Join-MED at the ICT 2010

Meeting ICT Researchers from the Mediterranean Partner Countries

Priorities

Policies

People

Establishing the EU-Mediterranean
ICT Research Network

Framework Programme 7

Information and Communication Technologies

Co-operation with the Mediterranean Partner Countries

Priorities, Policies and People

September 2010

Project Join-MED: Establishing the EU-Mediterranean ICT Research Network

The partners of this project are:

Planet S.A., Greece (coordinator) • IT Consult GmbH, Germany • Ministry of Communications & Information Technologies, Egypt • University Mohammed V - ENSIAS, Morocco • Institut Supérieur de Gestion et de Planification, Algeria • Centre National de l'Informatique, Tunisia • Royal Scientific Society, Jordan • Palestine Academy of Science and Technology, Palestine • Conseil National de la Recherche Scientifique - CNRS, Lebanon • Higher Institute for Applied Sciences and Technology - HIAST, Syria

The research leading to these results has received funding from the European Community's Seventh Framework Programme (FP7) under grant agreement 231550

Introduction

Within the International Cooperation scheme of the FP7 Programme the Mediterranean Partner Countries (MPC)[1] play an important role.

The Mediterranean Partnership was initiated at the Barcelona Conference in 1995 where the Foreign Ministers of all EU and all South Mediterranean Countries met and agreed to establish a comprehensive partnership among the participants - the Euro-Mediterranean partnership. Its emphasis is on strengthened political dialogue on a regular basis, the development of economic and financial co-operation and greater emphasis on the social, cultural and human dimension.

However, interest in the Mediterranean Partnership diminished over the years until it was revived recently through a new initiative, the Union for the Mediterranean.

Within this context of the EU-Med Partnership, the Framework Programme for Research and Development has funded Support Projects in the ICT sector to prepare the ground for a closer cooperation in R&D in the ICT field between the two regions.

One of these projects is Join-MED, the follow-up of the FP6 project MED-IST: the "Mediterranean Information Society". During 2007 and 2008 MED-IST carried out a detailed investigation to obtain a clearer picture of the ICT R&D landscape in the MPC, which has made significant advances over the recent years, but often unnoticed by the European research and IT community. Even more important for future collaboration in joint R&D activities, was to identify the ICT R&D priorities that leading research institutes in the MPC see for the future. The results of these activities are summarised in the first chapter of this report, while the full report on the MPC priorities is available on-line[2].

Based on these findings, the Join-MED project focused on two main objectives, firstly to bring researchers from both regions together through an ICT Research Network and, secondly, to identify research policies in the MPCs and to develop policy recommendations for enhanced EU-MPC R&D collaboration in the field of ICT. The second chapter of this report gives an overview of the research policies in the MPC; a detailed policy paper will be published in October 2010.

The main part of this report deals with the Networking aspect and it specifically targets the FP7 ICT 2010 Conference in Brussels. At this conference Join-Med is organising a Networking Session to promote the ICT Research Network to European researchers and the best way of doing that is to bring high level researchers from the MPC to present themselves and their organisations. Despite all the social networks on the Internet and the various partner search facilities that exist, personal contacts are still indispensable for establishing new project consortia. As an aide-mémoire the main chapter of this report lists all the researchers coming to this event.

The Join-MED consortium would like to express their thanks to two other European projects for the active support for this event through the travel support for a number of researchers:

- The INCO-Net project MIRA ("Fostering the European Union-Mediterranean Partner Countries (EU-MPC) Innovation and Science & Technology Communities of Practice") also addresses the entire MPC region, covering several Thematic Areas of FP7.
- The EuropeAid SRTD project that aims at increasing Jordan's scientific and technological capacity by fostering research and innovation linked to private sector and by accelerating Jordan's integration into the European Research Area.

[1] MPC is the term used by the EC within the Framework Programme and stands for Mediterranean Partner Countries, encompassing Morocco, Algeria, Libya, Tunisia, Egypt, Jordan, Lebanon, Palestine and Syria. All countries except Libya are represented in the Join-MED project

[2] http://www.join-med.eu/Reports/MED-IST_Report_1_TheMPCPriorities_V1.3.pdf

Contents

1 - Priorities

1.1 Introduction

During 2007 and 2008 the MED-IST project (predecessor project of Join-MED) had organised a series of 'consultation meetings' in most of the MPCs[3] to establish an overview of the current ICT capacities in each country and the ICT priorities for research and development for the future. On the basis of a scoping questionnaire and extensive discussions more than 250 ICT experts and stakeholders presented their views.

The results described in this chapter are based on the questions on the 'Current ICT research landscape' and on defining the 'ICT Research Priorities over the next five years'. The purpose of the first question was to get a qualitative overview of the current 'capabilities' in each country, based on the knowledge and experience of the experts. Concerning the question on research priorities, we wanted to identify the importance of an identified priority for a country and at the same time find out how feasibly it would be to implement it. Instead of asking directly we used five criteria (Research & Technological Opportunities, Economic Impact, Social Impact, Research & Technology Potential, and Application Potential) that were then clustered into the two target parameters - "importance" and "feasibility". In the following analysis where we compare not only the countries with each other but also show the difference between the existing capabilities and the envisaged priorities for the future, we used only the 'importance' parameter. It had turned out that the scores for the two dimensions were almost identical. Whenever a topic was seen to have high benefits (economic and social impact, leading to a high 'importance' value) it was also considered to have high 'Research & Technology Potential' and 'Application Potential', leading to an equally high 'feasibility' value.

In the following we use 'spider charts' for the graphical presentation of the priorities. The scale is relative and varies depending on the distribution of the 'importance' of each challenge per country, with the total of all challenges always being 100%.

1.2 The View across the Region

This section provides an overview of the *importance* of the identified priorities of each country as well as a summary across the region. It also compares the survey results of 'existing Research and Development capabilities' with the identified priorities for the future. It finally compares these priorities that were nominated by a selected group of high level stakeholders, with the FP7 interests declared by the members of the MPC Directory, representing a much wider group of ICT related researchers and developers across the region.

[3] The countries that participated in the consultation process were Morocco, Algeria, Tunisia, Egypt, Jordan, Palestine and Lebanon.

The summaries and comparisons were made on the 'Challenges' level only, i.e.:

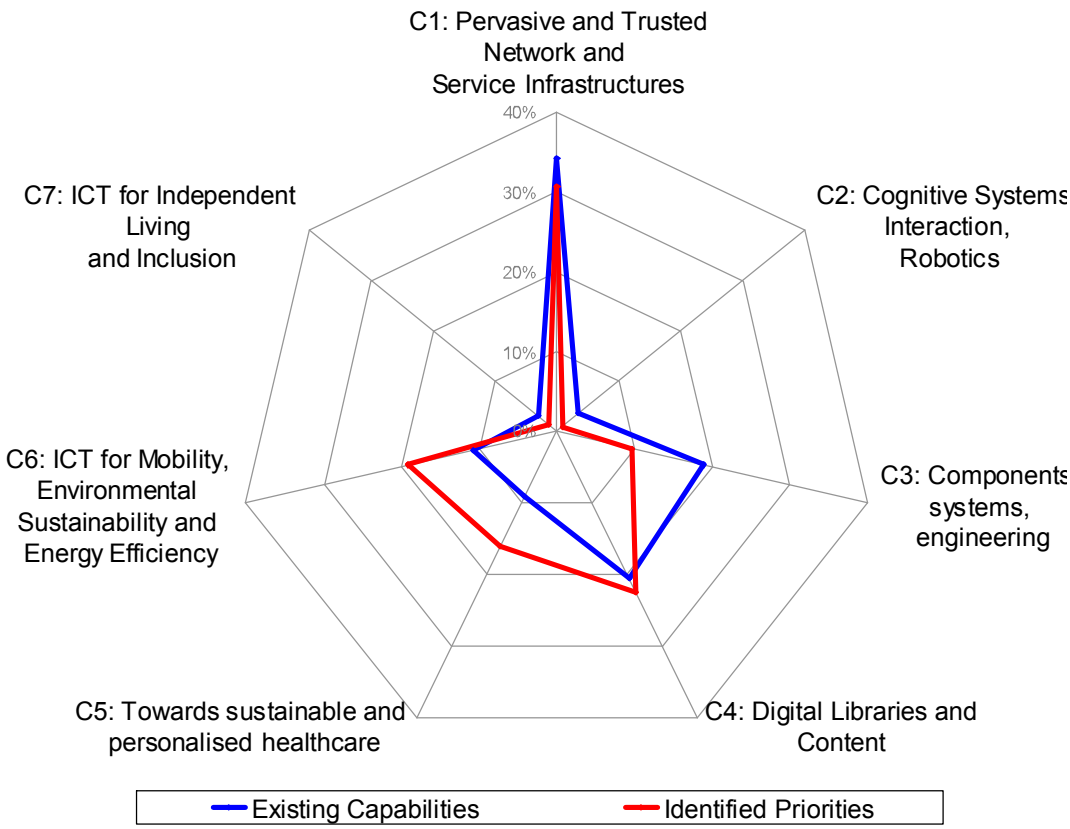
- Challenge 1: Pervasive and Trusted Network and Service Infrastructures
- Challenge 2: Cognitive Systems, Interaction, Robotics
- Challenge 3: Components, systems, engineering
- Challenge 4: Digital Libraries and Content
- Challenge 5: Towards sustainable and personalised healthcare
- Challenge 6: ICT for Mobility, Environmental Sustainability and Energy Efficiency
- Challenge 7: ICT for Independent Living and Inclusion

1.2.1 Identified Research and Development Priorities: Summary

The identification of priorities for future R&D in the MPC is based on two criteria:

1. The R&D capabilities of the countries as the most important one, since these existing capabilities will qualify organisations as promising partners in collaborative EU projects.
2. The expected needs of the countries play a role when defining priorities for the future, but should do this to a much lesser extent than their capabilities. It is not the role or task of FP7 to support building up entirely new Research and Development directions in the country, this falls under the responsibility of the countries themselves or under specific aid programmes.

The following graph shows the summary of identified Research and Development Priorities for all countries:

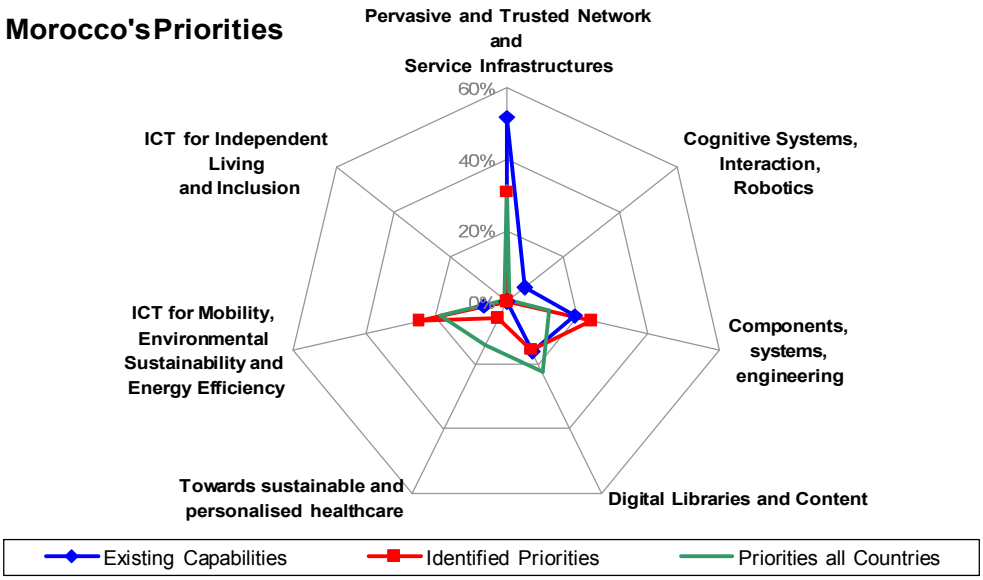


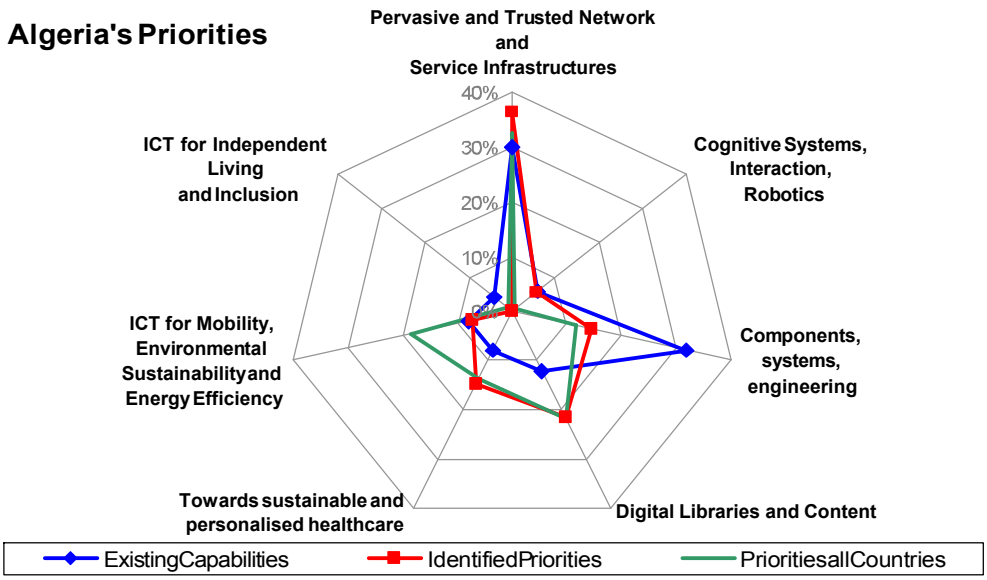
Globally, there is a clear preference for Challenge 1 both in terms of the countries' existing capabilities and future priorities, followed by Challenges 4, 6, 5 and to a lesser degree C3. Challenges 2 and 7 do not play a major role when looking at the entire region.

