

Empowering Romanian Research on Intelligent Information Technologies

Project in FP7-REGPOT-2010-1

Faculty of Automatic Control and Computers
University POLITEHNICA of Bucharest

Prof. Adina Magda Florea



About us

- Founded in 1818, **University POLITEHNICA of Bucharest** is the oldest and the largest technical university, amongst the most prestigious universities in Romania.
 - ▶ 24,000 students are studying at Bachelor, Master, and Ph.D. level
 - ▶ Houses 37 Research Centres
 - ▶ Comprises 15 faculties
 - ▶ Has co-operation agreements with 74 universities from Europe, America, Asia and Africa

Faculty of Automatic Control and Computers

- Offers undergraduate and graduate programmes in **Computer Science** and **Systems Engineering**

- **3300** Bachelor, Master and PhD students

<http://www.acs.pub.ro>

- **150** faculty members

- **3** Departments

- **3** Excellence Research

Centers: **NCIT**, **ACPC**, **CIMR**



Faculty of Automatic Control and Computers

- The **mission of A&C** is the **strategic combination** of **education**, **research** and **innovation**, which are keys to achieving a knowledge based society and economy
- **A&C last 5 years in figures**
 - ▶ More than 200 ISI papers
 - ▶ More than 100 R&D grants (national and international)
 - ▶ More than 100 international PC memberships
 - ▶ More than 50 PhD graduates (about 20% in joint coordination)

A&C Main research competencies in Computer Science

NCIT : National Center for Information Technology

- **Artificial intelligence and multi-agent systems**
- **Large scale distributed systems**
- **Grid computing**
- **Semantic and Social Web**
- **E-learning**
- **Pervasive computing**

A&C Main research competencies in Systems Engineering

APCC : Center of Automatics, Process Control and Computers

- **Intelligent control systems**
- **Optimization techniques**
- **System modeling and signal processing**

CIMR : Center for Research in Industrial Informatics, Materials Engineering and Robotics

- **Robotics and flexible manufacturing**
- **Artificial Vision systems**
- **Neural networks and fuzzy control in robotics**

ERRIC Project

Empowering Romanian Research on Intelligent Information Technologies

- Project number: **264207**
- Call (part) identifier: **FP7-REGPOT-2010-1**
- Funding scheme: **Coordination and support action**
- Area: **4.1.Unlocking and developing the Research Potential of research entities established in the EU's Convergence Regions and Outermost regions**
- Name of the coordinating person: Adina Magda Florea
- Project duration: **36 months**
- Start date: 1 September 2010
- Total cost: **2,994,404 Euro**
- EC contribution: **2,670,010 Euro**

ERRIC: Aim

- Leverage, support and further develop the existing high quality human and material resources of A&C with the goal of achieving international recognition for the Faculty as an outstanding unit of research excellence in selected areas of **Intelligent Information Technologies**:
 - ▶ **agreement technologies**
 - ▶ **semantic and collaborative technologies for the web**
 - ▶ **advanced grid technologies & large scale distributed system services**
 - ▶ **adaptive intelligent control**

ERRIC: Objectives

Strengthen Core Research Excellence

- Strengthen the research and technological innovation capacities of A&C in the above mentioned areas of IIT
 - ▶ produce more than **60 high quality scientific papers** on IIT
 - ▶ hire **6 experienced researchers** and an **experienced research manager**
 - ▶ develop a new **Laboratory of Ambient Intelligence**
 - ▶ **upgrade the HPC resources** to reach an estimated performance in benchmarking of 2 TFlops.

ERRIC: Objectives

Strengthen Core Research Excellence

- Reinforce the A&C research potential by supporting and mobilising human resources through **132 trans-national two-way secondments** with **11** partnering organizations from **5 EU** countries
- Establish an ambitious research agenda and the **Roadmap of A&C RTDI**
- Improve A&C's ability to respond to **ICT related socio-economic needs** in Romania and Europe

