

RESEARCH CENTER ON SOFTWARE TECHNOLOGIES AND MULTIMEDIA SYSTEMS FOR SUSTAINABILITY



CITSEM belongs to the Technical University of Madrid, its main activity is leveraging the basic software and multimedia technologies in a context of sustainability.

The CITSEM (<http://www.citsem.upm.es>) opened in December of 2011. It was boosted by three recognized research groups of the UPM: System & Software Technology Group (SYST), Electronic and Microelectronic Design Group (GDEM) and Next-Generation Networks and Services (GRYS) research group.

It has over 30 full-time researchers who play a relevant role in planning and promoting the R&D strategy, participating in national and international projects (ITEA, ARTEMIS, ESA/ESTEC and Framework Programmes of the European Union). The center aims to contribute to the academic development of graduate and PhD students.

CITSEM has a solid network of industrial partners.

The main activities of the Center are:

- Development of R&D projects.
- Elaboration of ICT studies, reports and consultancy.
- Collaboration with private companies and public institutions.
- Technology transfer and exchange of information and results.
- Training for Master's Degree and Doctorate students with two different paths, professional and research.

LIVING LABS:

- "Digital Home"
- "Smart Software Factory"
- "Interoperability for Energy Efficiency"
- "Multimedia Systems"



Contact

CITSEM
Universidad Politécnica de Madrid
Edificio La Arboleda - Campus Sur - UPM
Ctra. De Valencia Km 7
E-28031 Madrid - Spain
Tel.: +34 91 336 78 00

director.citsem@upm.es
secretaria.citsem@upm.es

www.citsem.upm.es



RESEARCH INTERESTS and PROVIDED BACKGROUND

RESEARCH CENTER
ON SOFTWARE
TECHNOLOGIES AND
MULTIMEDIA SYSTEMS
FOR SUSTAINABILITY



ITEMS OF SPECIAL INTEREST IN THE ICT INDUSTRIAL LEADERSHIP WORKPROGRAMME

ICT 1 - 2014	Embedded systems design. Power consumption optimization. Wireless Sensor Networks systems. Ad-hoc Networks systems.
ICT 2 - 2014	Power consumption optimization.
ICT 4 - 2015	Power consumption optimization. Software optimization for multi core architectures. Embedded systems design.
ICT 5 - 2015	Middleware architectures. Networking algorithms. Security services. Mobile agents.
ICT 6 - 2014	Software radio.
ICT 7 - 2014	Dynamic configuration. Automated provisioning and orchestration of cloud resources. Automated discovery and composition of services. Cloud security.
ICT 9 - 2014	Systems and services reliability, resilience and automatic adaptation. Tools and methods for incorporating integrity, robustness and reliability. Middleware architectures and tools for highly distributed applications. Software Systems Architecture and Autonomic Systems Architectures for Cyber physical Systems / Ultra-large Systems.
ICT 10 - 2014	Innovation in development process for Software Intensive Systems. Decision-making processes: ontologies. Networks of people, of things, of sensors.
ICT 11 - 2014	Experimentation-as-a-Service (EaaS). "Digital Home" living lab. Distributed Service Platforms. Autonomic Computing.
ICT 12 - 2014	Advanced Applications on top of Distributed Service Platforms.
ICT 15 - 2014	Big data technology. Innovation in Software Intensive Systems development.
ICT 16 - 2015	Predictions and rigorous progress monitoring and measurement. Data mining. Automatic services discovery.
ICT 18 - 2014	Learning in systems development.
ICT 19 - 2015	New emerging technologies for digital content creation: 3DTV, video coding, augmented reality, video and image, including graphic animation.
ICT 20 - 2015	Learning and teaching. Smart Software Factories as learning enablers.
ICT 21 - 2014	Games in non-leisure contexts. Gamification in agile development. Augmented reality.
ICT 22 - 2014	More "natural" communication with the system: visual part of human/machine interface, detection of movements, postures.
ICT 23 - 2014	Robotics abilities in each of the following areas: configurability, adaptability, interaction. Semantic middleware. Service orchestration. Sensor and actuators use.
ICT 29 - 2015	Embedded systems design. Power consumption optimization. Software optimization for multi core architectures. Control systems. Semantic middleware. Dynamic adaptation to the context. Experience at IoT applications.
ICT 31 -2014	End-to-end security. Context aware and self-adaptive security.
ICT 35 – 2014/15	Innovation in Systems development.

SOCIETAL CHALLENGES OF SPECIAL INTEREST

ENERGY, CLIMATE, TRANSPORT, SECURITY, HEALTH