

IM2 Newsletter

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News

IM2 Summer Institute

August 31st, September 1-2nd, 2009

Chavannes-de-Bogis, GE

<http://www.im2.ch/summer-institute-2009>

ICMI - MLMI 2009

November 2-6, 2009

Cambridge, USA

<http://icmi2009.acm.org>

KeyLemon

Winner of the Red Herring 100

Germany

Cover Story

CIVR 2009 - Conference co-organised and chaired by IM2 partners

Island of Santorini, Greece, July 8-10, 2009

This year, the CIVR, International Conference on Image and Video Retrieval (<http://www.civr2009.org>), will be held on the Island of Santorini, Greece, July 8-10, 2009. This conference is co-organised by Stéphane Marchand-Maillet (IM2.MCA Head, Viper Group, University of Geneva) and the Informatics and Telematics Institute (MKLAB, ITI, Grece). In addition, other IM2 Partners, such as Daniel Gatica-Perez, Sébastien Marcel (Idiap) and Eric Bruno (UniGe), will be also involved as chairmen. Finally, Prof. Luc van Gool (IM2 Steering Committee member, ETHZ) will be one of the invited speakers in this important meeting.

Image and Video retrieval have now reached a state where successful techniques and applications start flourishing and in which IM2 researchers play a major role. This ACM International Conference on Image and Video Retrieval (ACM-CIVR) series of conferences is an ideal opportunity to present and encounter such developments. Originally set up to illuminate the state-of-the-art in image and video retrieval throughout the world, it is now a reference event in the field where researchers and practitioners exchange knowledge and ideas.

CIVR2009 will present high quality topics addressing innovative research in the broad field of image and video

retrieval. They wish to highlight significant contributions addressing the main problem of search and retrieval but also the equally important related issues of multimedia content management, user interaction and community-based management.

Example topics of interest include but are not limited to: social network information mining, unsupervised methods for data exploration, large scale issues for algorithms and data set generation.

Program

The CIVR 2009 conference will include sessions for presenting high-quality research papers and for sharing practitioner experience. For this purpose it will contain keynote speeches, oral/poster sessions, special sessions, as well as a demo session for demonstration of existing commercial products, systems, and prototypes. The program will also include a practitioner day and, following the success of CIVR 2007, activities like evaluation showcases and VideOlympics.

Invited Speakers

Prof. Luis von Ahn (CMU) and Prof. Luc van Gool (ETHZ and Univ. Leuven) are confirmed as invited speakers.

VideOlympics Showcase

This is real-time demo session of video retrieval systems. The major aim of the VideOlympics is to promote video retrieval research. An additional main goal of the VideOlympics is giving the audience a good perspective on the possibilities and limitations of the current state-of-the-art systems. Where traditional evaluation campaigns like TRECVID focus primarily on the effectiveness of collected retrieval results, the VideOlympics also allows to take into account the influence of interaction mechanisms and the advanced visualizations in the interface. Specifically, VideOlympics is a showcase that goes beyond the



To be continued on page 2

CIVR 2009 (continued)

regular demo session: it should be fun to do for the participants and fun to watch for the conference audience. For all these reasons, the VideOlympics should only have winners. Similar to previous years, a number of TRECVID participants will simultaneously do an interactive search task during the VideOlympics showcase event. For the first time, in the 2009 edition of the VideOlympics a round with novice users will be included, in addition to the round with expert users.

Committee

Conference Chairs: Yiannis Kompatsiaris (ITI, Greece), Stephane Marchand-Maillet (Univ. of Geneva, Switzerland)

Program Chairs: Yannis Avrithis (NTUA, Greece), Noel O Connor (DCU, Ireland), Daniel Gatica-Perez (Idiap Research Institute, Switzerland), Tat-Seng Chua (National University of Singapore, Singapore)

Practitioner Chairs: Edward Chang (Google, China), Sébastien Marcel (Idiap Research Institute, Switzerland), Roelof van Zwol (Yahoo, Spain)

Special Session Chair: Eric Bruno (Univ. of Geneva, Switzerland), Allan Hanbury (Vienna University of Technology, Austria)

Venue

The conference will take place at Petros M. Nomikos Conference Centre (www.thera-conferences.gr) located in the capital of Santorini.

