**Project overview**

CROSSFIRE stands for "uncoordinated network StrategieS for enhanced interFerence, mobiIity, radio Resource, and Energy saving management" in Long-Term Evolution-Advanced (LTE-A) networks and it is a Multi-Partner Initial Training Network (MITN) Marie Curie project.

The aim of the CROSSFIRE project is to provide forward-looking solutions for LTE-A network co-existence including aspects ranging from the physical layer such as co-channel interference and cognition to the user perception of the service, i.e., Quality of Experience (QoE).

The project will analyze and propose network virtualization solutions for LTE-A networks, a technology which is envisioned to transform operation of cellular networks in the years to come. The project will approach the emerging LTE-A networks which will be populated by uncoordinated and vast number of small cells from an architectural and a component level perspective.

The work plan of CROSSFIRE is divided in four parts: Research (WP1-WP4), Training (WP5), Management (WP6) and Dissemination & Outreach Activities (WP7).

**Project’s partners**

The consortium is formed by 3 Universities, 1 Research Center and 4 Private Companies, distributed in 6 countries of the EU:

1. **University of Athens - UoA**
   Greece

2. **Kings College London - KCL**
   UK

3. **Open University of Catalonia (UOC)**
   Spain

4. **Centre National de la Recherche Scientifique - CNRS**
   France

5. **NEC Europe**
   Germany

6. **Iquadrat (IQU)**
   Spain

7. **Steinwurf**
   Denmark

8. **Vodafone Group R&D**
   UK
Recruitment of ESRs

The CROSSFIRE network's goal is to recruit talented Early Stage Researchers (ESRs) to conduct world-leading research and to offer them advanced training, mentoring and personalized career planning.

The following ESRs have been recruited so far (more ESRs in upcoming newsletters):

**ESRs in UoA:**

**Salvatore Costanzo**
received his B.Sc. in "Telematics Engineering" and his M.Sc. in "Telecommunications Engineering" both from the University of Catania. He worked at the same University as a developer of network protocols for WPANs within various European and Italian projects (CRUISE, NEWCOM++, SENTINELLA). He is currently an ESR within the CROSSFIRE project and a PhD Candidate at the Department of Informatics and Telecommunications of the University of Athens. His research interests focus on analysis and solutions for wireless networks, with a particular emphasis on network virtualization and software-defined network architectures.

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scostanzo@di.uoa.gr

**Eirini Liotou**
received the Diploma in Electrical & Computer Engineering from the National Technical University of Athens and the MSc in Communications & Signal Processing from the Imperial College of London. She has work experience as a Software Engineer in Siemens AG, where she worked in the R&D department for the SME business sector. Currently, she is an ESR in the Green, Adaptive and Intelligent Networking Group in the University of Athens, pursuing in parallel her PhD in the area of Quality of Experience (QoE) in LTE-A heterogeneous networks. She speaks Greek, English, German and Spanish.

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**ESR in UOC:**

**Georgia Tseliou**
was born in Greece in 1989. She obtained her five-year diploma (MSc equivalent) in Computer Engineering and Informatics Department, University of Patras in July 2012. Furthermore she has worked as a Researcher and Developer Computer Engineer at Computer Technology Institute and Press "Diophantus" (CTI), Patras, Greece from May 2010 until December 2012. Currently she is a Marie Curie Early Stage Researcher at Open University of Catalonia (UOC). Her research interests include network virtualization techniques and radio resource management in LTE-A environments.

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gtseliou@uoc.edu

**ESRs in CNRS:**

**Wei Lu**
was born in Shanghai, China, in 1988. He obtained his Bachelor's degree in Communication Science and Engineering from Fudan University, China, in 2011. He received the M.Sc degree with distinction in Signal Processing and Communications from the University of Edinburgh, United Kingdom, in 2012. Currently, Wei is a Marie-Curie Early-Stage-Researcher pursuing his Ph.D. degree at the Laboratory of Signals and Systems, the University of Paris-Sud, France. His research interests are focused on wireless communication and network interferences.

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**Peng Guan**
studied Communications Engineering and Finance at the University of Electronic Science and Technology of China from 2005, and graduated with double bachelor degrees in 2009. He received his M.Sc. Degree on Electrical Engineering from Technische Universität Delft, Netherlands in 2011. From 2011-2012 he was with the Vodafone Chair, Technische Universität Dresden, Germany. In January 2013 he joined the Laboratoire des signaux et systèmes (L2S) in Centre national de la recherche scientifique (CNRS) as an ESR working on interference in cellular networks.

