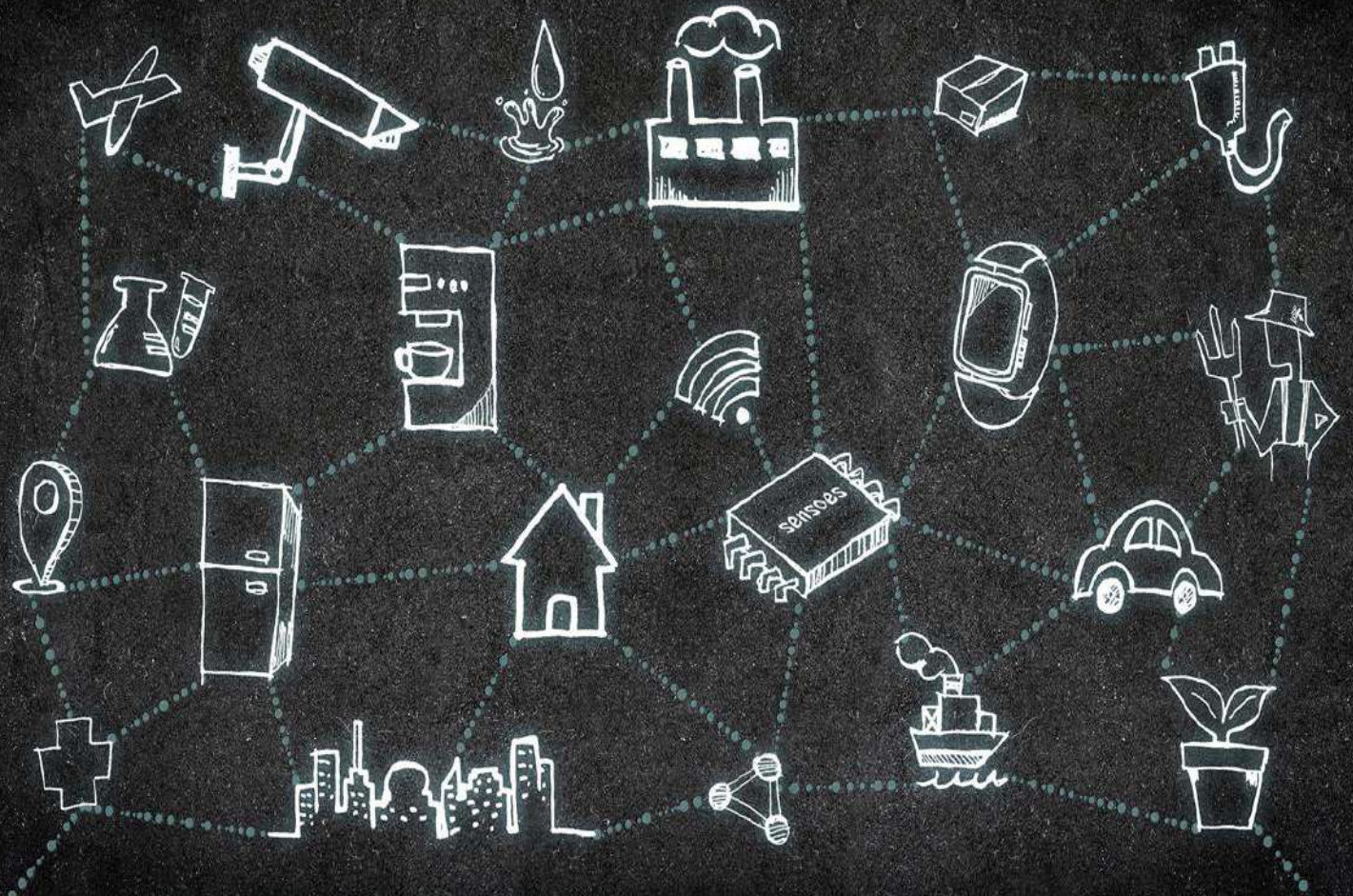


Software and Systems
Engineering
Research Group
SSE @ MU


**Mondragon
Unibertsitatea**
Faculty of
Engineering



We focus our research in different aspects of the development and operation of Software and Systems. We apply our knowledge in complex, highly configurable and distributed systems with real time constraints which need a multi-disciplinary approach and require interoperability in the development.

Research Areas

Design-Operation Continuum Methods

Automatic parameterization of highly configurable systems (online and offline).

Search-based algorithms to generate, select and prioritize test cases. Generation of oracles

Tool integration using OSLC standard. Traceability between different artefacts.

Continuous validation, integration, commissioning, operation and maintenance

Web engineering

Semantic Web technologies and data structures. Linked data from the perspective of open systems (Open source and Open data).

With this technology enriched structures could be provided to:

- Facilitate to search contents and services.
- Create intelligent agents for process automatization.
- Extract, process and store knowledge (Knowledge management).
- Integrate heterogeneous systems.
- Compose complex systems.
- Filter information
- Enable semantic processing by machines
- Standardize vocabularies

Remote monitoring and control

Design and Development of Distributed Control Systems with reliability and real-time requirements.

Models@Runtime: Generation of software components able to be monitored and adapted in model terms at runtime

Runtime/Remote Monitoring and Verification of software components of Distributed Control Systems.

IoT enabling software components: linking software controllers to IoT platforms



We apply our knowledge in IoT- enabled smart Cyber Physical Systems and platforms, which drive the innovation in the scope of Industry 4.0, health and smart cities.



2019

6 PhD
Students

8
doctors

10
European
Projects

18 industrial
projects

4
Engineers

1.000.000€
budget

15
publications
(2019)

Research and Industrial Projects

ARROWHEAD TOOLS

Develop smart solutions on Mobility, Energy saving and ICTs for the improvement of citizens' quality of life.

PRODUCTIVE 4.0

Electronics and ICT as enabler for digital industry and optimized supply chain management covering the entire product lifecycle.

DIMAND

Innovative Training Network (ITN) is an European Training Network (ETN) programme in the area of Industry 4.0

ADEPTNESS

Design-Operation Continuum Methods for Testing and Deployment under Unforeseen Conditions for Cyber-Physical Systems of Systems

Industrial Projects

- Technological advice & Training
- System analysis and Design
- Prototypes
- Reengineering and refactoring
- Methodology improvement & deployment



Dra Goiuria Sagardui



gsagardui@mondragon.edu



+34 943 794700



www.mondragon.edu/ingsw



Mondragon Unibertsitatea
Goiru 2
20500 Arrasate-Mondragon
Spain