Registration

You may register to CIVR2009 by filling the registration form on the website: <http://www.civr2009.org/registration>.



Valérie Devanthy
Idiap Research Institute

Technology Transfer - call for proposals to jumpstart the Swiss economy

DATE OF SUBMISSION: JUNE 2ND, 2009

In February 2009, the Swiss parliament decided to launch a package of economic stabilisation measures for a total amount of 700 Million CHF. Various actions for the support of Swiss economy are planned, amongst others, funding for technology transfer projects of the NCCRs. Cf. full message in FR/DE/IT: <http://www.seco.admin.ch/themen/02860/02942>

A total amount of 10 Million CHF was assigned to 10 (out of 14) NCCRs of the first series (IM2, Co-Me, MaNEP, MICS, Molecular Oncology, Nanoscale Science, Neuro Science, Plant Survival, Quantum Photonics and Structural Biology). These 10 NCCRs are now invited to submit proposals to the SNSF by the 2nd of June.

According to the message adopted by the Parliament the proposals must fulfil the following requirements:

- The proposals must be application-oriented, and be qualified to trigger additional investments in research and market-oriented technology and product development in the private sector (multiplier effects).

- At least one industry partner is required for each proposal acting as co-applicant.



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SWISS NATIONAL SCIENCE FOUNDATION

- The funding is used for the co-operation costs (e.g. personnel, material expenses) and is not invested into the participating companies as such. The SNSF does not stipulate a minimal amount of self-funding (in cash) by the participating companies.
- Based on existing co-operations with companies or own spin-offs the projects (technological developments, demonstrators, prototypes etc.) can be launched in October 2009, and accomplished within two years.

During its last meeting end of April 2009, the IM2 Technical Committee decided to meet, on May 18, the scientists and the representatives of SMEs involved in proposals to identify the most promising and innovative ideas.

François Foglia
Idiap Research Institute

Completed PhD Thesis , Till Quack, ETHZ, IM2.MCA,

LARGE-SCALE MINING OF VISUAL DATA IN A MULTIMODAL CONTEXT

Till Quack started his PhD in September 2004 at ETH Zurich under the supervision of Prof Luc Van Gool. He successfully defended his thesis on January 9, 2009.

His PhD was done in the framework of IM2.MCA and carries the title "Large-scale mining of visual data in a multimodal context". The work advances the state-of-the-art with three main contributions.

Firstly, with the investigation of itemset mining algorithms in the domain of visual data. This class of simple, but efficient algorithms have proven to be a useful tool for other kinds of data. We adapted these methods to work with local visual features.

The resulting algorithms are successfully employed to mine specific objects in video data, and to identify frequent feature configurations as representatives of object classes.

The second contribution consists of a multimodal data-mining method, which automatically mines objects and events from community photo collections on the Internet for applications such as retrieval or auto-annotation.

The third and final contribution consist of several prototype applications for scalable retrieval in visual data, partly building on the data mined in the previous steps. These retrieval applications focus on applications for mobile devices, again including multimodal context such as GPS location of the user.

Beat Fasel, ETHZ
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Till Quack, ETHZ

New project at Idiap on Group Conversational Analysis

Marie Curie Actions Program



Supported by the European Commission through the FP7 Marie Curie Actions Program on Inter-European Fellowships for Career Development, Idiap will start a new two-year project in June 2009 whose goals are relevant to those pursued in IM2.

The project, entitled Automatic Analysis of Group Conversations via Visual Cues in Non-Verbal Communication (NOVICOM)

will be led by Daniel Gatica-Perez and Oya Aran, who is supported as a Marie Curie Postdoctoral Fellow.

The scientific objectives of NOVICOM are the development of new computational methods to automatically detect and analyze nonverbal behavior from the visual modality, for the automatic analysis of social interaction in face-to-face conversations.

