

## Who we are?

The project consortium is formed by higher education institutions (2 universities from Romania and Greece), 2 research centres (from Greece and Spain), an emergency hospital (from Romania), all with great experience for both aspects (orthopedy and biomedical engineering), with demonstrated skills, recognized expertise and competence required to carry out all aspects of the proposed project.

The project is coordinated by the University of Craiova, Romania.



## What is ORTHO-eMAN ?

ORTHO-eMAN (A web-based e-training platform for Extended Human Motion Investigation in Orthopedics) is a two year European funded project (LLP/LdV/ToI/2011/RO/008) aiming to close the gap between engineering and medicine, by

creating a new e-learning environment for human motion analysis. For this reason, the project aims to offer to orthopedic doctors and engineers interested in medical field, a common learning tool, with interdisciplinary approaches using learning methodologies and experience from previous EU project, recte The e-MedI – Virtual Medical School.

The 2-year ORTHO-eMAN project will finish in January 2014.



## What we are going to do?

Together we aim to develop a web site in English and partners languages and a virtual educational center that will provide on-line education and training materials.

The main objective of the project consist in developing of a web-based e-training platform which is interprofessional in outlook, interdisciplinary in approach, intercultural in background, interactive in

design and international in scope. The project's on-line training platform will provide a repository of training material with real clinical case studies using digital imaging and accompanying notes, an interactive multimedia database system containing full reports on patients receiving orthopedic treatment linked to an image database of static and dynamic measurements of walking.

Using of an Authoring Tool we will create Test Cases that consist of patient's general information and a set of consecutive stages. Each Stage is a data point in patient's diagnostic time line. Each stage is associated with one or more visual content objects (i.e. 2D, 3D images and video sequence), which are the acquisition outputs of one of the available modalities (X-RAY, Video processing, Contact pressure pattern). In addition to the visual information, computed data will be also available.



## Consortium

The **University of Craiova** (UCV), project coordinator, offers excellent conditions of study to its 30000 students, in various fields embracing 120 specialisations; provides higher education in the area of Social Care, Economics and Business, Engineering, Health and Rehabilitation. UCV cooperates with international, national institutions, local government agencies, SMEs. The integration in the European academic structure is carried out through cooperation programmes such as LLP, and development of foreign partnerships in the European Space of Higher Education. UCV is affiliated to prestigious international academic association: EUA-European University Association, IAU-International Association of Universities etc.  
<http://www.ucv.ro/>

**Democritus University of Thrace** (DUTH) is a state Institution, founded in 1973. It was named after the Greek Philosopher Democritus. The central administration of the University is in Komotini, but there are campuses in Komotini, Xanthi, Alexandroupolis and Orestiada. In Xanthi resides the School of Engineering with five Departments (Department of Civil Engineering, Electrical & Computer Engineering, Environmental Engineering, Architectural Engineering and Production and Management Engineering). The total number of University students is about 18000 while the School of Engineering has a total enrolment of about 1000 undergraduate students and 200 postgraduate students.  
<http://en.ee.duth.gr/>

**The National Centre for Scientific Research "Demokritos"** (NCSR) is the largest research centre in applied sciences and engineering in Greece. NCSR is the home of the Greek National Host, a major node in the Greek National Research

and Technology Network (GR-Net) and a protagonist in the development of telecommunications and networking services in Greece. The Institute of Informatics and Telecommunications (IIT) is actively involved in many areas of ICT, including: Computational intelligence, Image processing, Multimedia systems, Broadband wireless networks, e-learning and e-business, Software engineering, etc. Moreover, IIT has a significant expertise in the development of IT systems for biomedical applications.  
<http://www.iit.demokritos.gr>

**Instituto de Biomecánica de Valencia** (IBV) is a research centre dedicated to scientific research, technological development, technical advisory and training in biomechanics. A multidisciplinary team of 250 professionals such as engineers, doctors, informatics, physiotherapists, biologists, social workers, designers, etc compose the Instituto de Biomecánica de Valencia. They have a broad experience in coordination and participation in European projects. They participate in a Master of Biomedical Engineering and offer vocational training on online platform "virtual Campus IBV". IBV has a broad network of contacts with other training centres and professional stakeholders in the orthopedic sector. [www.ibv.org](http://www.ibv.org)

**Clinical Emergency Hospital Bucharest** (SCUB) includes 725 beds in 16 fields of activity, more than 250 specialists and much more residents and trainers. It offers the best conditions for research as in daily clinical practice can be selected a large number of patients who can provide the necessary data study. Its activities include medical services, medical and educational development, continuous medical education. The orthopaedic clinic has more than 30 specialists in trauma and orthopaedics pathology.  
<http://www.scub.ro/>



## A web-based e-training platform for Extended Human Motion Investigation in Orthopedics

### ORTHO-eMAN

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#### Partners:

- University of Craiova (Romania) - UCV
- National Center for Scientific Research "Demokritos" (Greece) - NCSR
- Biomechanics Institute of Valencia (Spain) – IBV
- Clinical Emergency Hospital Bucharest (Romania) – SCUB
- Democritus University of Thrace (Greece) – DUTH

[www.ortho-eman.ro](http://www.ortho-eman.ro)

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