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**ESR in IQU:**

**Giorgos Kollias**
was born in Athens, Greece, in 1987. He received his B.Sc degree in Computer Science in 2010 and his M.Sc degree in Communications Systems and Networks in 2013 at the Department of Informatics and Telecommunications, University of Athens. At the moment he is a Marie Curie Early Stage Researcher at Iquadrat Informatica, Barcelona-Spain. His current research interests include SON (Self Organizing Networks) techniques, Radio Resource Management and Cognitive radios in LTE-A.

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pkollias@iquadrat.com
Kick-off meeting

The kick-off meeting of the Marie Curie Initial Training Network CROSSFIRE took place in Athens, November 1-2, 2012. All involved partners coordinated towards the recruitment process and organizational issues.

On the left, a picture of the participants.

From left to right:

Up: Dimitris Tsolkas (UoA), Vasilis Friderikos (KCL), Christos Verikoukis (CTTC, invited), Trevor Gill (Vodafone), Lazaros Merakos (UoA), Marco di Renzo (CNRS), Ferran Adelantado (UOC)

Down: Dionysis Xenakis (UoA), Janus Heide (Steinwurf), Nikos Passas (UoA)

Latest news

Ferran Adelantado (UOC) took part in the 7th meeting of COST Action IC0905 TERRA, held in the University of Macedonia, Thessaloniki, Greece on the 19th of April 2013. Ferran presented the Crossfire project to the audience, as part of the COST-TERRA session “Introducing new projects and partners” (picture on the left).

Also UOC participated in the 3rd ETSI Future Networks Technologies Workshop, at Sophia Antipolis (France) from 9-11 April 2013. This workshop was dedicated to Network Functions Virtualization (NFV) and Software Driven Networks (SDN), presenting emerging approaches and technical solutions with a focus on standardization opportunities for Future Networks.

Publications


Open Days

CNRS attended an open day at the University Paris-Sud on 18th January 2013. It was the 4th CSIS meeting whose aim is to bring together researchers and professors. There were around a hundred participants who friendly exchanged their ideas and research findings in different subjects.

Specifically, CNRS visited the research teams of three laboratories: FAST (Fluides, Automatique et Systèmes Thermiques), LIMSI (Laboratory for Mechanics and Engineering Sciences) and LRI (Laboratoire de Recherche en Informatique) in the morning. After the generous lunch, CNRS partner presented its poster, which thoroughly introduced the CROSSFIRE project to researchers, teachers and some Master students and also replied to questions about the project. This presentation drew extensive attention and caused strong interest of the participants.

The link of the website is http://jpo4csis.limsi.fr/

On 17th April 2013, another Open Day activity, 5th CSIS (Collège de Sciences de l'Ingénierie et des Systèmes) was organized at University Paris-Sud.

Three laboratories: IEF (Institut d'Electronique Fondamentale), IR4M (laboratoire d’Imagerie par Résonance Magnétique Médicale et Multi-Modalités) and LPGP (Laboratoire de Physique des Gaz et des Plasmas) introduced themselves in the opening hour and welcomed the visitors and event attendees. Next to the lab visit, poster session and social events were held for researchers to present their projects and exchange ideas. It was a good opportunity for different research teams to know each other and build connections.

For more information, please visit http://csissaclay.wordpress.com/rencontres/5eme-rencontre-du-csis/
Upcoming events – Save the dates!

The Crossfire plenary meeting together with two training seminars will be organized at Supélec premises in Paris on the first week of July: 2/7/13-5/7/13.

During this meeting, the ESRs will have the opportunity to present their current research status and future planning. There will also be an invited talk by Claudio Cicconetti on “The Road towards Wireless Dense & Heterogeneous Networks: The CROWD Perspective”.

The two seminars will be on the following topics:
- Recent advances in mobile communications
- Network Virtualization for LTE-A networks.

The final program will be available soon.

Crossfire in social media

Crossfire is present in:

- So please follow us @mitncrossfire and join “CROSSFIRE” group in Linkedin to keep up to date with the project progress!