1.2.2 Identified Research and Development Priorities: The view of the countries

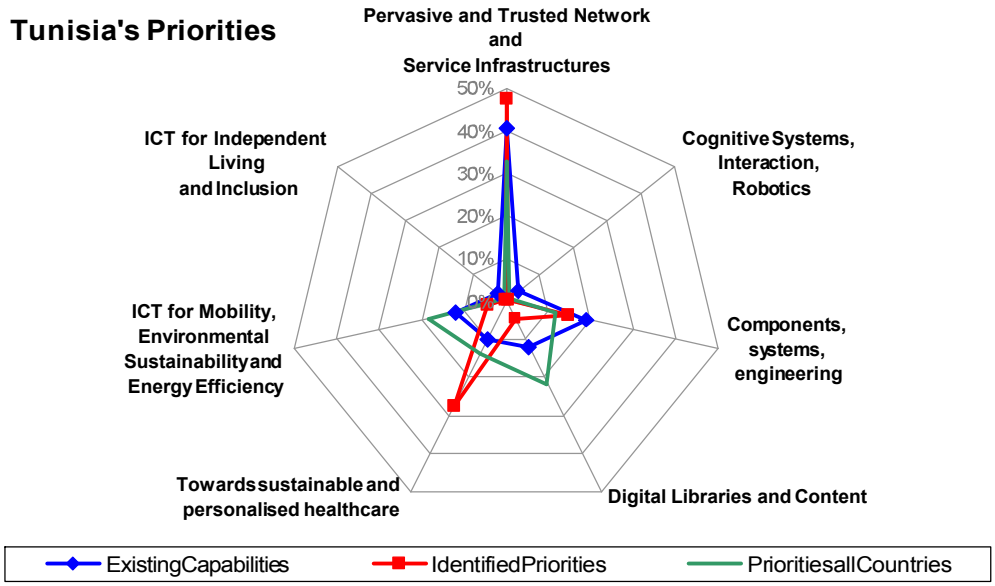
The following charts present the views of each country in terms of the importance of the FP7 ITC Challenges for their identified future R&D Priorities, along with their existing capabilities in each Challenge.

In order to better compare each country with the entire region, the summarised priorities of all countries are also given.

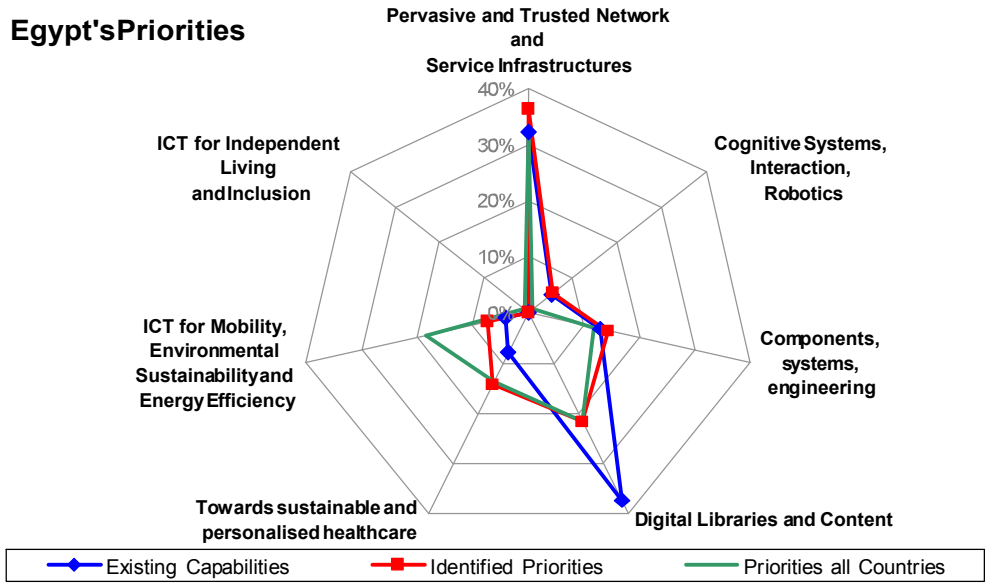




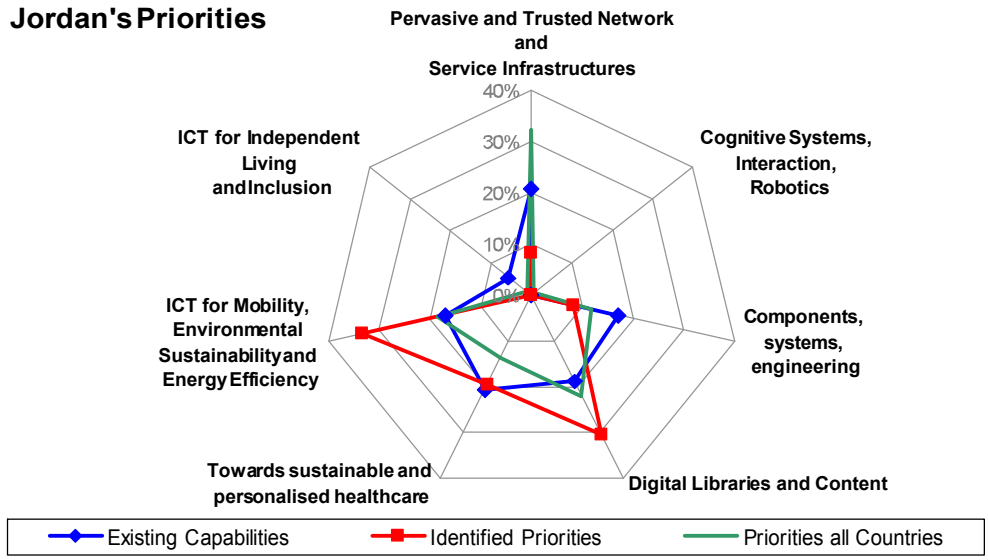
Tunisia's Priorities



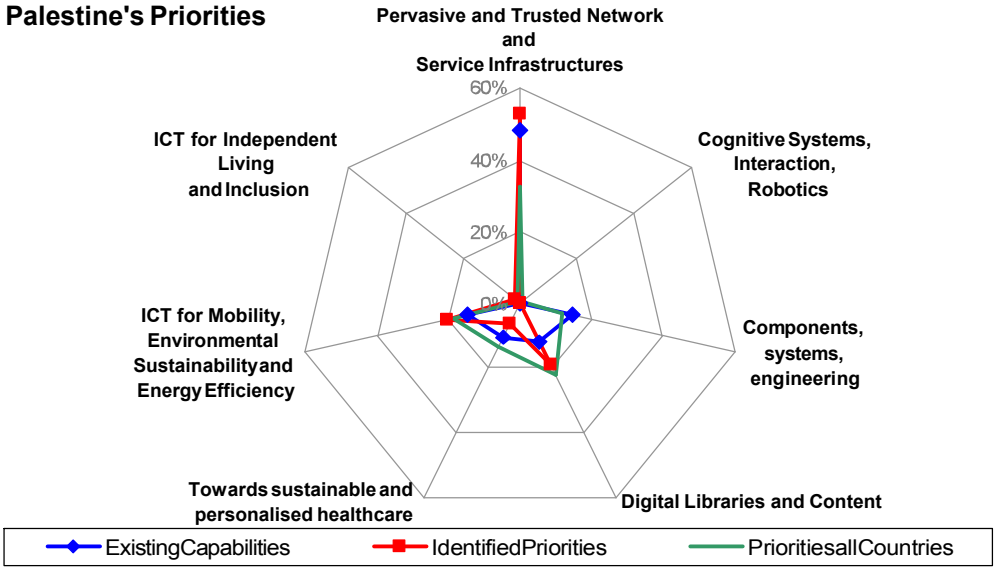
Egypt'sPriorities



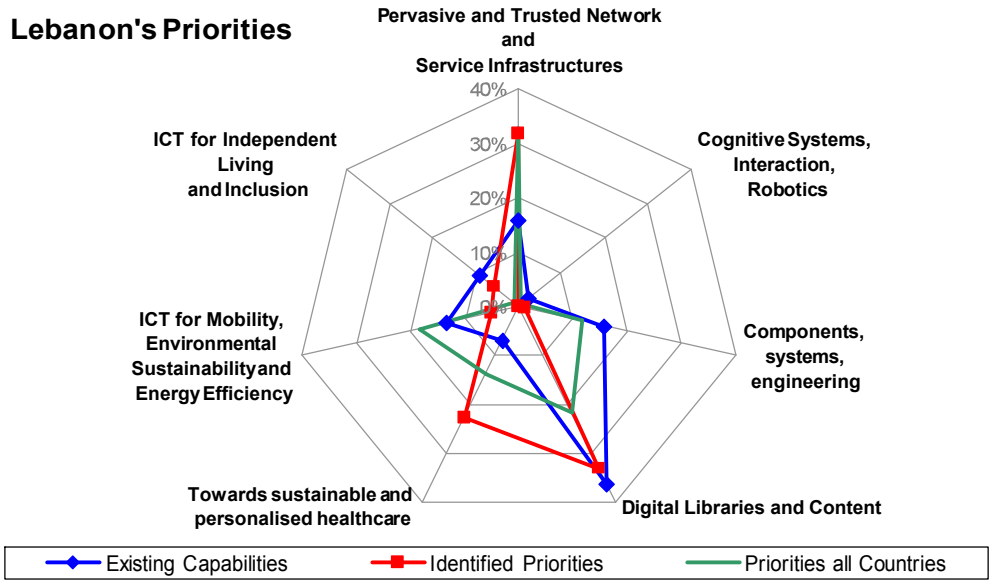
Jordan's Priorities



Palestine's Priorities



Lebanon's Priorities



2 - Policies

2.1 Introduction

Policies to foster and guide research and development play an important role for the development of a country, for its ability to become or remain competitive, for making full use of its innovation potential and hence successfully meet the challenges of a globalised world. In this sense research policies have a much wider impact than just to strengthen the academic world; they directly affect the socio-economic development. Research policies also have to take into account the necessity of co-operation across nations that in a sense has become a crucial survival factor in our globalised world. Europe with its Framework Programme for Research and Development (FP) is an excellent example for moving from national policies to a joint European one. The FP represents the pan-European research policy and at the same time provides the implementation mechanisms. Such a move is not yet visible in the MPC region.

However, both research co-operation with Europe as well as the topic of ICT has become an integral part of the ongoing development of research policies in all MPC. Already four countries (Egypt, Morocco, Tunisia, and Jordan) have signed a Science and Technology Co-operation Agreement with the EU and other countries from the region will follow. Under this agreement legal entities from the MPC can participate in the EU Framework Programme under the same conditions as European entities. Consequently, there is pressing need for the MPC to focus their own research strategies towards a closer co-operation with Europe and to learn more about the concrete Framework opportunities and procedures in the field of ICT.

It is worthwhile to observe that the need for a regional ICT strategy was already recognised some years ago, however, results are still sparse:

> *"The most important reason to justify the adoption of an Arab ICT strategy should not be assessed on the basis of profitability, which is certainly great, but should be calculated on the basis of loss likely to be incurred if such a strategy is not implemented." WSIS, Cairo, 2003*

At the Second Euro-Mediterranean Ministerial Conference on the Information Society in Cairo in February 2008 the Ministers stressed the necessity for greater participation of researchers and experts of the MPC in European R&D and asked for new ways and facilities for exchange and collaboration.

In order to achieve an effective cooperation, national policies need to be balanced among the MPCs. The countries will have different priorities in certain areas and overlap in others, but these policies should be complementary to be mutually beneficial for all countries. To support this, the Join-MED project has initiated an open dialogue among MPC policy makers and has developed harmonised policy recommendations for enhanced EU-MPC R&D co-operation in the field of ICT.

2.2 Analysis of the ICT R&D policy Environment in the MPC

The analysis in this section is based on the review of national policies and strategies in the MPC as well as existing EU-MPC and intra-MPC regional policy initiatives. A total of thirteen relevant documents on the national level were identified in the participating 8 MPC countries.

The analysis of national ICT policies and strategies reviewed was performed vis a vis two overall parameters:

1. the extent to which national policies/strategies effectively support R&D in the field of ICT within the countries (i.e. availability of implementation mechanisms, dedicated funds, priority setting)
2. the extent to which these policies/strategies promote R&D collaboration in the field of ICT with other countries (bilaterally and multilaterally).

The main findings that can be derived from the analysis of national policies/strategies are as follows:

- The majority of Mediterranean Partner Countries do not have *dedicated*[4] policies/strategies for research and development specifically in the field of ICT.
- At a policy/strategy level the most relevant documents focus on the development of the ICT sector and the promotion of ICT education.
- There are a number common national ICT priorities identified in the national policies and strategies reviewed. The following seven priorities are shared by at least five out of the 8 countries addressed:
  - Digital Content (Arabic content) - shared by 7 countries
  - Internet, Broadband and Mobile Technologies - shared by 7 countries
  - ICTs for Learning / Education
  - ICTs for Government
  - ICTs for Enterprises
  - ICTs for All (refers to the provision of universal, easy and affordable access to PCs and internet for all citizens and accessibly of all social groups to information and knowledge through the internet)

Overall the following observations were made from the documents reviewed:

- ICT priorities are defined in "technical detail" with R&D objectives in Morocco, Syria and in Tunisia for some priorities. In the remaining countries there is no detailed description of objectives (due to the more generic scope of the documents)
- In all documents except Algeria, there are foreseen institutional/legislative mechanisms for the promotion of R&D in the field of ICT. The predominant mechanisms are support for incubation projects, establishment of research centres of excellence, establishment of national R&D committees.
- With the exception of Palestine, all documents foresee a national funding mechanism for R&D activities in the field of ICT (however note that this does necessarily mean that they are implemented in practice).
- The policy documents of Jordan, Morocco, Palestine, Syria and Tunisia foresee specific measures/incentives for academia-industry partnerships for joint R&D activities in ICT.
- The "weakest point" of the examined policy documents is the lack of specific measures / incentives supporting international R&D collaboration in the field of ICT. Although international collaboration is a strategic objective mentioned in most policy documents, only the policy documents of Syria have specific measures/ incentives foreseen supporting R&D collaboration in the field of ICT.

[4] Out of the MPC countries addressed, only Jordan has a "Research & Development Strategy for Information & Communication Technologies".

