale  
Mobile Networks, Programmable Matter

### CIAD

Artificial intelligence, multi-agent systems, representation and  
modeling of knowledge, semantic modeling, perception of the  
environment, optimization and bio-inspired algorithms, artificial  
learning