ERRIC: Objectives

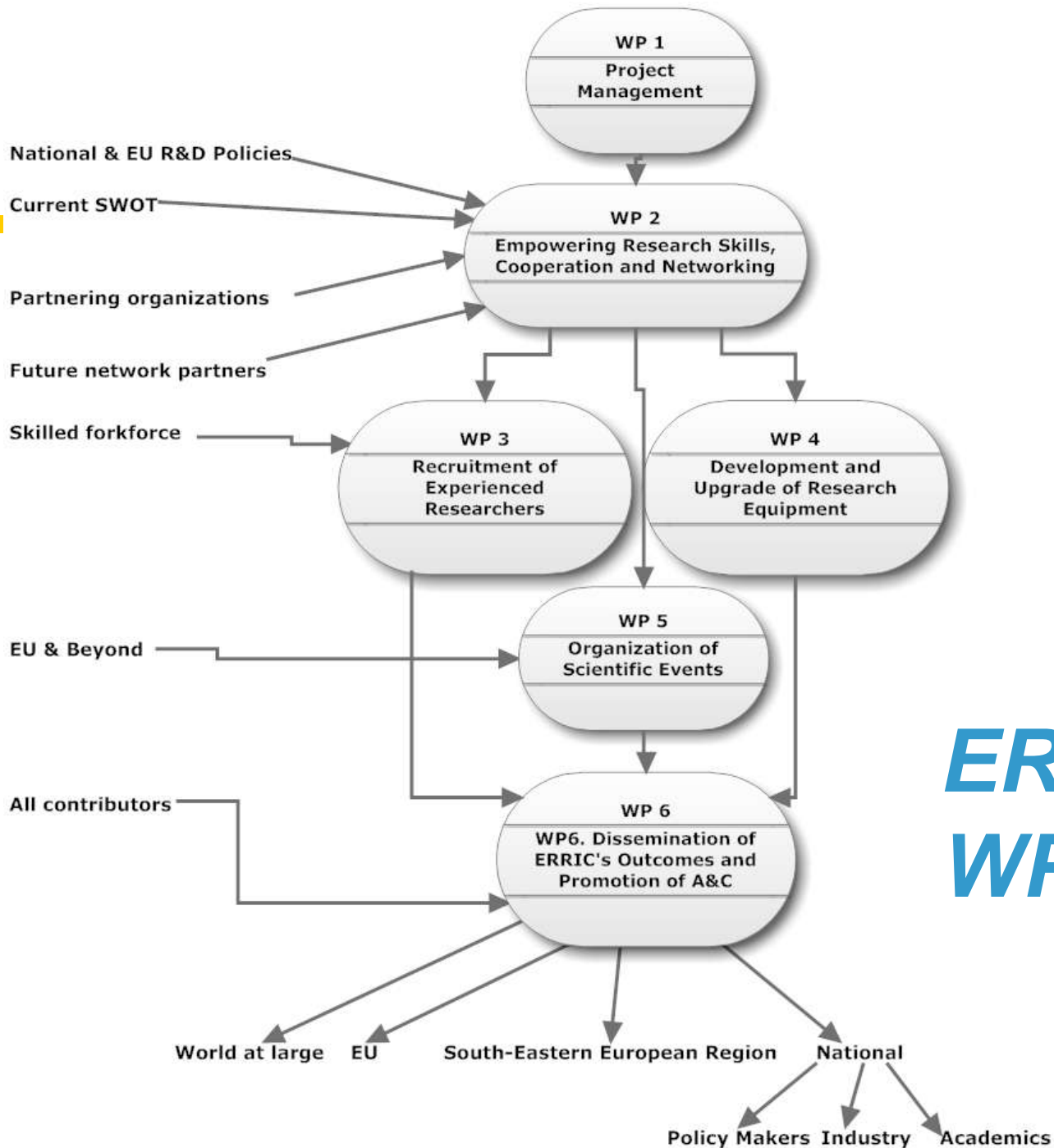
Networking, Community Building and Strategic Partnerships

- Make A&C an international gateway to access IIT research results through **ERRIC Knowledge E-Environment** and **ERRIC portal**.
- Establish **strategic partnerships** and wide-ranging collaborations between A&C and high excellence research units across the EU.
- Build the capacity of A&C for a better collaboration with **high tech companies** towards **valorisation of high potential research results**.