The project will investigate models related to communicative gestures and postures, and for the integration of multimodal cues for analysis of group interaction, thus building upon and extending the research in Daniel's group on social inference from sensor data.

Oya received the BS, MS and PhD degrees in Computer Engineering from Bogazici University, Istanbul, Turkey in 2000, 2002 and 2008, respectively. During her PhD, she focused on hand gesture recognition and sign language recognition, and she actively participated in various research projects, both national and international, including the EU SIMILAR Network of Excellence. Her research interests include pattern recognition, machine learning, computer vision, and human-computer interaction.

NOVICOM brings complementary expertise to address a number of aspects known to be fundamental components of nonverbal communication, but which have not been thoroughly studied in the context of computational modeling.

This new project has a number of clear interconnections with IM2, and will hopefully result in further collaborative work.



Oya Aran

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An IM2 IP head chosen to head the Technical Committee 12 of IAPR

IAPR - INTERNATIONAL ASSOCIATION OF PATTERN RECOGNITION

Dr Stephane Marchand-Maillet, head of the IP on Multimodal Content Abstraction (IM2.MCA) has been appointed as head of the Technical Committee 12 on "Multimedia and Visual Information Systems" of the International Association of Pattern Recognition (IAPR) for 2 years.

The International Association for Pattern Recognition (IAPR) is an international association of non-profit, scientific or professional organizations (being national, multi-national, or international in scope) concerned with pattern recognition, computer vision, and image processing in a broad sense.

The IAPR TC12 is a focal point for all activities of education, data distribution and benchmarking in all aspects of research, including:

- Content analysis of images, videos, 3D models, and associated audio or text.
- Summarization of multimedia content
- Multimedia mining
- Cross-media mapping
- Multimedia information retrieval, browsing, and visualization
- Semantics based analysis of multimedia data
- Innovative multimedia applications

The International Association for Pattern Recognition



All these topics are relevant to his activities in IM2 and Dr Marchand-Maillet will pursue the active effort of former chairs Prof. M. Worring (Amsterdam) and Dr P. Pala (Florence) to promote the TC12 and to provide a useful service to the Multimedia Information Retrieval community.

More information at:
<http://www.iapr-tc12.org>

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Dr S. Marchand-Maillet,
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News

ICMI-MLMI 2009

Nov 2-6, 2009, Cambridge, USA

The 11th International Conference on Multimodal Interfaces and Workshop on Machine Learning for Multi-modal Interaction will jointly take place at the MIT Media Lab on November 2-6, 2009.



ICMI-MLMI aims to further scientific research in multimodal interaction, methods and systems.

The joint conference will feature a single-track main conference with keynote speakers, panel discussions, technical paper presentations, poster sessions, demonstrations, and workshops.

Organizing Committee

General Co-chairs:

- James Crowley, INRIA
- Yuri Ivanov, MERL
- Christopher Wren, Google

Program Co-Chairs:

- Daniel Gatica-Perez, Idiap Research Institute
- Michael Johnston, AT&T Research
- Rainer Stiefel, University of Karlsruhe

Important Dates:

Paper submission: May 22, 2009
Author notification: July 20, 2009
Conference: November 2-4, 2009

More information: <http://icmi2009.acm.org>

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KeyLemon : Winner of the Red Herring 100

Red Herring 100 Europe 2009, Berlin, Germany, March 31 - April 2, 2009

KeyLemon (<http://www.keylemon.com>) is winner of the Red Herring 100 Europe (most promising Tech Companies). The Red Herring 100 is a mark of distinction and prestige. The companies are chosen as finalists from across Europe.

Red Herring is a global media company uniting the world's best high technology innovators,



venture investors and business decision makers in a variety of forums: a leading innovation magazine; an online daily technology news service; technology newsletters, and major events for technology leaders around the globe.

Red Herring provides an insider's access to the global innovation economy, featuring unparalleled insights on the emerging technologies driving the economy. For more information, visit <http://www.redherring.com>

Since 1996, technology industry executives, investors, and strategists have valued the Red Herring 100 lists as an instrument for discovering and advocating the most promising private ventures.