2.3 Key findings from the analysis of EU-MPC regional policy initiatives

With respect to regional policies, the aim was to identify the existing joint EU-Mediterranean as well as intra-MPC regional policy initiatives and examine to what extent they effectively support R&D collaboration *between* the region and Europe as well as *within* the region. In addition to the national policy documents mentioned above, four documents were identified that are mainly proposals for the development of the information society (containing elements on R&D collaboration) in the EU-Mediterranean region and proposals addressing overall EU-Mediterranean R&D collaboration (across fields, not specific to ICT).

The key findings on EU-MPC regional policy initiatives are as follows:

- A dedicated intra-MPC regional policy or strategy for Research and Development in the field of Information and Communication Technologies does not exist.
- Similarly, there is no dedicated EU-MPC policy promoting Research and Development in ICT.
- On the other hand, there are a few proposals for the development of the information society (containing elements on R&D collaboration) in the EU-Mediterranean region and proposals addressing overall EU-Mediterranean R&D collaboration (across thematic fields, not specific to ICT).
- Based on the analysis of the above proposal documents, the following common/ regional ICT priorities emerge:
    - Multi-lingual eContent
    - eLearning
    - eHealth
    - eGovernment
- The above regional priorities are fully in line also with the common priorities identified from the analysis of national policies / strategies.
- All the regional proposal documents suggest certain actions and mechanisms for the promotion of EU-Mediterranean R&D collaboration in the field of ICT.
- Finally, a total of 6 regional funds for R&D in ICT are identified at this point of time, in addition to the FP7's ICT work-programme that provides collaborative funding opportunities to R&D organisations across the region.

2.4 Country-level Recommendations

The recommendations in this section target national policy actors in the MPC with a view to further support R&D activities in the field of ICT, which is considered as a pre-requisite for enhanced EU-MPC R&D collaboration. The most important recommendations to be made by Join-MED are summarised here.

2.4.1 Institutional Issues

The main issue throughout most MPCs is the lack of a clear vision and strategy for ICT research and development. Secondary issues deal with lack of funding, bureaucratic governance, lack of incentives for SMEs to engage in R&D, or lack of support for researchers and PhD students.

It is therefore necessary for each MPC to decide whether ICT is a priority sector and then to elaborate an ICT research strategy based on a vision shared by major key players. National R&D strategies must go beyond research and also take into account innovation.

Innovation concerns all players and most importantly SME's. It is also important to outline the possible impacts of Research, Development and Innovation on the creation of start ups, new jobs, or the attraction of foreign companies.

The future national ICT Research Development and Innovation (RDI) strategies should define prioritized objectives with regard to two main directions:

- Technology oriented RDI to feed the ICT sector.

- Innovative application oriented RDI as a vector for the development of a country's priority sectors (e.g. agriculture, health, transport, tourism).

MPC RDI strategies should also define adequate Governance and Financial mechanisms. A specific funding mechanism with very flexible and non bureaucratic management procedures is key to success.

2.4.2 Education and Human Resources Issues

A major component of the future RDI strategies is the development of qualified human resources at all levels. Key recommendations related to education and HR development are:

- Create centres of excellence, independent or within universities, based on recognized international standards (critical mass of researchers and rich environment) and capable of participating on equal footing in international cooperative projects such as FP7 projects;
- Create and/or strengthen ICT doctoral programs in cooperation with recognized centres of excellence.
- Finance PHD students and Postdoctoral students.
- Launch joint RDI programs with the key players from the ICT business sector and application sectors.
- Promote international cooperation providing easy mechanisms for mobility and collaborative projects.

2.4.3 ICT Business Sector Issues

A major issue pointed out is the weakness of the ICT sector and its lack of interest for research and development. As a consequence there is far too little cooperation between academic research teams and the private business sector. Both actors seem to ignore each other. The good news, however, is that all over the region many incubators and technology parks have been created in the recent past, and their number is still increasing. Many of the start-up companies in the incubators will one day make it into the main stream market, but it is also important to identify the current key players in the private sector that can drive RDI. Incentives to attract them for joint business-research RDI projects are vital. A good example is the Queen Rania Center for Entrepreneurship (QRCE) in Jordan that is running several programmes trying to build an entrepreneur-friendly environment that would serve entrepreneurs in Jordan and the region.

Key recommendations related to the ICT business sector are:

- Identify key business players that can drive RDI.
- Promote networking of key business players and academic research teams.
- Devise financing mechanisms and incentives to promote joint academia-business RDI projects based on cost-sharing.
- Promote entrepreneurship and the development of ICT incubators to enable the creation of start ups.
- Promote the creation of more technology parks with very attractive conditions and infrastructures to attract foreign ICT actors.
- Promote IPR awareness.

2.5 Intra-regional Recommendations

The main issue is the lack of clear vision and strategy for ICT research at regional level. Whereas the Arab countries have developed, under the umbrella of the Arab league, a regional strategy for the development of the Information Society and created formal coordination mechanisms such as the council of ministers in charge of ICT and more recently the Arab ICT organization (AICTO[5]), they have not as yet elaborated a common framework for research in ICT.

As a result there are no regional research projects, except for a few bilateral initiatives that have been launched in recent years.

Recommendations:

[5] http://www.aicto.org/

- Advocate the elaboration of an ICT research vision and strategy at regional level. The council of ICT ministers and AICTO could be in charge of leading this task. EU may provide some assistance.
- Advocate the launching of regional or sub regional RDI projects to demonstrate the impact of such endeavours. Projects should be related to common priority areas. AICTO could be the leader organization to launch and manage such programs. EU could assist in building up AICTO's capacities.
- Advocate the dedication of a certain percentage of funds allocated to research in ICT for regional projects.
- Promote the networking of research and business actors of the region.

2.6 EU-MPC Recommendations

A dedicated regional policy or strategy for Research and Development in the field of Information and Communication Technologies does not exist until now, whether it is in an intra-MPC regional or an EU-MPC bi-regional context. However, a fundamental policy on the European side exists: the opening of the European Research Programme for the Mediterranean Partner Countries, virtually without any restrictions. It is not a dedicated or thematically focused policy; it opens the doors to EU-MPC Co-operation but leaves the initiative to grab the opportunities it offers to the MPCs.

As highlighted also in the document "*Investing in our Future: Building Together our Information Society*"[6] which can be considered the most comprehensive effort of the Mediterranean countries in this area, two of the key obstacles faced by Mediterranean Partner Countries in this area are: (a) a lack of a clear strategy for ICT research and development in the region and (b) a lack of sustainable funding mechanisms and investments.

Main recognized obstacles:

- There is no regional interlocutor to deal with the EU.
- MPC do not have a common strategy to work with EU.
- MPC teams often do not have critical mass and expertise to be attractive to EU partners.
- Lack of willingness or awareness of EU teams to involve MPC teams in FP7 projects. Note however, that EU teams strive to attract researchers from MPCs to their labs or in joint bilateral projects.
- Researchers' mobility constraints due to visas and other local bureaucratic procedures.

Key recommendations:

- Create an institutional mechanism to develop EU-MPC research cooperation based on the experience and results of Med-IST and Join-MED projects. AICTO (or an ad-hoc NGO) could play a major role.
- EU to assist MPCs to develop an EU-MPC ICT R&D strategy.
- Launch special calls on areas of common interest (ICT and environment, ICT and health, Cultural heritage, Digital Content…) where the involvement of MPCs is mandatory. This will help build up ties between EU and MPC teams and give some exposure of MPC teams to FP7 projects.

[6] available on http://www.join-med.eu/Reports/Investing_in_our_Future_2007.pdf

3 - People

In the context of its Networking objective, Join-MED is organising a Networking Session at the ICT 2010, addressing European researchers and presenting them the potential of the MPC research community. Since networking is about people, the Join-MED project has invited a number of MPC researchers from universities and the private industry to this session, to present themselves and their organisations with a few slides.

As a back-up and reference for further contacts this section gives a profile of each of the researchers with a short description of their institutions, with the focus on ICT research topics and their FP7 focus. An expanded list of MPC researchers and organisations is available in the online Join-MED directory that currently comprises over 650 researchers across the region.

Algeria

- Mokhtar Benabdelatif: Institut Supérieur de Gestion et de Planification - ISGP
- Mohamed Ahmed Nacer: Université des Sciences et de la Technologie Houari Boumédiène (USTHB)

Egypt

- Ayman Bahaa: Softlock

Jordan

- Ali Maqousi: Petra University
- Mousa Al-Akhras: The University of Jordan
- Raad Al-Qassas: Princess Sumaya University for Technology
- Ayman Issa: Philadelphia University
- Edward Jaser: Royal Scientific Society
- A. Y. Al-Zoubi: Princess Sumaya University for Technology

Lebanon

- Nashat Mansour: Lebanese American University
- Ahmad Nasri: American University of Beirut (AUB)
- Rayan Jreije: CCT International

Morocco

- Mohamed Essaaidi: Abdelmalek Essaadi University
- Amine Bensaid: Moroccan foundation for Advanced Science, Innovation and Research - MAScIR
- Salah Baina: Ecole Nationale Supérieure d'Informatique et d'Analyse des Systèmes - ENSIAS

Palestine

- Imad Khatib: Palestine Academy for Science and Technology
- Mahmoud Hawamdeh: AL-Quds Open University

Syria

- Mohamad Nawar AL-AWA: Damascus University
- Said Desouki: HIAST

Tunisia

- Sihem Guemara: École Supérieure des Communications de Tunis - Sup'com
- Jawhar Ferjaoui: Centre National de l'Informatique - CNI

Turkey

- Muslim Bozyigit: Middle East Technical University

Mokhtar Benabdelatif: Institut Supérieur de Gestion et de Planification - ISGP, ICT department, Algeria

EDUCATION
Magister in Information Technology, USTHB (Algeria)
Master's in Information Technology, INSA of Lyon (France)

EXPERIENCE
Areas of interest: Information Technology/Computer Science, Management Information Systems.
Teaching (Lectures, Tutorials): 30 years in teaching experience of IT and MIS.
Supervision (Master and postgraduate studies) : More than 30 projects
Institution Membership:
- *From 2006 : Member of the Algerian Association of Technology Transfer (@2T2)*
- *From 1999 to 2004 : Member of the Algerian Scientific Research and Technological Development Committee*

POSITIONS HELD
Since 2004 Director of "ICT department", ISGP
From 1999 to 2004 : Head of "Research Office"
From 1996 to 1999 : Head of "I.S. & Database Laboratory"
From 1994 to 1996 : Head of "Software Laboratory"

Contact email: mbenabdellatif@hotmail.com;isgp1@wissal.dz

About our organisation

Established in	2000
Number of staff	5
Our Web Address	www.isgp.dz

Our activities:

Overview of the department	The ICT department is in charge of : 1. Professional master : "Application of ICT in Management" 2. High diplomas (DESS) : "IT Project Manager", "Management of Information systems" and "Networkadministration". 3. Development Certificates in Business (CPGE) : "Office " and "Audit". Courses are delivered by external consultants. So the staff is only in charge of management.
Intl. projects	MedForIST; MedNet'U; Odiseame

Mohamed Ahmed Nacer: Université des Sciences et de la Technologie Houari Boumédiène (USTHB), Computer Science Department, Algeria

- *Full Professor at the Computer Science Department of the Faculty of Electronic & Computer Science of USTHB (Algier's University).*
- *Director of the Computer Engineering Laboratory at USTHB and in charge of the software engineering team.*
- *Expert at the UNDP project in the Enhancement of Quality Assurance and Institutional Planning at Arab Universities.*
- *My current research interests include process modelling, software architecture based components, service web development, software databases and ICT.*

Contact email: anacer@mail.cerist.dz, lsi@lsi-usthb.dz

About our organisation

Established in	2000
Number of staff	85

Our activities:

Overview of the department	The Computer Science Department is in charge of Academic and Research aspects.
	• For Academic aspects, the department is in charge of two graduation types: Licence and Master.
	  • 2 Licences: Academic (general) Licence, and Information systems and software engineering Licence.
	  • 3 Masters: Software Engineering, Networks and Distributed Systems, and Artificial Intelligence
	• For the Research aspects: 2 Research laboratories and one Doctoral school (Post-Graduation)
	  • Computer Science Laboratory
	  • Artificial Intelligence Research Laboratory

Intl. projects	CMEP - Tassili projects; TEMPUS project; UNDP project : "Enhancement of Quality Assurance and Institutional Planning at Arab Universities."
Our main ICT RTD Topics	• Software engineering • Information systems • Modelling and performance evaluation • Multimedia and security • Networks and wireless systems • Verification and parallel systems team
Research Groups	There are two major research tracks issued from two research laboratories: 1. Computer Science Laboratory with 42 researchers (software engineering team, information system team, modelling and performance evaluation team, multimedia and security team, Networks and wireless systems team, verification and parallel systems team) 2. Artificial Intelligence Research Laboratory with 30 researchers (4 teams in AI research)

Our FP7 ICT Focus is on:

Challenge 1: Pervasive and Trusted Network and Service Infrastructure

Challenge 2: Cognitive Systems and Robotics

Challenge 3: Alternative Paths to Components and Systems

Challenge 4: Technologies for Digital Content and Languages

Challenge 6: ICT for a Low Carbon Economy

Some Facts and Figures

Number of reviewed publications over the past 3 years (approximate)	150
Number of researchers in the department	72

Number of Master Degrees awarded over the last 3 years	250
Number of PhDs awarded over the last 3 years	11
Number of current PhD Students	45
Number of completed collaborative projects during the past 5 years	6
Number of ongoing collaborative projects	4
Total number of projects funded by the European Union (EU)	6
by the following programmes:	CMEP - TEMPUS

Networking

Total number of foreign researchers hosted at our organisation during the last two years	10
Total number of own researchers we sent abroad to do research	8

Ayman Bahaa: Softlock, Research and Development, Egypt

Education
2000-2004: Faculty of Engineering (Ain Shams Univ.) Cairo, PhD. in Computers & Systems Engineering, " Intelligent Systems for Information Security" (Honoured by Ain Shams University as one of the best researches in 2004)

Publications
More than 25 scientific papers in journals and conferences around the world.

