

ACROSS project is implemented by the Faculty of Electrical Engineering and Computing of the University of Zagreb in cooperation with the following EU and Croatian partners:



- Kungliga Tekniska Högskolan, Stockholm • Sweden
 - Prof. Danica Kragić
- Albert-Ludwigs-Universität Freiburg • Germany
 - Prof. Wolfram Burgard
- Technische Universität Wien • Austria
 - Prof. Markus Vincze
- Technical University of Crete, Chania • Greece
 - Prof. Nikos Tsouveloudis
- IRISA/INRIA Rennes • France
 - Prof. François Chaumette
- DOK-ING Ltd., Zagreb • Croatia • Zoran Bošković
- Linköping University, Linköping • Sweden
 - Prof. Robert Forchheimer
- University of Manchester • United Kingdom
 - Prof. Anthony Peyton
- Tampere University of Technology • Finland
 - Prof. Atanas Gotchev
- Karlstad University • Sweden
 - Prof. Andreas J. Kassler
- Ericsson Nikola Tesla Inc. • Croatia
 - Dr. Darko Huljenić
- University of Seville • Spain
 - Prof. Eduardo F. Camacho
- Politecnico di Milano • Italy • Prof. Carlo L. Bottasso
- National Technical University of Athens • Greece
 - Prof. Nikos Hatzigiorgiou
- Politecnico di Bari • Italy • Prof. Marco Liserre
- KONČAR – Electrical Engineering Institute Inc.
 - Croatia • Dr. Mate Jelavić
- ETH Zürich • Switzerland • Prof. Manfred Morari
- Technische Universität München • Germany
 - Prof. Sandra Hirche
- Eindhoven University of Technology • Netherlands
 - Prof. Paul van den Bosch

ACROSS PROJECT TEAM

The ACROSS project team consists of twenty seven professors from seven UNIZG–FER's departments with required multi-disciplinary R&D expertises:

- **Department of Control and Computer Engineering**
 - Ivan Petrović, Nedjeljko Perić, Zdenko Kovačić, Stjepan Bogdan, Željko Ban, Mato Baotić and Mario Vašak
- **Department of Electronic Systems and Information Processing**
 - Sven Lončarić, Mladen Vučić, Vedran Bilas, Davor Petrinović, Damir Seršić, Igor Lacković and Marko Subašić
- **Department of Electronics, Microelectronics, Computer and Intelligent Systems**
 - Bojana Dalbelo Bašić, Zoran Kalafatić and Siniša Šegvić
- **Department of Telecommunications**
 - Maja Matijašević and Igor S. Pandžić
- **Department of Electric Machines, Drives and Automation**
 - Fetah Kolonić and Jadranko Matuško
- **Department of Power Systems**
 - Davor Škrlec, Zdenko Šimić, Igor Kuzle and Marko Delimar
- **Department of Electroacoustics**
 - Hrvoje Domitrović and Kristian Jambrošić

ACROSS PROJECT COORDINATOR

- **Professor Ivan Petrović**
University of Zagreb, Faculty of Electrical Engineering and Computing

address • ACROSS Office,
Unska 3, HR-10000 Zagreb, Croatia
phone/fax • +385 1 6129-542
e-mail • across@fer.hr
URL • <http://across.fer.unizg.hr>, <http://across.fer.hr>



Centre of Research Excellence
for Advanced Cooperative Systems

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ACROSS GLOBAL OBJECTIVE

The ACROSS project aims to unlock and strengthen research potential of the Faculty of Electrical Engineering and Computing at the University of Zagreb (UNIZG-FER) for the benefit of the national, as well as the regional and EU community with the global objective to create a **Centre of Research Excellence for Advanced Cooperative Systems** within UNIZG-FER.

The Centre will be at the forefront of research and development of novel methodologies and advanced engineering approaches for cooperative systems in general and will act as a point of contact between academia and industry, providing an infrastructure for scientific exchange in the area of cooperative systems related to robotics, networked embedded systems and renewable energy systems.

ACROSS SUB-OBJECTIVES

The ACROSS global objective is to be achieved by execution of the main sub-objectives:

- strengthening the research management potential;
- increasing the human potential;
- increasing the technology potential;
- developing the strategic partnerships with outstanding research centres in EU and leading Croatian industrial partners;
- increasing scientific visibility and international reputation;
- improving responses to socio-economic needs of Croatia;
- earning a certified recognition “**EU Centre of Research Excellence**”.

ACROSS FUNDING & DURATION

project budget • 3.755.660,00 €
EC contribution • 3.351.776,00 €
duration • 1.10.2011 – 31.03.2015

ACROSS WORK PLAN

The ACROSS work plan implements a coherent set of measures for execution of the project main sub-objectives:

- recruitment of a project manager;
- recruitment of 18 researchers;
- upgrading research equipment and establishing three new interdepartmental laboratories;
- exchange of know-how and experience with 16 leading EU centres and 3 Croatian industrial partners;
- organisation of workshops and conferences;
- intensive dissemination and promotional activities;
- ex-post evaluation of research potential by 4 independent experts chosen by the EC.

ACROSS STRATEGIC RESEARCH DOMAINS

The research activities of the Centre focus on four major strategic research domains:

- cooperative cognitive and robotic systems;
- cooperative networked embedded systems;
- cooperative renewable energy systems;
- cooperative control methods.

While the first three strategic research domains are application-oriented, the fourth strategic research domain is of paramount importance for advanced cooperative systems in general, as a fundamental enabling technology.

Possible applications of these advanced cooperative systems are numerous: advanced flexible manufacturing, renewable and sustainable energy, home and office automation, transport, logistics, environmental monitoring, healthcare, security and surveillance, human augmentation etc.

ACROSS EXPECTED IMPACTS

It is expected that the project will reinforce UNIZG-FER RTD potential, mobilise its human and material resources, develop partnership with outstanding EU research entities and local industry, disseminate and promote research results and raise awareness among various stakeholders in the area of cooperative systems.

More specifically, the expected impacts of the ACROSS project are:

- **better integration of the UNIZG-FER in the European Research Area.** Strategic partnership will be built by utilising strong expertise of the EU experts and partnering research organisations involved in ACROSS through intensive exchange of know-how.
- **increased RTD capacity and capability as well as the quality of research carried out at the UNIZG-FER.** The RTD capacity and capability as well as the overall quality of research will be significantly upgraded by:
 - reinforcing human potential and research infrastructure,
 - improving research management and
 - unifying the RTD activities at UNIZG-FER in the domains relevant for ACROSS.
- **increased contribution to Croatian economic and social development.** ACROSS will have strong impact on Croatian economic and social development by offering information and services to all interested stakeholders (R&D groups, end-user community, large industry and SMEs, governmental bodies) and general public.
- **improvement of participation of the UNIZG-FER in EU-level projects.** ACROSS will create a stimulating environment for all involved entities from the EU and Croatia for future multilateral collaboration at EU level.