

Joint DELOS - MUSCLE Summer School on

Multimedia Digital Libraries

Machine learning and cross-modal technologies for access and retrieval

About one hundred European universities and research centres have been involved over the last few years in initiatives addressing multimedia data analysis, computer vision and object recognition, multimedia management in large audio and video collections. Presently, two Networks of Excellence, partially funded by the European Commission, are addressing these subjects within the sixth EU Framework Program, namely MUSCLE and DELOS, both coordinated by ERCIM.

MUSCLE is a Network of Excellence that aims at establishing and fostering closer collaboration between research groups in multimedia datamining and machine learning. The Network integrates the expertise of over forty research groups working on image and video processing, speech and text analysis, statistics and machine learning. The goal is to explore the full potential of statistical learning and cross-modal interaction for the (semi-)automatic generation of robust meta-data with high semantic value for multimedia documents.



DELOS is a Network of Excellence designed to coordinate the activities of some leading European teams working in the field of Digital Libraries. In particular, DELOS has a specific task devoted to handling audio, video and non traditional objects within Digital Libraries. This addresses the capture, organisation, storage and management of large amounts of digital information ranging from human knowledge, to culture or even history. The underlying objective of this activity is to provide European researchers with a common knowledge on the state of the art, major research directions and leading new applications for digital libraries.



In the scope of their respective dissemination and training activities, both MUSCLE and DELOS networks have decided to organise a joint summer school to address a shared research agenda through a synergetic approach.

This Joint Summer School was organised from 12 to 17 June 2006 in San Vincenzo, Italy.

Co-organised by CNR Pisa and ERCIM with the support of the University of Florence, INRIA, CWI and the University of Modena, the Summer School on "Multimedia Digital Libraries, Machine learning and cross-modal technologies for access and retrieval" has been a **real success**.



Attracting young researchers as well as some senior researchers from all over Europe, the event addressed the latest scientific breakthrough and emerging research directions.



Relying on the expertise of MUSCLE and DELOS, the summer school presented software tools and research strategies to enable users to move away from labor-intensive case-by-case modelling of individual applications, and allow them to take full advantage of generic adaptive and self-learning solutions that need minimal supervision in the field of new generations of digital libraries.

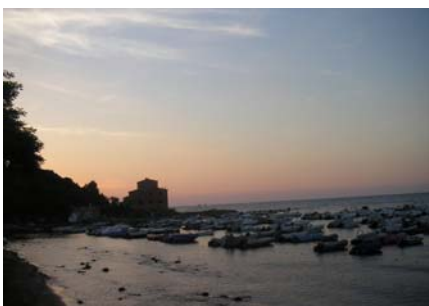
Technologies for multimedia digital libraries span over many disciplines: **information systems, knowledge representation, computer vision, audio and image processing, compression and storage, machine learning and information retrieval, multimedia data mining, cross-media analysis, user interfaces and interoperability**. On these topics, the School program had invited highly qualified lecturers and international researchers, addressing theoretical approaches and practical solutions. Among the leading researchers involved were:

- [James Wang](#) – Pennsylvania State University
- [Fernando Pereira](#) – Instituto Superior Tècnico Lisboa
- [Nicu Sebe](#) – University of Amsterdam
- [Milind Naphade](#) – IBM T J Watson Research Center
- [Alex Hauptmann](#) – Carnegie Mellon University
- [Padraig Cunningham](#) – Trinity College Dublin
- [Jia Li](#) – Pennsylvania State University
- [Alan Smeaton](#) – Dublin City University



Prof. James Z. Wang

Altogether, this Summer School highlighted leading research achievements and improved general knowledge in these fields. It also defined a common vision of future research orientations in multimedia datamining, and provided a significant opportunity to exchange experiences, share views and address common problems. Hopefully, this initiative will stimulate the emergence of new research collaborations.



Scientific Organisation Committee:

- [Alberto del Bimbo](#) - Università degli Studi di Firenze
- [Rita Cucchiara](#) - Università degli Studi di Modena
- [Eric Pauwels](#) - CWI
- [Nozha Boujema](#) - INRIA