Professional experience

- *May 2010 - Now: Egyptian Universities Network, Supreme Council of Universities, Managing Director*
- *Aug. 2007 - Jan. 2008: Ministry of Military Production, Egypt, Principal Investigator, Smart token for Data Encryption,*
- *Oct. 2006 - Sep. 2007: Ministry of Communication and Information Technology, Principal Investigator, Smart token for E-business, A research project fully funded by ITIDA (1M L.E.),*
- *Jan. 2006 - Dec 2006: Ministry of Higher Education, Egypt, Deputy Manager, Information & Communication Technology Development Project in Higher Education*
- *Oct. 2004 - Now: Several Governmental Organizations, Egypt, Information Security Consultant*
- *2005 - Now: Ain Shams University Information Network, Consultant*
- *2004 - Now: Faculty of Engineering Ain Shams University, Associate Professor*
- *2004 - Now: Softlock Cairo, Egypt, Chief Technical Officer and Board Member*
- *1995 - Now: Information systems Specialist and Consultant*

I worked in several projects including designing, supervising and implementation of large scale information technology projects including:
Information Security, Banking, Networking, Copy Protection, Network Management, Internet Infrastructure, Content Management, Content Filtering, Financial and general portals, Stock Market information gathering and broadcasting, Payment Gateway for scratch cards.

Professional memberships

- *Member of the Egyptian Syndicate of Engineers.*
- *Member of the Egyptian Programmers Committee. (An establishment member)*
- *Member of the IEEE*
- *Member of Egyptian Association for Smart Cards Industry & Applications*
- *Member of Egyptian Society of Language Engineering*

Scientific Activities

- *Organizing Committee Member of several scientific conference*
- *Member of expert groups in Map-IT and MED-IST projects*
- *National Coordinator, OpenSaaS project, an ITEA2 project with consortium from Spain, Finland, France, Sweden, Turkey and Egypt.*
- *Web Chair in several conferences*

Contact email: ayman@softlock.net

About our organisation

Established in	1996
Number of staff	15
Turnover (in kUS$)	1000
Our Web Address	http://www.softlock.net

Our activities:

Overview of our company and the products and services	Softlock is the world's leading progressive, innovative, expanding national and international company in the field of digital security. Our aim is to gain customer satisfaction, on time and every time. We are established since 1997 to create quality security and to keep the value for what's important in your life. Our high quality service and excellent benefits and the ability of being reliable and responsible put us as a leader on the top of digital security companies. Softlock provides unique products and solutions, which cover many security areas fulfilling customers need in different market sectors. We provide a set of products and solutions covering the following areas: software protection, data encryption, security hardware, digital signature, secure identification and authentication, secure online distribution of digital Contents.

	Softlock supports different market sectors like; governmental institutes, organizations, banks, software development companies, multimedia software and game producers, media and eBooks publishers and individual users. Softlock value comes from the continuous research, the integrated products, the realistic implementations, and the successful support since 1997. Softlock is recognized in the local market as the only owner and provider of digital security services. Softlock is uniquely identified in the global market by the integrated products and the research based development
Intl. projects	OpenSaaS (ITEA2 Call 4); WOODOO (ITEA 2 call 5); MANY (ITEA 2 Call 5)
Our main ICT RTD Topics	Softlock believes of the importance of the scientific research to achieve unique products. For that reason the company took following steps to support the scientific research: • Construct special department for the Research and Development • Construct a team work consisting of several researchers and highly qualified developers • Encourage the development of scientific papers and publish it in the international conferences • Sponsor and Support many International Conferences • Registration of patents for the innovative ideas and the unique products • Supervise and support undergraduate student projects in the field of digital security As a result of that support many unique products, published papers and registered patents are produced. In the following a list of the existing research projects: • Develop Accurate Method to Identify Optical Disks • Develop Efficient Cryptographic Accelerators • Develop Efficient FP Recognition Accelerator • Develop Efficient and Specialized Cryptographic Techniques • Develop Secure Microcontroller, this is project is funded by DANIDA (Denmark) • Develop LMS (License Management System) and DRM (Digital Rights Management) Specification language • Develop Portable Executable Protector • Develop Open Programming Environment to produce a Service Based Software Systems (Open SAAS), this is project is funded by FP7 (European Union) Also Softlock supervise and manage the annual "International Conference on Computer Engineering & Systems" from 2006 to 2009 in cooperation with the Department of Computer and System Engineering, Ain Shams University.

Our FP7 ICT Focus is on:

Challenge 1: Pervasive and Trusted Network and Service Infrastructure

Challenge 3: Alternative Paths to Components and Systems

Challenge 4: Technologies for Digital Content and Languages

Challenge 6: ICT for a Low Carbon Economy

Challenge 10: International Cooperation

Challenge 11: Horizontal Actions

Our main geographical focus

Our own country

Europe

Med and Gulf Region

Ali Maqousi: Petra University, Computer science & Networking, Jordan

Education:

- *PhD IN COMPUTER SCIENCE, OXFORD BROOKES UNIVERSITY, OXFORD, UK 2003.*
- *PhD thesis: Supporting Guaranteed Services in Multi-service Packet Switched Networks by means of Measurement-Based Flow Admission Control".*

Professional Experience:

Assistant Professor at the Faculty of Information Technology at Petra University since 2003. Currently I am the head of Computer Science & Networking Department

Publications:

- *A. Maqousi, T. Balikhina, "Building Security Awareness Culture to Serve EGovernment Initiative", submitted and accepted as book chapter in E-Services in the Public Sector: E-Government Strategies and Advancements, Author Dr. Abid Al Ajeeli, 2009, the book will be published by IGI Global, Pennsylvania, USA.*
- *Ali Maqousi, and Tatiana Balikhina, "User Security Awareness in E-Society", International Arab Conference of e-Technology, IACeT 2008, 5th - 16th October 2008, Amman, Jordan.*

Scientific Activities:

- *Member of the technical committees for the International Conference on Information Technology ICIT 2007 & 2009, Amman Jordan*
- *Session Chairman at the 2nd International Conference on Information Technology ICIT 2007, Amman Jordan*
- *Journal Reviewer of International Arab Conference of e-Technology, IACeT*
- *Conference Reviewer of International Conference on Networked Digital Technologies (NDT 2009) (Co-Sponsored by IEEE), July 2009, Czech Republic*
- *Organizer and main Presenter for several workshops to promote 7th Framework Program FP7*

Running Projects:

Maqousi, and T. Balikhina, carrying on a project that aims at Developing a Framework for Evaluating User security Awareness, the project is funded by the Research Deanship at Petra University.

Contact email: amaqousi@uop.edu.jo

About our organisation

Established in	1992
Number of staff	27
Our Web Address	www.uop.edu.jo

Our activities:

Overview of the department	The Faculty of Information Technology (FIT), at Petra University, is keen about staying in line with the rapid changes and latest advancements in the field of Information technology. Accordingly, the faculty exerts continuous efforts for the development of its faculty members, learning and teaching resources, research, and curriculums. With a watchful eye on the needs of local and regional markets, FIT works hard to satisfy these needs by graduating students who are well educated and who are properly trained to serve their community. Thus, FIT has an atmosphere that can be characterized as dynamic, motivating, and innovative; making it an incubator to many ideas affecting the entire university as well as the local community.
Our main ICT RTD Topics	• Networking • E-Learning • Languages[Arabization] • IT users Security

Our FP7 ICT Focus is on:

Challenge 1: Pervasive and Trusted Network and Service Infrastructure

Challenge 2: Cognitive Systems and Robotics

Challenge 4: Technologies for Digital Content and Languages

Challenge 5: ICT for Health, Ageing Well, Inclusion and Governance

Challenge 10: International Cooperation

Some Facts and Figures

Number of reviewed publications over the past 3 years (approximate)	77
Number of researchers in the department	27

Mousa Al-Akhras: The University of Jordan, Computer Information Systems, Jordan

Mousa AL-Akhras is a member of IEEE and he was elected as a secretary for general activities of the IEEE executive committee, Jordan Section, region 8 for the years 2010-2011. He was also elected as a vice-chair for Computational Intelligence/Computer Joint Societies Chapter, Jordan section for the years 2010-2011. He is also a member of IEEE CIS & RAS Societies. Mousa received his B.Sc. and M.Sc. degrees in Computer Science from the University of Jordan, Jordan, in 2000 and 2003, respectively. He received his Ph.D. degree from De Montfort University, UK, in 2007. He is currently working as an assistant professor in the Computer Information Systems Department at King Abdullah II School for Information Technology (KASIT) at the University of Jordan, Amman, Jordan (http://www.ju.edu.jo/). He is also the assistant dean for computer and development affairs at the Faculty of Graduate Studies at the University of Jordan. Dr.AL-Akhras main research interests include problems in the area of Artificial Intelligence and particularly Artificial Neural Networks (ANN). His research interests include Voice over IP, Multimedia Communication, Robotics, Genetic Algorithm, Fuzzy Logic, and statistics. He is also interested in the area of electronic learning (e-learning) and mobile learning (m-learning). Mousa is in the organizing and technical committees for a number of local and international conferences. Also, he serves as a reviewer and a member of the editorial board in a number of local and International Journals. He is a member of the Jordan Society for Scientific Research (JSSR). He also serves as a judge in the national and Arabic robot contest (First Lego League).
Contact email: mousa.akhras@ju.edu.jo

About our organisation

Established in	2000
Number of staff	21
Our Web Address	http://www.ju.edu.jo/

Our activities:

Overview of the department	The Department of Computer Information Systems (CIS) at King Abdullah II School for Information Technology, The University of Jordan was established in 2000. King Abdullah the II School for Information Technology (KASIT) was established in the summer of 2000 and the Computer Information Systems (CIS) department was in the very heart of the new faculty along with the Computer Science (CS) and the Business Information Systems (BIS) departments. The CIS Department aims at: 1. Providing the society with qualified and well-trained graduates with a wide range of transferable skills in computing and system development, including independent learners and team workers, enabling them to function effectively in the public and private sectors to meet the needs of Jordan and the region in several fields of computer information systems. 2. Producing graduates capable of performing research and postgraduate studies that fulfil the need for professional computer information systems instructors, lecturers, researchers and developers. 3. Providing the local hi-tech/business communities a professional education and skilled workforce in the CIS fields. 4. Forging links and partnerships with regional, national and international institutions and organizations for the purpose of exchanging enterprise. 5. Allowing students from different countries and from various regions in Jordan to enrol the department including disabled people. The CIS programmes have been established based on the following reasons: 1. The world –in all of its aspects- is characterized by rapid change, increasing globalization and growing complexity in terms of its use of Information and Communication Technology (ICT) 2. There are needs for developed information and supported services on the use of ICT at regional, national, and international levels as the need for professionals in computing and system development increases. 3. There are crucial needs for expert technicians and professionals in the fields of computing, information and communication technology in Jordan and the neighbouring countries.
Intl. projects	Improving Cadastral System in Jordan; Open Source Arabia
Our main ICT RTD Topics	• Intelligent Information Management • Cognitive Systems and Robotics • Natural Language Processing • Future Internet Multimedia Research • Technology-Enhanced Learning • Image Processing

	• SoftwareEngineering • AdaptiveHypermedia • DataMining • Multimedia • Databases
Research Groups	• Group 1: Artificial Intelligence (Neural Networks, Machine Learning, Agents and Natural Language Processing)- 4 members • Group 2: Image Processing & Multimedia - 3 members • Group 3: Software Engineering - 2 members

Our FP7 ICT Focus is on:

Challenge 2: Cognitive Systems and Robotics

Challenge 4: Technologies for Digital Content and Languages

Challenge 5: ICT for Health, Ageing Well, Inclusion and Governance

Challenge 8: ICT for Learning and Access to Cultural Resources

Challenge 10: International Cooperation

Some Facts and Figures

Number of reviewed publications over the past 3 years (approximate)	60
Number of researchers in the department	10
Number of Master Degrees awarded over the last 3 years	100
Number of current Master Students	80
Number of completed collaborative projects during the past 5 years	3
Number of ongoing collaborative projects	2
Total number of projects funded by the European Union (EU)	1
Total number of projects funded by other agencies or governments	3

Networking

Total number of foreign researchers hosted at our organisation during the last two years	4
Total number of own researchers we sent abroad to do research	2

Raad Al-Qassas: Princess Sumaya University for Technology, King Hussein School for Information Technology, Jordan

Raad S. Al-Qassas received his PhD in Computer Science from University of Glasgow/UK in 2007, his MSc in Computer Science from Al-Albayt University/Jordan in 2003, and his BSc degree in Computer Science from Yarmouk University/Jordan in 1999. His research interests are in the areas of Computer Networks, Mobile Computing, Wireless Communication Systems, and Web Applications. He has served on the technical program committee of many well-known international conferences and as a reviewer of academic journals including IEEE Transactions on Parallel & Distributed Systems (IEEE TPDS), International Journal of Communication Systems (IJCS) and International Journal of Computers & Applications (IJCA). Dr. Al-Qassas has served as external examiner for postgraduate students. He has also supervised and examined several graduation projects. Dr. Al-Qassas has been an Assistant Professor at Princess Sumaya University for Technology since 2007. Over the past two years he has been a member of the Research Advisory Committee.