ERRIC: Objectives

Promotion, Visibility and Dissemination

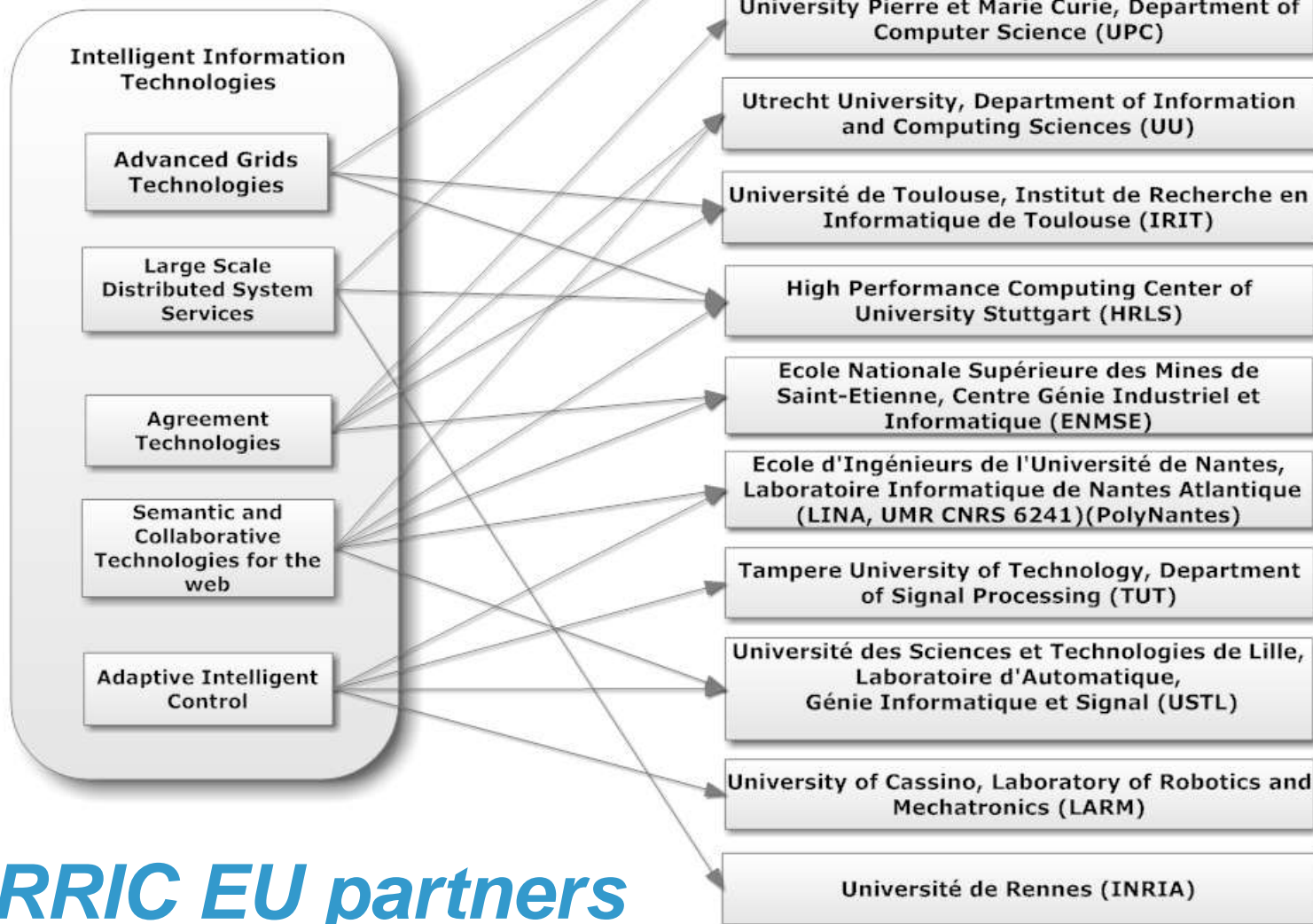
- Organize **18 quality scientific events** and **4 dissemination events** for knowledge sharing and network building
- **Promote A&C** scientific research excellence and increase its visibility at European level through the **dissemination, promotion and awareness plan and package**.



