



**Information
Management
Unit**

www.imu.iccs.gr



***enabling the knowledge
organization***

IMU is a research unit of ICCS
(Institute of Communication and Computer Systems)
of the National Technical University of Athens

National Technical University of Athens (NTUA)

- NTUA is the **oldest and most prestigious educational institution** of Greece in the field of technology
- NTUA has contributed unceasingly to the country's scientific, technical and economic development since its foundation in 1836.
- NTUA is divided into **9 academic Faculties**
 - eight being for the engineering sciences, including architecture, and one for the general sciences



- Basic figures:
 - 700 academic staff
 - 140 scientific assistants
 - 260 administrative and technical staff
 - about 8500 undergraduate students
 - about 1500 graduate students



Institute of Communication & Computer Systems

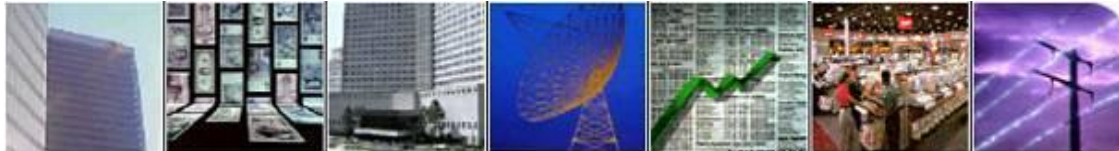
■ Research Institute

- associated to the Department of Electrical & Computer Engineering (DECE) of the National Technical University of Athens (NTUA)

- Established in 1989 by the Ministry of Education of Greece and NTUA

■ Carries out RTD activity in the fields of

- Computer and telecommunications systems and techniques
- their applications in a variety of domains



- The active research personnel of ICCS consist of

- 80 faculty of DECE/NTUA,
- 25 senior researchers and
- 150 researchers

- ICCS is active in basic and industrial research activities

- ICCS ranked 13th in the top 20 participants of the EC/IST 1st and 2nd calls (with institutions like Fraunhofer, Daimlerchrysler, Siemens, France Telecom, CNRS, Philips, BT, etc)

IMU - Information Management Unit

- IMU is an **multi-disciplinary unit** engaged in research and technology development activities in **Information Technology Management**.
- Our mission is **to enable the development of knowledge-driven organisations**



- We design, develop and validate innovative models, methods and tools that leverage the *creation, sharing and use of information and knowledge* at the individual, team and organisational levels.
- Our aim is to promote scientific results and enable value creation in **e-government** and **e-business** efforts

- **IMU is a member of:**



- **STI International**, a collaborative association of scientific parties which share the vision of establishing semantics in modern computer engineering



- **NESSI** the European Technology platform dedicated to Software and Services

The way we work

- Our work encompasses **applied research** and is **multi-disciplinary** in nature.
- We adopt **field-based** and **action research** approaches.

- The **life-cycle of our research activities** includes:



- **Theory building** with conceptual frameworks and mathematical models
- **Design, prototyping and development** of Information and Communication Technology (ICT) systems
- Redesign and **performance management** of organizational structures and processes
- **Experimentation and evaluation** with case studies and field experiments
- Technology and **know-how transfer** in order to build long-lasting impact

Technologies we work with

■ Knowledge and semantic technologies

- Ontology-based intranet systems
- Corporate taxonomies and knowledge maps
- Context-aware business processes management
- Semantic portals
- Web service-based knowledge discovery



■ Web-based and service-oriented computing

- Service-oriented architectures
- Life-cycle of semantic web services
- Peer-to-peer systems and infrastructures
- Quality of service in web services
- Grid computing infrastructures

■ Groupware and workflow management

- Weakly-structured workflow management systems
- Component-based distributed workflow design
- Virtual shared collaborative workspaces
- Semantically-enhanced groupware tools
- Group Decision Support Systems



Application domains



■ Knowledge Management

- Personal Information Management
- Competence management
- Knowledge-intensive business processes
- Holistic corporate Knowledge Management
- Virtual communities and social networks
- Integration of KM and e-learning approaches

■ E-government

- One-stop-shop e-government service provision portals
- G2B and G2C transactional systems
- Government process re-engineering
- Change management in public administrations
- E-participation and e-consultation



■ E-business

- Management of virtual organizations
- Enterprise Application Integration
- Electronic trading of information products and services
- Healthcare Information Management Systems
- E-contracting and e-negotiation systems

People

- **Three (3) faculty**

- Professor in Information Technology Management
- Assistant Professor in Decision Support Systems
- Lecturer in e-business

- **Seven (7) senior researchers**

- post-doctoral researchers
 - Ph.D.s in Electrical and Computer Engineering
 - and post-graduate diplomas in:
 - Business Administration and
 - Information Technology



- **Twelve (12) researchers and PhD students**

- with diploma degrees in engineering and post-graduate diplomas in:
 - Business Administration
 - Information Systems
 - Computer Engineering
 - Telecommunications

Research activities

- Since its establishment IMU contributed actively in **more than thirty (30) research and development projects**