Contact email: raad@psut.edu.jo

About our organisation

Established in	1991
Number of staff	26
Our Web Address	http://www.psut.edu.jo/

Our activities:

Overview of the department	The King Hussein School for Information Technology (KHSIT) at PSUT, the first ever specialised faculty of this kind in Jordan, was established in 1991 to prepare undergraduate students for productive careers in industry and academia by providing an outstanding environment for education regarding the theory and applications of computing. The global vision of KHSIT is to be a centre of excellence of higher learning and related activities with emphasis on national relevance, international recognition, innovation and creativity in IT and other related professional disciplines. Within this vision, the focus is to produce highly qualified graduates in an environment that provides a rewarding experience for its students and staff. The KHSIT has grown into a diverse faculty teaching undergraduate and graduate courses in computer science, and computer graphics and animation.
Our main ICT RTD Topics	• Natural Language Processing • e-learning • Mobile Computing • Computer Networking

Our FP7 ICT Focus is on:

Challenge 1: Pervasive and Trusted Network and Service Infrastructure

Challenge 4: Technologies for Digital Content and Languages

Challenge 8: ICT for Learning and Access to Cultural Resources

Some Facts and Figures

Number of reviewed publications over the past 3 years (approximate)	60
Number of researchers in the department	14
Number of current Master Students	24
Number of completed collaborative projects during the past 5 years	4
Number of ongoing collaborative projects	4
Total number of projects funded by the European Union (EU)	7
by the following programmes:	FP7, EUMEDIS, TEMPUS
Total number of projects funded by other agencies or governments	1

Networking

Total number of foreign researchers hosted at our organisation during the last two years	2
Total number of own researchers we sent abroad to do research	1

Ayman Issa: Philadelphia University, Software Engineering, Jordan

Education

- *July, 2006: The University of the West of England. PhD in Using Use-Case Models to Estimate Software Development Cost*
- *January, 2003: The University of Jordan. Master of Computer Science in Supporting Mobile Databases by Translating Traditional Web Pages into WML pages. GPA: 3.81/4.0 (Excellent)*
- *January, 2000: The University of Jordan. Bachelor of Computer Science. GPA: 3.54 /4.0 (V.Good)*
- *July, 1996: General Secondary Education Certificate from Hamza's prince school. GPA: 91.6 % (Excellent)*

Recent Publications

- *Al-Ali, A. and Issa, A., (2010). Use Case Patterns Driven Requirements Engineering in Proceedings of The Second International Conference on Computer Research and Development (ICCRD 2010), Kuala Lumpur, Malaysia. IEEE Computer Society.*
- *Issa, A. and Abu Rub, F., (2009). A Business Process Modelling Driven Approach for Legacy Systems Evolution in Proceedings of The Second International Conference on the Applications of Digital Information and Web Technologies (ICADIWT 2009), London, UK. IEEE UK & RI Section.*
- *Issa, A. and Al-Ali, A., (2009). A Use Case Driven Approach for Quantitative Software Projects Assessment in Proceedings of The Second International Conference on the Applications of Digital Information and Web Technologies (ICADIWT 2009), London, UK. IEEE UK & RI Section.*
- *Issa, A., Abu Rub, F., and Thabata, F., (2009). Using Test Case Patterns To Estimate Software Development and Quality Management Cost. Software Quality Journal, 17(3), pp. 263-281, Springer.*

Research Interests

- *Software Cost Estimation.*
- *Software Patterns.*
- *Software Metrics.*
- *Use Case Modelling.*
- *E-Commerce, E-Government, E-Services.*
- *Model Driven Architecture.*
- *Software Architecture.*
- *Quality Assurance and Control.*
- *Software Standardization.*
- *Soft Computing Techniques and Datamining*
- *Semantic Web (Web 3.0).*

Contact email: aissa@philadelphia.edu.jo

About our organisation

Established in	1989
Number of staff	600
Our Web Address	http://www.philadelphia.edu.jo

Our activities:

Overview of the department	The Software Engineering Department at Philadelphia University was founded in the year 2000 as one of the first Software Engineering Departments offering honour degree in Software Engineering in Jordan. This undergraduate program addresses the growing need for professionals in this sophisticated field. The mission of the Software Engineering Department at Philadelphia University is to provide outstanding education and research to its undergraduate students in accordance with the principles of the University mission, to advance scholarship in key domains of software engineering, and to engage in activities that improve the welfare of society. The Department aims to maintain an environment that promotes innovative thinking; values mutual respect and diversity; encourages and supports scholarship; instils ethical behaviour; and engenders life-long learning. The strategies of the Department are set to meet the demands of a rapidly evolving world, and to meet the needs of a developing job market in Information Technology. Graduates of this program will work with the engineering of software, with special attention devoted to large and critical systems. This program addresses both analytic and practical skills required by students to develop robust and efficient computer software systems for manufacturing, industrial, medical, government, and business applications. They will have individual and team hands-on experience with timely, cost-effective and state-of-

	the-art processes, methods and tools. Inspiring from the university research objectives, the department also aims to: • Encouraging academic research through increasing research projects appropriations and finding ways to motivate researchers in a way that may be useful to research process at the University and bring about positive resells to the local community. • Simplifying procedures for obtaining all kinds of support to increase academic output. • Prompting the setting up of integral research groups that may work at higher levels inside and outside the Kingdom in various fields, to be more effective in community service. • Expanding academic research scope through launching new to increase academic production. • Proceeding with completion of requirements for launching new graduate study programs and focusing on the quality of their output.
Intl. projects	Support to Research and Technological Development - Jordan / FP7
Intl. projects	TEMPUS
Our main ICT RTD Topics	• Data Mining and Warehousing • Semantic Web • Image Processing • Software Design and Architecture • Artificial Intelligence
Research Groups	• Data Mining (4 researchers) • Software Design and Architecture (4 researchers) • Semantic Web and Ontologies (4 researchers) • Artificial Intelligence (6 researchers)

Our FP7 ICT Focus is on:

Challenge 2: Cognitive Systems and Robotics

Challenge 3: Alternative Paths to Components and Systems

Challenge 4: Technologies for Digital Content and Languages

Challenge 6: ICT for a Low Carbon Economy

Challenge 8: ICT for Learning and Access to Cultural Resources

Challenge 10: International Cooperation

Challenge 11: Horizontal Actions

Some Facts and Figures

Number of reviewed publications over the past 3 years (approximate)	45
Number of researchers in the department	8
Number of Master Degrees awarded over the last 3 years	15
Number of current Master Students	25
Number of current PhD Students	15
Number of completed collaborative projects during the past 5 years	8
Number of ongoing collaborative projects	4
Total number of projects funded by the European Union (EU)	4
by the following programmes:	Tempus, FP7
Total number of projects funded by other agencies or governments	4

Networking

Total number of foreign researchers hosted at our organisation during the last two years	3
Total number of own researchers we sent abroad to do research	3

Edward Jaser: Royal Scientific Society, Information Technology Center, Jordan

Dr. Edward Jaser *obtained his PhD in Computer Vision from the University of Surrey (United Kingdom) in 2005. He received his Masters degree in Human-Computer Interaction from Heriot-Watt University (United Kingdom) in 1999. He is currently working as a Researcher and Senior Systems Analyst at the Information Technology Centre of the Royal Scientific Society (Jordan).*
He participated in developing various computer and database solutions for several Jordanian institutions. He is participating as Business Software Analyst and Project Manager for a EuropeAid project in Syria aiming at developing a pilot e-government application. He also participated in a number of research projects.
Dr. Edward was the author or co-author of several research papers. Recently he started lecturing IT courses at a leading university in Jordan.

Contact email: e.jaser@gmail.com

About our organisation

Established in	1972
Number of staff	50
Our Web Address	www.rss.gov.jo

Our activities:

Overview of the department	**Information Technology Centre of the RSS** The centre was founded in 1972, two years after the establishment of the Royal Scientific Society (RSS). It was the first to introduce computerization in Jordan. In 1992 the centre expanded its operations to cover industrial studies and conduct long term specialized training courses in the field of Information Technology at the regional level in cooperation with Japan International Cooperation Agency (JICA). Major activities are focused on: • Research and Development • IT consultations & requirement analysis • Software development • Advanced training The centre has been engaged in several European projects. Currently there are two active projects: JOIN-MED and EU-JordanNET.
Intl. projects	Join-MED / FP7; EU-JordanNET / FP7; SOHITCOM / IDRC-Canada
Our main ICT RTD Topics	• Machine Learning • e-Learning • Mobile applications • e-Health

Our FP7 ICT Focus is on:

Challenge 2: Cognitive Systems and Robotics

Challenge 4: Technologies for Digital Content and Languages

Challenge 5: ICT for Health, Ageing Well, Inclusion and Governance

Challenge 8: ICT for Learning and Access to Cultural Resources

Challenge 10: International Cooperation

Some Facts and Figures

Number of reviewed publications over the past 3 years (approximate)	8
Number of researchers in the department	5
Number of completed collaborative projects during the past 5 years	10
Number of ongoing collaborative projects	5
Total number of projects funded by the European Union (EU)	13
by the following programmes:	FP7, FP6, FP5

A. Y. Al-Zoubi: Princess Sumaya University for Technology, King Abdullah I School for Graduate Studies and Scientific Research, Jordan

A. Y. Al-Zoubi received his BSc and PhD in Electrical and Electronics Engineering from the University of Nottingham, UK in 1983 and 1987 respectively. He joined the Electrical Engineering Department, Mutah University, Jordan, where he was promoted to the rank of associate professor in 1992 and to the rank of full professor in 1998. Al-Zoubi held positions including Vice Dean for Faculty of Engineering, Assistant to President for Administration, member-elect of the university council and member of the editorial board of Mutah Journal for Scientific Research. Al-Zoubi is a senior member of IEEE, Vice President of the International Association of Online Engineering (IAOE), Vice President and co-founder of the International E-Learning Association (IELA), member of the International Mobile Learning Association and Co-Editor of the International Journal of Emerging Technologies in Learning (iJET). He is actively involved in research in the fields of mobile learning, eLearning, virtual engineering, remote labs, and microwave measurements.

Contact email: zoubi@psut.edu.jo

About our organisation

Established in	1991
Number of staff	55
Our Web Address	http://research.psut.edu.jo/

Our activities:

Intl. projects	Erasmus Mundus External Co-operation Window Programme,
Our main ICT RTD Topics	Electronic, Computer and Communications Engineering as well as Computer Science and Computer Graphics and Animation.

Some Facts and Figures

Number of researchers in the department	45
Number of completed collaborative projects during the past 5 years	5
Number of nationally funded projects	4
Number of ongoing collaborative projects	6
Total number of projects funded by the European Union (EU)	5
by the following programmes:	FP6, FP7, TEMPUS, Erasmus Mundus
Total number of projects funded by other agencies or governments	3

Networking

Total number of own researchers we sent abroad to do research	8

Nashat Mansour: Lebanese American University, Computer science and mathematics, Lebanon

Research Interests

- *Metaheuristics and Data Mining: application to real-world problems.*
- *Biomedical Informatics: protein structure prediction.*
- *Software Engineering: software testing.*

Education

- *Bachelor of Engineering (Electronics): School of Electrical Eng., University of New South Wales, 1980*
- *Master of Engineering Science (Communications): School of Electrical Eng., University of New South Wales, 1983*
- *Master of Science (Computer Eng.): Department of Electrical and Computer Eng., Syracuse University, 1990*
- *Doctor of Philosophy: School of Computer Science, Syracuse University, 1992*

Recent Publications

- *Scatter search algorithm for protein structure prediction. International Journal of Bioinformatics Research and Applications, Vol. 5, No. 5, 2009, 501-515. (with C. Kehyayan, H. Khachfe)*
- *Regression test selection for C# programs. Advances in Software Engineering, 2009. (with W. Statieh) doi:10.1155/2009/535708*
- *Filtering intrusion detection alarms. Cluster Computing Journal, Vol. 13, No. 1, 2010, 19-29 (with M. Shehab, A. Faour) DOI: 10.1007/s10586-009-0096-9*
- *Improving the Accuracy of English-Arabic Statistical Sentence Alignment. International Arab Journal on Information Technology, 2010 (with M. Salameh, R. Zantout)*

Contact email: nmansour@lau.edu.lb

About our organisation

Established in	1977
Number of staff	15
Our Web Address	http://sas.lau.edu.lb/csm/

Our activities:

Overview of the department	The Department of Computer Science and Mathematics offers a Bachelor of Science (B.S.) in Computer Science, a B.S. in Mathematics, and an Master of Science (M.S.) in Computer Science. The current number of computer science students is about 170 students.
Intl. projects	our faculty members have collaborated on projects with international peers in: Montreal Polytechnique, Canada; Reims University, France; University of Tennessee, USA
Our main ICT RTD Topics	VLSI testing and synthesis; graph algorithms; software testing; bioinformatics; arabic-related information retrieval; power-aware multimedia transmission; database and software security

Our FP7 ICT Focus is on:

Challenge 3: Alternative Paths to Components and Systems

Challenge 4: Technologies for Digital Content and Languages

Challenge 5: ICT for Health, Ageing Well, Inclusion and Governance

Some Facts and Figures

Number of reviewed publications over the past 3 years (approximate)	35
Number of researchers in the department	7
Number of Master Degrees awarded over the last 3 years	35
Number of current Master Students	50
Number of completed collaborative projects during the past 5 years	4
Number of ongoing collaborative projects	5
Total number of projects funded by other agencies or governments	2

Networking

Total number of own researchers we sent abroad to do research	1

Ahmad Nasri: American University of Beirut (AUB), Department of Computer Science, Lebanon

- *Professor at the Computer Science Department of the Faculty of Arts & Sciences.*
- *Coordinator of the ASHA Computer Graphics & Animation Lab.*
- *Member of the board of Administrators of the Lebanese National Council for Scientific Research.*
- *Consultant to many regional universities for Curricula development, Program Reviews, etc.*
- *My current research interests include Computer Graphics, 3D Geometric Modelling, Visualization, 3D Cultural Heritage, Subdivision Surfaces and its applications in Graphics and Animation, Digital Arts, etc.*

Contact email: anasri@aub.edu.lb

About our organisation

Established in	2003
Number of staff	15
Our Web Address	www.aub.edu.lb

Our activities:

Overview of the department	The Computer Science Department at AUB offers two programs leading to a Bachelor of Science (B.S.) in Computer Science, and an Master of Science (M.S.) in Computer Science. The department is equipped with various teaching and research labs including ASHA Computer Graphics and Animation Lab.
Intl. projects	The agency Francophone des Inforoutes through a collaboration with MIRALAB form the University of Geneva: "Interactive Virtual Exposition of Francophone clothing heritage"
Our main ICT RTD Topics	• Computer Graphics • 3D Geometric Modelling & Visualization • Software engineering • Networks and wireless systems • Numerical Computing • Visual Languages
Research Groups	The major research tracks concentrate on the above topics. Our strengths are in Computer Graphics and Geometric Modelling, Networks, Formal Methods in Software Engineering, and Visual languages. My current research activities include Sketch-Based Modelling, 3D cultural heritage, 3D Modelling of Islamic Patterns, Data Visualization, Animation and digital arts.