The 2009 winners were unveiled and featured at Red Herring 100 Europe 2009. The CEOs and founders from the Red Herring 100 presented their winning technologies to an audience of leading entrepreneurs, financiers and corporate strategists in Berlin, March 31 - April 2, 2009.

Valérie Devanthery
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Selected publications

Q-stack Aging Model for Face Verification

A. Drygajlo, W. Li, K. Zhu

European Signal Processing Conference (Eusipco 2009), Glasgow, UK, August 24-28, 2009.

Characterizing Conversational Group Dynamics using Nonverbal Behavior.

D. Jayagopi, B. Raducanu, D. Gatica-Perez

in Proc. IEEE Int. Conf. on Multimedia (ICME), Cancun, Jun. 2009.

Multimodal database annotation formats and standards, software architecture for multimodal interfaces.

A. Popescu-Belis

In Thiran J.-Ph., Bourlard H. & Marques F., eds., Multimodal Signal Processing: Methods and Techniques to Build Multimodal Interactive Systems, Academic Press.

Accessing a Large Multimodal Corpus using an Automatic Content Linking Device.

A. Popescu-Belis, J. Carletta

In Kipp M., Martin J.-C., Paggio P. & Heylen D., eds., Multimodal Corpora, LNAI, Springer-Verlag, Berlin/Heidelberg, 14 p.

Towards Automatic Argument Diagramming of Multiparty Meetings.

D. Hakkani-Tür

in proceedings of IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Taipei, Taiwan.

Improving Graph Classification by Isomap.

K. Riesen, V. Frinken and H. Bunke

In Graph Based Representation for Pattern Recognition (Gbr'09), Venice, Italy.

Multimodal interfaces for automotive applications (MIAA).

C. Müller, G. Friedland

ACM IUI 2009, pp. 493-494, Sanibel Island, FL, USA, 8-11th February 2009.

Temporal reliability of features and models for multimodal person recognition. Part 1. Recognition of aging faces.

K. Zhu, W. Li, A. Drygajlo

White Paper Project Research Report, EPFL, January 15, 2009.

Rate-distortion performance evaluation of JPEG-XR Objective results and proposed methodology for subjective quality assessment.

F. De Simone, V. Baroncini, F. Dufaux, and T. Ebrahimi

JPEG Contribution to JPEG XR Camera Raw coding AHG meeting 18-19 February 2009, Tokyo, Japan.

MEMODULES as tangible shortcuts to multimedia information.

E. Mugellini, D. Lalanne, B. Dumas, F. Evequoz, S. Gerardi, A. Le Calve, A. Boder, R. Ingold, O. Abou Khaled

Human Machine Interaction, LNCS 5440, State-of-the-Art Survey, Springer-Verlag, Berlin/Heidelberg, pp. 103-132.

Extended Excentric Labelling.

E. Bertini, R. Rigamonti, D. Lalanne

Eurographics/IEEE Symposium on Visualization, 2009. In Computer Graphics Forum, the International Journal of the Eurographics Association.

Modelling long-term relevance feedback.

D. Morrison, S. Marchand-Maillet, E. Bruno

In Proceedings of the ECIR Workshop on Information Retrieval over Social Networks, Toulouse, FR

Human Machine Interaction.

D. Lalanne, J. Kohlas eds.

LNCS 5440, State-of-the-Art Survey, Springer-Verlag, Berlin/Heidelberg, 315 p.

Multimodal Interfaces: A Survey of Principles, Models and Frameworks.

B. Dumas, D. Lalanne, S. Oviatt

Human Machine Interaction, LNCS 5440, State-of-the-Art Survey, Springer-Verlag, Berlin/Heidelberg, pp. 3-27.

Interactive Visualization - A Survey.

D. Brodbeck, R. Mazza, D. Lalanne

Human Machine Interaction, LNCS 5440, State-of-the-Art Survey, Springer-Verlag, Berlin/Heidelberg, pp. 27-46.