

**inLab FIB UPC** is a research and innovation laboratory of the Barcelona School of Informatics at UPC, specialized in applications and services based on the latest **ICT technologies**.

**inLab FIB UPC** has over 30 years of experience collaborating in cutting edge projects, creating customized solutions for public and private institutions and organizations, and providing learning labs specialized in informatics engineering.

#### Our Mission

- To transfer knowledge to society through developing human talent and R&D&i multidisciplinary projects based on breakthrough ICT technologies, Simulation and Data Science.

The **Universitat Politècnica de Catalunya - Barcelona Tech (UPC)** specializes in the areas of architecture, science and engineering technologies.

The UPC is the leading university in Spain in volume of research and technology transfer to companies, and has become one of the major hubs of knowledge in Southern Europe.

The UPC is also a major player in European projects.

**inLab FIB**

**Campus Nord  
B6 Building (Floor -1)  
C/Jordi Girona, 1-3  
08034 Barcelona - Spain  
Tel. +34 93 401 69 41  
inlab@fib.upc.edu**

[inlab.fib.upc.edu](http://inlab.fib.upc.edu)



**UNIVERSITAT POLITÈCNICA  
DE CATALUNYA  
BARCELONATECH**



**TECHNOLOGY CENTER**

**UNIVERSITAT POLITÈCNICA  
DE CATALUNYA  
BARCELONATECH**

**inLab**  
talent & tech

**FIB**

# RESEARCH AND INNOVATION AREAS

## DATA SCIENCE AND BIG DATA

Smart data, methods and statistical techniques for analysing and processing data and their interoperability: data mining, advanced statistical analysis, measurement of intangibles, Open Data, integration, fusion and processing of large volumes of data, dashboards, Big Data architectures, data warehouse...



## MODELLING, SIMULATION AND OPTIMIZATION

Feasibility studies and/or improvements to systems and processes using modelling, simulation and optimization techniques applied to transport, manufacture, logistics, industrial processes or emergency systems. Social Simulation applied to demography, epidemiology, population dynamics, health or environmental systems. Modelling and simulation of energy efficiency in buildings and transport



## ICT ENVIRONMENTS AND SERVICES TO SUPPORT LEARNING

Learning analytics, smart learning environments, information systems for university management, computer labs and systems for measuring and analysing academic results.

## MOBILE SOLUTIONS

- Integration with wearables technology and IoT
- Mobile applications for geoservices based on OpenStreetMap
- Mobile Apps Learning Lab
- iOS, Android Apps development



## SMART MOBILITY

Public transport systems, traffic management, dynamic routing applications, traffic and mobility data processing

- New generation forecasting models for high quality traffic and travel information, short-term real-time predictions.
- Traffic data analytics: data filtering, completion and fusion, big data, interoperability, floating passenger data.
- New mobility concepts: ridesharing, demand-responsive transportation modes, connected cars.
- Multimodal journey planners, dynamic vehicle routing for fleets.
- Macro, meso and micro traffic simulation.



## SOFTWARE ENGINEERING

- Semantic integration
- Interoperability and integration of systems.

## CYBER SECURITY

Information security (audits, forensic analysis, monitoring of networks), development of systems for detecting malware and electronic fraud, security of applications, training and cyber security awareness

inLab FIB incorporates esCert



Granting and training system

# talent: program

Talent Training program using learning-by-doing and skills-oriented methodologies

Direct access to students:

the future developers, IT professionals and entrepreneurs

Sponsored by:



With the collaboration of:



Mentoring  
Internationalization  
Financial aid for students  
Monitoring and evaluation  
Recognition and accreditation  
Professional environment  
Bachelor Final Project or  
Masters Final Thesis  
Values acquisition