Our FP7 ICT Focus is on:

Challenge 1: Pervasive and Trusted Network and Service Infrastructure

Challenge 2: Cognitive Systems and Robotics

Challenge 4: Technologies for Digital Content and Languages

Some Facts and Figures

Number of reviewed publications over the past 3 years (approximate)	52
Number of researchers in the department	7
Number of Master Degrees awarded over the last 3 years	28
Number of current Master Students	36
Number of completed collaborative projects during the past 5 years	6
Number of ongoing collaborative projects	3

Networking

Total number of foreign researchers hosted at our organisation during the last two years	1

Rayan Jreije: CCT International, 3D & Visual Controls, Lebanon

Rayan jreije is the manager of 3D and visual project controls solutions for CCT. He is in charge of 3D Based visual project controls software development, product manager of the C3D integration platform and in charge of 3D systems integrations. He also runs the technical implementation of the said software solutions.
Rayan is also a member and contributor with the ADI project team (ISO 15926) in FIATECH, as well as the stanford's CIFE research group. Lately he won the CETI 2010 STAR international award by FIATECH for his international role in the implementation of the ISO15926 standard. Rayan is a holder of an MS Degree in Artificial Intelligence and Computer Vision (1997), with 13 years of experience in 3D software development and systems integration for the EPC industry.
Contact email: rayan@ccc.gr

About our organisation

Established in	2000
Number of staff	20
Turnover (in kUS$)	1000
Our Web Address	www.cctintl.com

Our activities:

Overview of our company and the products and services	CCT's mission is to develop immersive business solutions; our competency is in the following lines of Business: 1. To develop a 3D based integrated project/s control strategy & to develop the appropriate tools needed thereof. 2. To deliver creative ECM/ BPM solutions for a greater business agility and improved productivity / customer interactions for all stakeholders. CCT is a 10 year old company that was founded to develop 3D based, ECM & BPM solutions. CCT is based in Beirut, Lebanon near some of the top universities in Lebanon & the Middle East, such as the American University of Beirut (AUB) and the Lebanese American University (LAU). CCT has grown to host more than 40 top software architects, developers & support staff. CCT's senior management has more than 30 years of experience in construction & solution development. CCT has delivered solutions to its customers in the construction field as well as related industries, having been deployed successfully in projects & countries all over the Middle East, Africa & the Caspian region. • CCT has partnered with several universities and R&D communities in the USA and Europe, such as CIFE (Center for Integrated Facility Engineering) at Stanford. CCT has done major work on ISO 15926 which is supported by Fiatech. CCT is working on becoming compliant with semantic web initiative. TECHNOLOGY PLATFORM • BPM (Business Process Management): Workflows, Rich clients and document centric applications with RIA portal. The way to integrate 3D into the work environment is to define how it is to be used in the workplace (workflow). • ECM (Enterprise Content Management): ECM framework is used to capture, manage, store, and deliver content and documents to the end users related to organizational processes. • Visioneering: 3D and visual oriented applications / reporting: 3D tools are excellent report generators, linking 3D models to a multitude of data, colorizing the models as per different statuses & providing it to the user for review or possible action. For more info, please visit www.c3d.com • Automatic data acquisition and collection on sites using handhelds and RFID, etc. Handhelds facilitate the collection & dissemination of data at the work place. • Corporate Dashboard: Using Rich Internet Application Technologies; Dashboard is a customizable solution for knowledge workers that consolidate personal, team, departmental, project, corporate and even external information in a one-single-portal. • Business Intelligence (Data warehousing, OLAP technologies, Web based Dashboards & intelligentreporting). • Electronic Data Interface, process industry accelerated implementation of standardized data connectivity between all computerized systems (IFC/ISO & Semantic web). • (AI) based systems & simulation. 4D Tools as well as actual simulation of activities and use of Rule based systems to optimize construction activities such as earthwork, construction activi-

	ties coordination as well as construction equipment fleet distribution. CCT is researching the use of AI technologies in developing shop drawings extracted and integrated with the 3D model.
Intl. projects	ISO15926 (FIATECH & POSC CAESAR)
Intl. projects	IRingTools Open Source (FIATECH)
Intl. projects	JOGL (Open Source project originally sponsored by SUN Microsystems now sponsored by CCT)
Our main ICT RTD Topics	• 3D Based Visual Project Controls • Genetic Algorithms and artificial intelligence for Planning • Simulation for decision making • 3D visualization on Mobiles and Handhelds

Our FP7 ICT Focus is on:

Challenge 1: Pervasive and Trusted Network and Service Infrastructure

Challenge 2: Cognitive Systems and Robotics

Challenge 10: International Cooperation

Our main geographical focus

World-wide

Mohamed Essaaidi: Abdelmalek Essaadi University, Telecommunications, Morocco

Prof. Dr., IEEE Senior Member and professor of Electrical & Computer Engineering at Abdelmalek Essaadi University, Morocco.
He is the founder and the current Chair of the Institute of Electrical and Electronics Engineers (IEEE) Morocco Section since November 2004. He is also the founder of the IEEE Communication & Computer Societies Morocco Chapter and the organizer of IEEE Education Society Morocco Chapter in October 2009. He is the founder and the General Chair of Mediterranean Microwave Symposium (MMS) since the year 2000, the co-founder and the General Chair of Information and Communication technologies International Symposium (ICTIS) since 2005, NATO Advanced Research Workshop on Information Security Assurance Co-director, Tetuan, June 3-6, 2005, and the General Chair of International Conference on Multimedia Computing and Systems, Ouarzazate, Morocco, April 2-4, 2009. He is the Chairmen of the Scientific Committees of SETIT'07, SETIT'09 (Tunisia) and e-MEDISYS'07 (Morocco) and e-MEDISYS'09 (Tunisia) as well.
Professor Essaaidi is a member of IEEE Microwave Theory and Techniques Society, IEEE Antennas and Propagation Society, IEEE Communications Society, IEEE Computer Society and European Microwave Association. His biography was listed in Who's Who in The World in 1999.
He is also the co-founder and the current coordinator of the Arab Science and Technology Foundation (ASTF) RD&I network on Electrotechnology.
His research interests focus mainly on RF and microwave passive and active circuits and antennas for wireless communications and medical systems and Wireless Sensor Networks (WSN).
Prof. Essaaidi holds four patents on antennas for very high data rate UWB and multiband wireless communication networks and high resolution medical imaging systems (OMPIC 2006, 2007, 2008, 2009). He has also co-organized several competitions aiming at fostering research, development and innovation in Morocco and in the Arab World (Moroccan Engineers Week 2006, 2007 and "Made in Morocco" and ASTF "Made in Arabia" Competitions in 2007 and 2009).
He was also a member of the IEEE 802.16 Sponsor Ballot Pool of IEEE Standard Association that defined the technical specifications for WiMmax.
Contact email: essaaidi@ieee.org;essaaidi@gmail.com

About our organisation

Established in	1995
Number of staff	150

Our activities:

Overview of the department	The Abdelmalek Essaadi University (with 15,000 students) is one of the fourteen universities in Morocco and has achieved consistently high scores for its teaching and learning activities. The University offers first-rate opportunities and facilities for study and research, and provides a stimulating working environment. The University currently has four High School and seven Faculties. The Faculty of Sciences and Technics of Tangier (FSTT) was established in 1995,Include more than thirty programs dividing in fours Cycle of engineer and nine Department : as Department of Biology, Geology , Chemistry, Physics, Mathematics, Computer Sciences, Mechanics and Electrics, and with a group of 151 Professors. Today FST of Tangier is one of most important Moroccan Faculties especially with its high quality formations.
Intl. projects	Mixed signal circuits design / US Army Research Office
Intl. projects	Integrated Actions Spain-Morocco
Our main ICT RTD Topics	• Networks • Information Systems • Electronic Systems
Research Groups	There are 24 Labs with 71 research teams: Chemistry, Physics, Computer Science, Geology, Medicine, ICT, Management and Enterprise.

Our FP7 ICT Focus is on:

Challenge 1: Pervasive and Trusted Network and Service Infrastructure

Challenge 3: Alternative Paths to Components and Systems

Some Facts and Figures

Number of current Master Students	54

Amine Bensaid: Moroccan foundation for Advanced Science, Innovation and Research - MAScIR, , Morocco

Employment History

- *March 2009-Present: Principal, Futuris, a project aiming at setting up the first private and not-for-profit (technical) university in Morocco.*
- *Sept. 2010 – Present: Advisor, the MAScIR foundation (Moroccan Advanced Scientific Innovation & Research)*
- *Feb. 2007-Feb. 2009: Full Professor and Vice-President for Academic Affairs, Al Akhawayn University in Ifrane (AUI), Ifrane, Morocco.*
- *June 2001-Jan. 2007: Dean, School of Science and Engineering (SSE), AUI.*
- *Sept. 98-Jan. 2007: Associate Professor in Computer Science, SSE, AUI.*

Education

- *'92-94 College of Engineering, University of South Florida (USF), Tampa, Florida. Ph.D., Dec. '94. Major: Computer Science & Engineering*
- *'91-92 College of Engineering, USF, Tampa, Florida. M.S., May '92. Major: Computer Engineering*
- *'89-90 College of Engineering, USF, Tampa, Florida. B.S., Dec. '90. Major: Information Systems. Minor: Business Administration. Suma Cum Laude*

Industry-Oriented R&D

- *Co-Principal Investigator of project for high-performance multi-lingual portal, 2001- 2004.*
- *Co-founder of joint-venture with the Syndeos Group, Celebration, FL, for building e- commerce software that integrates organizations quickly and cost-effectively, synchronizes trading partners, and optimizes business processes, 2001.*
- *Consultant, VR2Ltrade, Orlando, FL, for automatic extraction of information from the Internet, 2000-2001.*
- *Consultant, TelTech International, New York, NY, for automatic detection of defects in contact lenses for Bausch & Lomb, 1997-98.*

Refereed research papers for international research journals and conferences: IEEE Trans. Fuzzy Systems, IEEE Trans. Neural Networks, IEEE Trans. Pattern Analysis and Machine Intelligence, Pattern Recognition, Int'l Journal of Artificial Intelligence and Pattern Recognition, IEEE International Conf. On Fuzzy Systems, IEEE International Conf. On Neural Networks, IEEE International Conf. On Evolutionary Computation, and Conf. of the North American Fuzzy Info. Processing Society, since 1991, Associate Editor of IEEE Transactions on Systems, Man and Cybernetics - Part B

Contact email: a.bensaid2007@gmail.com

About our organisation

Established in	2007
Number of staff	100
Our Web Address	http://www.mascir.com/mascir/mascir/en/

Our activities:

Overview of the department	Founded in 2007 as non-profit foundation, MAScIR aims at promoting excellence in market- oriented research and technology development in Morocco, in order to generate wealth and jobs and to produce intellectual property. The foundation seeks to serve the development of science at the national level, especially in the fields of nanotechnology, biotechnology, information technology, microelectronics, environmental research and energy. The foundation aims at: • Serving as a growth engine for the fields mentioned above; • Investing in and promoting the development of the human capital and key competences using international standards; • Pursuing the advancement of applied research to produce intellectual and industrial property according to the market's needs; • Providing solutions and services to existing businesses acting in the selected fields; • Generating the development of innovative businesses based upon research findings and achievements of the foundation; • Signing agreements and forging linkage between educational institutions and industry; • Contributing to the training of experts in the fields mentioned above.
Intl. projects	Development of a domestic, innovative technology using Moroccan modified microalgae strains for biofuel industrial production in order to compensate the current national deficit in bio-energy.

Intl. projects	Synthesis of new functional molecules such as organic materials, conductive polymers, fluorescent and phosphorescent molecules, dendrimers, bioactive & amphiphilic molecules in applications such as clay, phosphate and Moroccan biomass modification and upgrading.
Intl. projects	Embedded systems for wafer level camera application
Our main ICT RTD Topics	• Micro Camera based embedded systems, including systems architecture, miniaturization, board design and prototyping, FPGA HW design, Real Time Embedded Software development. • Image processing for optical systems impairments compensations. • Electronics Systems Simulations in terms of thermo-mechanical (heat dissipation, deformation etc…) and electro-magnetic (interferences, CEM, etc…) finite element simulations. • Advanced packaging technologies (3D staking, Flip Chip assembly etc…)

Our FP7 ICT Focus is on:

Challenge 3: Alternative Paths to Components and Systems

Salah BAINA: Ecole Nationale Supérieure d'Informatique et d'Analyse des Systèmes - ENSIAS, Al Qualsadi Research Team, Morocco

Dr. Salah BAINA is Professor at ENSIAS Engineer School of Computer Science and System Analysis (ENSIAS) in Rabat, Morocco. He received his PhD on computer science and production engineering in 2006 at Nancy-University. The subject of his PhD thesis was "MODEL DRIVEN INTEROPERABILITY: A Product Oriented Approach for Enterprise Systems Interoperability". After obtaining his PhD, he has been in a postdoctoral position at Belgian University "Facultés Universitaire Notre-Dame de la Paix" in Namur. He also obtained in 2003 an Engineering degree in Computer Science and Applied Mathematics at ENSIMAG, Grenoble France.
Salah BAINA is skilled in information systems interoperability and modelling. His research interests are Information Systems Interoperability, Business/IT Alignment and Business Process Modelling and refactoring. He is also interested in open source development projects and products. In 2009, He and his team won the best product award at the Moroccan OpenSource Championship.
Since 2003, Dr. Salah BAINA participated to several research and networking European projects in the FP6 and also in the FP7, MED-IST and NTEROP NoE were some of the most successful of those projects.