- Twenty five (25) projects were successfully completed during the 1997-2009 period
- Seven (7) projects are active during the 2010-2012 period

- The total funding of IMU since 1997 exceeds **8,0 million euros**

- Our work is funded by these programs and institutions:



- **Information Society Technologies** initiative of the research Framework Programs of the European Commission

- www.cordis.lu/ist



- Operational Program for the **Information Society** of the Greek Ministry of Economy and Finance

- www.infosoc.gr



- Research programs of the **General Secretariat for Research and Technology** of the Greek Ministry of Development

- www.gsrt.gr

Research in Knowledge Management

- In Knowledge Management we adopt multi-disciplinary approaches that aim to **enable individuals, teams and entire organizations to collectively and systematically create, share and apply corporate knowledge** to better achieve organizational efficiency, responsiveness, competency and innovation.



Nepomuk

- social semantic desktop
- Jan 2006 – Dec 2008



Decor

- process-oriented KM
- June 2000 – July 2002



Team

- knowledge sharing for software development
- Sep 2006 – Feb 2009



Inkass

- platform for exchanging explicit knowledge assets
- March 2002 – February 2004



Laboranova

- collaborative work for innovation management
- June 2006 – Nov 2009



Rocket

- roadmap for convergence of KM and e-learning
- June 2001 – July 2002



Compete

- competency management
- Nov 2005 – Dec 2008



KnowNet

- Integrated method and tool for Knowledge Management
- October 1998 - March 2000

Research in Social Computing

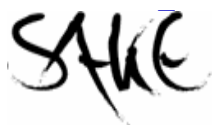
- In Social Computing we develop methods and tools that provide **computational facilitation of the social dynamics between human (and artificial) agents** and enable crowdsourcing mechanisms at organizational- and web-scale.
- **Recommenders**
 - Context-aware recommenders
 - Fuzzy preferences
 - Linguistic term-based
 - Multi-criteria recommenders
- **Social Computation**
 - Collaboration patterns
 - Group dynamic & decision making
 - Cross-organizational collaboration
- **Social Media**
 - Social information extraction, representation and mining
 - Latent topic modelling
- **Opinion Analysis**
 - Opinion mining & aggregation
 - Sentiment Analysis
 - Electronic word-of-mouth
- **Organik**

 - **Enterprise KM system that integrates semantic and social software applications**
 - (Sep 2008 – Aug 2010)
 - Based on open source Drupal CMS
 - LDA for search & recommendations
 - <http://www.organik-project.eu/>
- **Laboranova**

 - **collaborative work for innovation management**
 - (June 2006 – June 2010)
 - Prediction market for idea evaluation
 - Computational agents process social media info and predict Oscars awards and FIFA World Cup winners
 - www.imu.ntua.gr/software/socialmediapredict

Research in E-government

- In e-government we aim to help government become more effective and responsive to citizens. Our vision is “**smart e-government**”, i.e. a government which provides intelligent dynamic and interactive services to spatially and socially mobile citizens and businesses by exploiting its internal knowledge.



Sake

- Framework and tools for **agile knowledge-based government**
- March 2006 – February 2009



NetForce

- Development of **Regional Information Society**
- Jan 2006 – June 2007



Fit

- **semantically-enriched self-adaptive e-government**
- Jan 2006 – June 2008



Youth

- support for the **e-government portal** of the General Secretariat of Youth
- April 2005 – June 2006



Demo-net

- Network of Excellence in **e-participation**
- Jan 2006 – Dec 2009



Cb-Business

- intermediation platform for **service models in G2B transactions**
- March 2002 – Feb 2004

Research in E-business

- e-business is the conducting of business on the Internet, not only buying and selling but also servicing customers and collaborating with business partners.
- We are active in **e-business research** in the following focus areas: enterprise application integration and **virtual supply chains**, electronic trading of **e-services** and e-contracting and e-negotiation systems.



Synergy

- Knowledge-based collaboration in **virtual organizations**
- Feb 2008 – Jan 2011



Ride

- **Roadmap for semantic interoperability in e-health**
- Jan 2006 – Dec 2007



Fusion

- Framework and tools for **semantic Enterprise Application Integration**
- Feb 2006 – July 2008



Supplypoint

- One-stop shop service for **dynamic virtual supply chains** in electronic tendering
- June 1998 – May 2000



WebNews

- **personalized news service** across different media
- June 1999 – Dec 2000

Publications and dissemination activities

- more than 80 papers in international journals and three (3) books



- more than 120 articles in international conferences



- co-organised ten (10) conferences, workshops and symposia in KM and e-government



- more than 60 presentations in seminars and articles in popular magazines





Information Management Unit

Contact

Prof. Gregoris Mentzas
IMU — Information Management Unit
National Technical University of Athens
9, Iroon Polytechniou street
Zografou Campus
157 80 Zografou
Athens, Greece
Greece

W: www.imu.ntua.gr
E: imu@softlab.ntua.gr
T: +30 210 772 3895
+30 210 772 2415
F: +30 210 772 4042

Visit our site: <http://www.imu.ntua.gr>