ERRIC WPs

ERRIC Areas of Research Excellence

EU Partnering Organisations of ERRIC

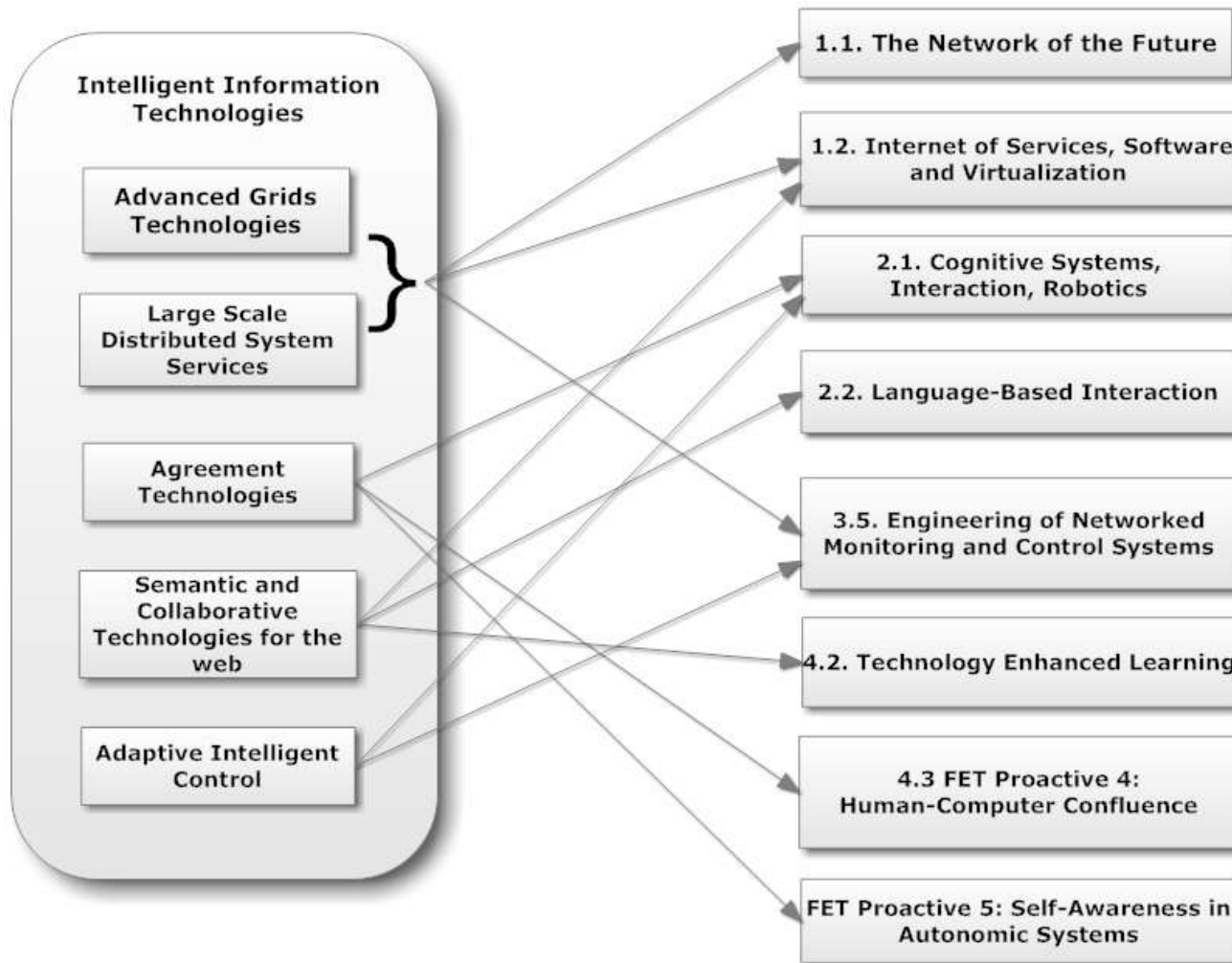


ERRIC EU partners

ERRIC areas of research in connection with FP7

A&C Competences

FP7 Challenges and Objectives



Challenges

- Find the best experienced researchers to be hired
- Ensure high quality and consistent participation to organized scientific events
- Enhance and enlarge networking with R&D entities in Romania and EU
- Build a strong international scientific community in IIT based on ERRIC outcomes and results
- Leverage the existing scientific and technical cooperation with well known companies working in the domain of ICT and advanced control, and achieve innovation and technological transfer

Sustainability

- A&C Innovation and Technological Transfer Office
- A&C Brokering Events
- Join scientific and professional networks
- Project proposals for national calls, e.g., structural funds, including transnational partners
- Join existing or future consortia in FP7
- Marie Curie Action Initial Training Networks (ITN)
- Marie Curie Action Industry-Academia Partnerships and Pathways (IAPP)
- Marie Curie Co-funding of regional, national and international programmes (COFUND)
- The South East Europe Transnational Cooperation Programme