Contact emails: sbaina@ensias.ma;salah.baina@gmail.com

About our organisation

Established in	2006
Number of staff	8

Our activities:

Overview of the department	**Organisation :** ENSIAS Computer Science Institute is one of the most important Moroccan educational institutions in computer science field. Created in 1992 with the aim to graduate high level computer science and information technology engineer. To achieve this objective ENSIAS developed important research capacities in computer science and communication. **Department:** **Al Qalsadi (**Enterprise Architectures**,** Quality of their Development and Integration**)** is a young research team at ENSIAS that focuses on Enterprise Architectures and new paradigms for creating a competitive and well structured environment for enterprise applications integration and interoperability. This interoperability is the result of both internal and external interaction with other applications. Al Qalsadi is constituted of 6 Professors and 18 PHD and Master students.
Intl. projects	INTEROP-Network of Excellence; MEDFORIST; MEDNETU; ATHENA
Our main ICT RTD Topics	• **Axe 1 - EA Governance :** KPI/GKI/KFS models for IT Strategy, Governance, Maturity & Alignment. TOGAF/DoDAF,COBIT, CMMi. • **Axe 2 - EA Integration :** Portal/Process/Service/Component User-centric syntactic/semantic/technical integration and interoperability through SOA/BPM/MDM/ERP/Portals/3G. • **Axe 3 - EA Quality :** MDE/MDA, EA models formal specification and validation. B methods, Graphs, PN, LTL/TTL, but also Six sigma, ITIL • **Axe 4 - Applied Maths for EA :** statistics and quantitative method for EA quality, optimal control for IT alignment, modelling for ITG. • **Axe 5 - Applied EA for ICT4D:** e-Government, e-health, and e-education. Citizen-centric approach for EA use.

Our FP7 ICT Focus is on:

Challenge 2: Cognitive Systems and Robotics

Challenge 3: Alternative Paths to Components and Systems

Challenge 4: Technologies for Digital Content and Languages

Some Facts and Figures

Number of reviewed publications over the past 3 years (approximate)	30
Number of researchers in the department	8
Number of Master Degrees awarded over the last 3 years	3
Number of PhDs awarded over the last 3 years	1
Number of current PhD Students	8
Number of completed collaborative projects during the past 5 years	2

Number of ongoing collaborative projects		2
Total number of projects funded by the European Union (EU)		1
by the following programmes:	FP7	

Networking

Total number of own researchers we sent abroad to do research	2

Abdelhak Mouradi: Ecole Nationale Supérieure d'Informatique et d'Analyse des Systèmes - ENSIAS, Software Engineering, Morocco

Employment

- *1994 - now: Professor, ENSIAS, Rabat*
- *1989 - 1994: Associate professor, Faculty of Science, Rabat*
- *1978 - 1985: Assistant professor, Faculty of Science, Rabat*

Work experience

- *2003 – 2007:Director of ENSIAS Ecole Nationale Supérieure d'Informatique et d'Analyse des Systèmes)*
- *2008 - 2010 : Member of the MEDAR consortium (European Commission's INCO-MED program)*
- *2005 - 2006 : Member of the NEMLAR consortium (European Commission's INCO-MED program)*
- *2004-2006 : Member of the scientific council of the Avicenna Project (Eumedis program)*

Education

- *1985 : Doctorat d'Etat in computer science, Faculty of Science Rabat, Morocco*
- *1978 : Doctorat 3ème cycle in computer science, Faculty of Science, Toulouse, France*

Teaching domains

- *Operating systems, Speech synthesis and recognition, Human machine interface*

Research topics

- *Speech analysis and synthesis, Text categorization, Human language technology, Language resources production*

Professional association membership

- *Founder of the scientific association MIPS (Maghrebian Information Processing Society)*
- *Member of the AUSIM association – Morocco*

Contact email: mouradi@ensias.ma

About our organisation

Established in	1992
Number of staff	100
Our Web Address	www.ensias.ma

Our activities:

Overview of the department	Founded in 1992, ENSIAS is the Moroccan leader in Computer Science Education. ENSIAS Focuses in Higher Education and Research in the field of Computer Science.
Our main ICT RTD Topics	• Work-flow • Web Services • Business Process management • Data-warehousing • Computer Supported Cooperative Work • Model Driven Architecture • Quality methodologies for Software Engineering • Security • Networks • Multimedia • SOA • Business Intelligence Networks • Software Development • Speech analysis and synthesis • Machinetranslation

Our FP7 ICT Focus is on:

Challenge 1: Pervasive and Trusted Network and Service Infrastructure

Challenge 3: Alternative Paths to Components and Systems

Challenge 4: Technologies for Digital Content and Languages

Challenge 6: ICT for a Low Carbon Economy

Challenge 8: ICT for Learning and Access to Cultural Resources

Some Facts and Figures

Number of reviewed publications over the past 3 years (approximate)	200
Number of researchers in the department	46
Number of Master Degrees awarded over the last 3 years	40
Number of PhDs awarded over the last 3 years	4
Number of current Master Students	30
Number of current PhD Students	106
Number of completed collaborative projects during the past 5 years	50
Number of ongoing collaborative projects	26
Total number of projects funded by the European Union (EU)	4
by the following programmes:	2 Tempus & 2 FP7
Total number of projects funded by other agencies or governments	22

Networking

Total number of own researchers we sent abroad to do research	5

Imad Khatib: Palestine Academy for Science and Technology, Palestine Academy for Science and Technology, Palestine

Education:
1995-1998 Ph.D. Environmental Modelling Technology, University of Karlsruhe (TH) / Germany
1988-1990 M.Phil. Energy Engineering, Cardiff University / United Kingdom
1980-1985 B.Sc. Mechanical Power Engineering, Helwan University / Egypt
Employments:

- *1999 - Now: Associate Professor / Faculty of Engineering and Technology, Palestine Polytechnic University*
- *January 2001 - Now: Secretary General ,Palestine Academy for Science and Technology*
- *2006 - 2009: Dean of Graduate Studies and Research, Palestine Polytechnic University*
- *September 1999 - Now: Director of Renewable Energy and Environment Research Unit, Palestine Polytechnic University*
- *2001 - 2005: Director of the Scientific Research Department, Palestine Polytechnic University*

Awards:

- *The British Council Award, 1987*
- *The German Academic Exchange Services (DAAD) Award, 1994*
- *Recognized by the 'International Who's Who' as a distinguished professional and been included in their 1999 International Who's Who edition.*

Contact email: ikhatib@palestineacademy.org

About our organisation

Established in	1998
Number of staff	10
Our Web Address	www.palestineacademy.org

Our activities:

Overview of the department	**Palestine Academy for Science and Technology** is an independent, not-for-profit organization with its headquarter in Jerusalem and branches in Ramallah and Gaza. Established by the presidential decree No. 114 in 1997 and reconfirmed by the presidential decree No. 13 in 2004, in which the Academy is mandated to be the primary science and technology body in the country in charge of providing advice in formulating policies, programs and projects to support national development and participating in the coordination of relevant scientific and technological (S&T) activities. As a result, the Academy constitutes the focal point and an umbrella for science and technology. Mission Statement: The academy aims at institutionalizing scientific and technological research in Palestine, promoting scientific discovery and innovative technological advances, in addition to fostering the use of science and technology in various domains. Furthermore, it aspires to obtain a fundamental role in coordinating scientific efforts between the private and the public sectors in order to encourage a strong national economy that is globally competitive through the support of the Palestinian science and technology base and partnerships with governmental, non-governmental, local and international bodies.
Intl. projects	The Join-MED project funded by the European Commission in the context of the "Information & Communication Technologies"
Intl. projects	Ma-Pi type 2 Mellitus Diabetes Project in Palestine in cooperation with Italian Organization UPM
Intl. projects	Promoting Academic-Industrial partnership in Palestine and Assessing Innovation Status by using Community Innovation Survey in Palestinian Industries

Our FP7 ICT Focus is on:

Challenge 4: Technologies for Digital Content and Languages

Challenge 5: ICT for Health, Ageing Well, Inclusion and Governance

Challenge 6: ICT for a Low Carbon Economy

Challenge 10: International Cooperation

Mahmoud Hawamdeh: AL-Quds Open University, Information and Communication Technology Center (ICTC, Palestine

Mahmoud Hawamdeh is currently working as Head of Training and Development at the Information and Communication Technology Center (ICTC), Al-Quds Open University. His duty and responsibility is to design and supervise the implementation of ICT training programmes conducted by the ICTC. He responsible for the overall direction, development, coordination and supervision of the Training and Development Department which provides a broad range of courses on a variety of subjects in Information and Communication Technology (ICT).

Prior to joining Al-Quds Open University, Mr. Hawamdeh worked as training manager at Arab Technology Systems (ATS) where he was responsible for all training programmes offered by ATS. He has participated in the training planning and managing and documentation for the systems for Jerusalem District Electricity Company; 2002, Southern Electricity Company; 2003, Hebron University; 2003, Number of Municipalities in the West Bank and Gaza Strip; 2000 and a variety of training programs supported by AED, ANERA, USAID, Deloitte Touche Tohmatsu and many others.

In his professional career, Mr. Hawamdeh has delivered several presentations at various conferences and events including a presentation at Online Educa Berlin 2007 (The 13th International Conference on Technology Supported Learning & Training), which took a place in Berlin, Germany in November 2007. The presentation focused on The Future of E-training Technologies in Al-Quds Open University (www.online-educa.com).

Contact emails: mahmoud.hawamdeh@gmail.com;mhawamdeh@qou.edu

About our organisation

Established in	1991
Number of staff	1500

Our activities:

Overview of the department	**Al-Quds Open University - Information and Communication Technology Center (ICTC)** ICTC was established in 1998 following a decision from the university council. It is considered as one of the most important centres that serve the university in all technological and communication aspects. It has the responsibility of technical development of programs regarding administration, financial, academic, and community service. It links the university to the most up-to-date technological resources. The University has the most extensive and elaborate technology network in the West Bank and Gaza Strip. ICTC consists of four departments: Networking and Technical Support, Training and Development, Software Engineering, and Multimedia and Graphic Design. Achievements ICTC has achieved many projects that serve its objectives. Some of these projects are summarised as follows: • Hosting the Eumed-Connect line; a direct link between UK and Palestine with 45Mbps shared between the Palestinian Universities. • Development of the e-courses hosted on Avicenna Portal Project funded by Eumedis and European Union. http://pleiad.qou.edu. • Signing an agreement with Toulouse University to cooperate in educational multimedia development. • PEDEX 2007 and 2008: ICTC was responsible for the organization of QOU participation in Palestine 3rd Educational Exhibition 2007. ICTC was also involved in the organization of QOU participation in cooperation with PR department in Palestine 4th Educational Exhibition 2008. QOU was the Silver Sponsor for PEDEX 2008.
Intl. projects	TEMPUS/RUFO Project; EUMED-Connect Project
Our main ICT RTD Topics	• Pervasive and Trusted Network and Service Infrastructures • E-Learning & Digital Libraries
Research Groups	Intelligence E-learning Platform for Open and Distance learning. This research is focus to have integrated a secure e-learning platform which can serve the open and distance learning organization.

Our FP7 ICT Focus is on:

Challenge 1: Pervasive and Trusted Network and Service Infrastructure

Challenge 4: Technologies for Digital Content and Languages

Challenge 5: ICT for Health, Ageing Well, Inclusion and Governance

Some Facts and Figures

Number of researchers in the department	2
Number of Master Degrees awarded over the last 3 years	4
Number of PhDs awarded over the last 3 years	1
Number of current PhD Students	1
Number of completed collaborative projects during the past 5 years	2
Number of ongoing collaborative projects	1
Total number of projects funded by the European Union (EU)	3
by the following programmes:	Avicenna Portal Project funded by Eumedis , RUFO is a TEMPUS-MEDA, Eum-edconnect

Mohamad Nawar AL-AWA: Damascus University, Faculty of IT Engineering - Networking Department, Syria

PhD in Electronic Systems

Qualification

- *1992-1995: PhD in Electronic Systems from INPG (Institut National Polytechnique de Grenoble)- France.*
- *1988- 1991: Engineering degree from ENSERG (Ecole Nationale supérieure d'Electronique et de Radio-électricité de Grenoble)- INPG-France.*
- *1991: Higher Studies Diploma (DEA) in Electronic Systems from INPG.*

Professional experience

- *2009 - now: Editor in Chief of Research Journal of Engineering Sciences (University of Damascus)*
- *2005-2009 : Dean of IT Engineering Faculty- University of Damascus*
- *2005: Associate Professor at the Department of Networking – Faculty of IT Eng. - University of Damascus*
- *2005- Now: lecturer at the IUST (International University of Sciences and Technology)- Damascus – Syria.*
- *2003-2004: General Manager of SYRONICS (Syrian Company for Electronic industries)*
- *2002- 2003: main researcher at the SSRC (Scientific Studies and research center) – Damascus – Syria*

Main Publications

Studies

- *"Building Trust in e-services in the ESCWA region"- ESCWA – 2008*
- *"Future of ICTs" – Arab Knowledge Report – UNOPS – 2008*
- *Many published studies in Arab Encyclopaedia in the ICT sector.*

Papers

- *"Digital divide Indicators" – Arab Academy Annual Conference – Damascus – 2006*
- *"ICT in Syrian Higher Education", ICT Policy Makers Workshop-ESCWA Beirut 2006*
- *"A parallel architecture for image processing" – 1st Syrian-Lebanese engineering conference – Damascus – 1999.*
- *"An open bus for real-time vision applications"- Real-Time Imaging Journal, Academic Press, 1998.*
- *"The DRIFT-bus architecture", IEE Conference on Image Processing and its Applications, UK, 1995.*

Other activities

- *Board Member in SCS (Syrian Computer Society) since 2007*
- *Member in the Board of Trustees of ICT Incubator since 2006*
- *Member in IAJIT editorial board*

Contact emails: alawan@scs-net.org; nawar.alawa@gmail.com

About our organisation

Established in	2000
Number of staff	10
Our Web Address	www.damasuniv.sy

Our activities:

Overview of the department	Administratively, it is part of the faculty of IT Engineering at the Damascus University. The number of permanent staff is 4. However, there is about 15 outside lecturers from other institutions (like HIAST) participating in the department activities The number of undergraduate students is about 100, and the number of postgraduate students is about 40. We are planning to develop a new master program in network and system security. Staff members are participating in consulting activities for different public and private institutions in the country.
Intl. projects	We have a joint-master in advanced telecom engineering with Telecom Bretagne
Our main ICT RTD Topics	• LAN/WAN modeling and simulation • Computer system performance • Wireless Networks (routing and security) • Operating Systems

- Video/Audio Transmission over Networks
- Mesh Networks
- Adhoc Networks
- Network Management and Security
- Real-time systems

Our FP7 ICT Focus is on:

Challenge 1: Pervasive and Trusted Network and Service Infrastructure

Challenge 3: Alternative Paths to Components and Systems

Challenge 5: ICT for Health, Ageing Well, Inclusion and Governance

Challenge 8: ICT for Learning and Access to Cultural Resources

Some Facts and Figures

Number of reviewed publications over the past 3 years (approximate)	12
Number of researchers in the department	4
Number of Master Degrees awarded over the last 3 years	2
Number of current Master Students	50
Number of ongoing collaborative projects	1
Total number of projects funded by other agencies or governments	1

Said Desouki: HIAST, Informatics, Syria

Education

- *1994–1997 UJF (University Joseph Fourier) Grenoble, France: Ph.D. Thesis in Computer Science "Deductive and Active Aspects in Databases and Knowledge Bases: Attributes Derivation and Maintenance."*
- *1993–1994 INPG (Institute National Polytechnic Grenoble) France: D.E.A. in Computer Science.*
- *1991–1992 HIAST (Higher Institute of Applied Science and technology) Damascus, Syria: D.E.S in Computer Science.*
- *1986–1991 HIAST Damascus, Syria: M. Sc. in Computer Engineering.*

Professional Experience

2008-2009 HIAST Damascus, Syria

- *Member in the work team of "Arabic Interactive Dictionary" project.*
- *Leader of work team of "Morphological Arabic Analyzer" project.*
- *Teacher of the Advanced Database Course for 4th Year Informatics*
- *Teacher of Database for 4th Year Communication + Informatics*
- *Teacher of Algorithms & advanced data structures, 4th Year Informatics*

Recent Publications

1. *"Arabic Morphological Analysis: a New Approach", Proceeding of the International Conference of Information and Communication Technology from Theory to Applications ICTA08, Damascus, April 2008.*
2. *"Information systems in Syria", cooperation with Dr. Ghaida Rebdawi, Info Magazine, Syrian Computer Society, No. 13, Mars 2007.*
3. *"Win-Win Theory in Software Project management", Info Magazine, Syrian Computer Society, No. 8, October 2006.*

Contact email: said.desouki@hiast.edu.sy

About our organisation

Established in	1985
Number of staff	68
Our Web Address	www.hiast.edu.sy

Our activities:

Overview of the department	The department performs a number of tasks and projects for the interest of various parties. It also takes part in the teaching process in some Syrian universities due to co-operation agreements. The department has a number of researchers, well-qualified engineers and technicians. It supports the other departments in teaching the department-related subjects. Its main tasks can be summarised as follows: Research and Development, and Teaching activities in the following topics: Software engineering Programming languages Operating systems Information systems Web applications development Networks Arabic language processing Databases The department performs tasks and projects for the benefit of public sectors. It also conducts co-operation projects with the European Union.
Our main ICT RTD Topics	Specialized database systems. Software engineering and its application. Arabic language processing. Networks. E-learning
Research Groups	Database group (15 persons) Software engineering group (20 persons) Networking group (12 persons)

Our FP7 ICT Focus is on:

Challenge 1: Pervasive and Trusted Network and Service Infrastructure

Challenge 2: Cognitive Systems and Robotics

Challenge 3: Alternative Paths to Components and Systems

Challenge 4: Technologies for Digital Content and Languages

Challenge 5: ICT for Health, Ageing Well, Inclusion and Governance

Some Facts and Figures

Number of researchers in the department	13
Total number of projects funded by the European Union (EU)	10
by the following programmes:	FP6, FP7, EUMEDIS

Sihem GUEMARA: École Supérieure des Communications de Tunis - Sup'com, Sécurité Numérique, Tunisia

Sihem Ghemara El Fatmi *received her PhD in Computer Science in 1983 and her MS from Université Pierre et Marie Curie, Paris VI in 1981 and BS from Faculty of Sciences in Tunis. She joined Faculty of Sciences as Assistant in 1984 and Assistant Professor and then Higher School of Communications Sup' COM, Tunis since 2000. She is currently teaching as Professor at Higher School of Communications and Polytechnic School of Tunisia. As researcher, Pr. Guemara is founding member of research unit "Communication Networks and security" and member of "Numeric Security" research unit. She is also member of research projects with European institutions and in charge of research projects assessment at national and international levels. She has served on technical program committees of various international conferences and as reviewer of academic journals. She supervises as examiner for postgraduate students and managed two sessions of "Challenge Entrepreneurship Projects" (2009 & 2010). Pr. Guemara has been member of several committees at Ministry of Higher Education for implementation and various reforms of engineers' training and master courses. She is founding member of "Telecom Scientific Society" (NGO).*

Pr. Guemara is Director of Higher School of Communications Sup' COM since April 2010.
Contact email: sihem.guemara@supcom.rnu.tn

About our organisation

Established in	2005
Number of staff	31
Our Web Address	http://www.supcom.mincom.tn/fr/index.htm

Our activities:

Overview of the department	**International competition** Participation in the contest for the best Arab plan for the establishment of an innovative, organized by the "Massachusetts Institute of Technology (MIT). The team's research unit, Digital Security, has participated in the contest, as part of the proposed creation of an innovative company called "Digital Security Innovation (DSI). 1241 candidates from 17 Arab countries participated in the contest and the draft proposed by the research unit has not only reached the final, but the company "ISD" was perceived by a jury, as being among the most innovative 9 finalists in this competition in 2009. **Mentoring doctoral students** The senior members of the research unit have provided over the last 5 years supervisory activity that resulted in obtaining a large number of Masters degrees in telecommunications and theses in information technology and communication. **Publications:** Nearly one hundred scientific papers have been published in international conferences and nearly two dozen papers in international journals indexed. Depending on the software bibliometric tool that uses Google 'Publish or Perish' "http://www.harzing.com/ Scholar to measure the impact of publications, it is noted a total of more than 1000 citations to these publications. **Patents** Registration of patents at the national and international, the latest patent covers a new method for validating configuration files firewalls to make them more effective. **Openness to international cooperation:** Several actions have been made by the senior team at international level. You can quote the example of two Japanese students in the premises of the team for training. Similarly, intensive courses were taught by team members at foreign universities such as universities in Japan, Canada and France.
Our main ICT RTD Topics	• Cryptography and steganography • Security services, information systems and networks • Certification of telecommunications software and security protocols. • detection systems and intrusion prevention • Methods and Tools for security in distributed systems • Configuring firewalls for maximum security of networks • Administration of a security policy • Security in a broadband environment

	• Opticalnetworking
Research Groups	Security software: “Security Equipment Advisor”: is an innovative cross platform software for managing, auditing and correcting network security equipments. In addition of managing security equipments our software can: • Detect and correct syntactical anomalies on security equipments configuration; • Detect and correct semantic anomalies on security equipments configuration; • Check and correct the conformity of security equipments configuration (firewall, IDS, etc…) with respect to security policies. • Safe deploy security policies on real time (without causing a down of services).

Our FP7 ICT Focus is on:

Challenge 1: Pervasive and Trusted Network and Service Infrastructure

Some Facts and Figures

Number of researchers in the department	31
Number of Master Degrees awarded over the last 3 years	9
Number of PhDs awarded over the last 3 years	10
Number of current PhD Students	10
Number of completed collaborative projects during the past 5 years	7

Jawhar FERJAOUI: Centre National de l'Informatique - CNI, , Tunisia

Diplomas:

- *Engineer in computer science and communication.*
- *Ecole supérieure des communications de Tunis SupCom*
- *Professional certifications: Certificate of authentification on CISCO products level ACRC.*
- *Current responsibilities: General manager of the Centre National de l'Informatique (CNI), Tunis.*

Previous positions and evolution of the professional career:

Professional posts:

- *Head of personal staff of Minister of Communication Technologies (April 2009-August 2010) .*
- *General Manager of the Digital Economy in the Ministry of the Communication Technologies (August 2008-April 2010).*
- *Manager of Organization, Methods and computer science in the Ministry of Social Affairs, Solidarity and Tunisians Abroad (May 2006-August 2008).*

Nominations in Ministries Staffs:

- *Representative of the Minister of Communication Technologies (August 2008-August 2010).*
- *Head of the computer science Security Cell with the staff of the Minister of Social Affairs, Solidarity and Tunisians Abroad (June 2007-August 2008)*
- *Responsible of the computer science and the Communication Technologies with the Minister of Social Affairs, Solidarity and Tunisians Abroad (February 2002-August 2008).*
- *Coordinator of the technical Unit for the follow-up and the support of the computer science application for Health Insurance in the Minister's Personal Staff (October 2001-August 2008).*
- *Coordinator of the communication service with the staff of the Minister of Social Affairs, Solidarity and Tunisians Abroad (October 2001-August 2008).*

Main projects:

- *Contribution to the promotion of the computerized system for Public health.*
- *Setting up of Medical projects "telemedicine" between Tunisian and foreign hospitals 1996-2001(13 projects).*
- *Conception and setting-up of the project of the virtual Medical library 1998-1999.*
- *Development of the social security system online 2001-2004.*
- *Conception, setting up and follow-up of the computing system of health security 2001-2008.*
- *Contribution to the partnership with CISCO and the opening of its first representative in Tunisia.*
- *Contribution to the support of Microsoft in the running up of the National Program "BIZPARK" that promotes Tunisian successful projects.*

Contact email: directeur.general@cni.tn

About our organisation

Established in	1975
Number of staff	198
Our Web Address	www.cni.nat.tn

Our activities:

Overview of the department	• Adopt information systems and applications of the Administration. • Insure the exploitation and the development of the National Inter Administrative Network. • To be a support with the public structures for installing and exploit information systems. • To participate in the supply of the electronic exchanges service to the public structures. • To take part to the international demonstrations.
Intl. projects	MED-IST
Intl. projects	JOIN-MED
Intl. projects	MEDRESSA I & II

Muslim Bozyigit: Middle East Technical University, Computer Engineering, Turkey

Dr. Muslim Bozyigit is currently a full professor of Computer Engineering Department, Middle East Technical University-METU. He has received his PhD from Westminster University, London, in 1979 in computing, BS and MS from Middle East Technical University in 1969 and 1972 respectively, in engineering. His research interests are computer networking, distributed computing, and operating systems. Currently he is involved in wireless ad-hoc networking issues and distributed synchronizations. He has over sixty publications.

Few of his recent publications are as follows:

1. *Bozyigit, M., Wasiq, M., "User-level process checkpoint and restore for migration,"ACM SIGOPS Operating Systems Review, 35(2), pp.86-96, 2001.*
2. *G. A. SHAH, Ö. B. AKAN, M. BOZYIGIT, "Multi-Event Adaptive Clustering (MEAC) Protocol for Heterogeneous Wireless Sensor Networks", in Proc. Fifth Annual Mediterranean Ad Hoc Networking Workshop (MedHoc-Net), June 2006.*
3. *A. OKUTANOGLU, M. BOZYIGIT ," Time Management in Dynamically Clustered Federation Communities" 2006 Fall Simulation Interoperability Workshop, Fall 2006.*
4. *A. OKUTANOGLU, M. BOZYIGIT ,"Proximity-Aware Synchronization within Federation Communities," 10th ACM/IEEE DS-RT, October 2, 2006.*
5. *G. A. SHAH, M. BOZYIGIT, DEMET AKSOY, "RAT: Routing by Adaptive Targeting in Wireless Sensor/Actor Networks", in Proc. Second IEEE/ACM International Conference on COMmunication System softWAre and middlewaRE (COMSWARE), January 2007.*
6. *G. A. SHAH AND M. BOZYIGIT, "Exploiting Energy-aware Spatial Correlation in Wireless Sensor Networks", 2nd International Workshop on Software for Sensor Networks (SensorWare 2007), January 2007.*
7. *Bokar A, Bozyigit M, Sener C, "Scalable Energy-Aware Dynamic Task Allocation", Title: Scalable Energy-Aware Dynamic Task Allocation Conference Information: 23rd International Conference on Advanced Information Networking and Applications Workshops, Pages: 371-376, MAY 2009.*
8. *G. A. Shah, M. Bozyigit, F. B. Hussain "Cluster-based coordination and routing framework for wireless sensor and actor networks" Wireless Communications and Mobile Computing, Article first published online : 8 DEC 2009.*

Contact email: bozyigit@metu.edu.tr

About our organisation

Established in	33
Number of staff	36
Our Web Address	http://www.metu.edu.tr

Our activities:

Overview of the department	The Computer Engineering department of METU, established in 1978, is the biggest computer engineering department in Turkey as regards the number of faculty members and postgraduate students. We carry out research activities and community services in our department with education taking centre stage. We expect increasing research activity thanks to the increasing support opportunities. The objective is to provide a national contribution in addition to the global contribution. Our academic staff currently consists of 28 faculty members and lecturers with PhD degrees, 32 research staff and approximately 20 full-time project research staff. In addition to the undergraduate program of about 500 students, we also provide three masters and one doctorate programs with an enrolment of approximately 350 students.
Our main ICT RTD Topics	Artificial Intelligence Bioinformatics Computational Linguistics DBMS Design of Algorithms Electronic Commerce Image Processing & Pattern Recognition Networking & Mobility Grid Computing Computer Vision Computer Graphics and User Interfaces

	Parallel and Distributed Systems & Algorithms SoftwareEngineering System Simulation Security
Research Groups	Image Processing and Pattern Recognition, KOVAN (CooperatiVe and CognitiVe Agents, LcsL (Laboratory for Computational Studies of Language), Bioinformatics and Computational Biology, Parallel Computing, FOOMM (Fuzzy Object Oriented MultiMedia Modeling), Intelligent Systems, METU–SRDC (Software Research & Development Center), MODSIMMER (METU - Turkish Armed Forces Modeling Simulation Research and Development Center)

Our FP7 ICT Focus is on:

Challenge 2: Cognitive Systems and Robotics

Some Facts and Figures

Number of researchers in the department	28
Number of Master Degrees awarded over the last 3 years	50
Number of PhDs awarded over the last 3 years	20
Number of ongoing collaborative projects	10

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