

# IM2 Newsletter

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## Contents

### COVER STORY

- Turn your ideas into a startup at the International Create Challenge 2012 1

### FOCUS

- Contribution to MPEG on evaluation of some objective quality metrics for 3D video 2
- Multimodal Signal Processing: Human Interactions in Meetings 2
- The Third General Meeting of the Qualinet COST NoE 3
- Koemei on stage at the Demo Spring 2012 3
- MediaSense 2012: Summer School on Multimodal Data Analytics 3

### INSIDE IM2

- News
- Selected publications

## Event

### AERFAI SUMMER SCHOOL

Vigo, Spain  
June 4-8, 2012

<http://webs.uvigo.es/aerfaiss12>

Cover Story

## Turn your ideas into a startup at the International Create Challenge 2012 (ICC'2012)

SEPTEMBRE 1-21 2012, CENTRE DU PARC, MARTIGNY

The 2012 International Create Challenge is an initiative supported by the IM2, via its association (AIM2), and the Idiap Research Institute.

The goal of ICC'2012 ([www.createchallenge.org](http://www.createchallenge.org)) is to foster the creation of start-ups within the framework of Human & Media Computing. ICC'2012 is a free of charge 3-week immersive technology transfer accelerator program giving entrepreneurs the unique opportunity to develop their original idea towards a "Minimum Viable Product" in collaboration with groups of entrepreneurs and researchers.

ICC'2012 combines the availability of state-of-the-art technologies, cutting edge research, mentored coaching, and micro-seed investment. The winning team(s) will share global award amounting to more than CHF 200'000.

### Eligibility

Applicants must be skilled researchers, entrepreneurs, developers, or designers. Projects should exploit Information and Communication Technologies as available within IM2 and Idiap.

### Application

By opening this call for participation, AIM2 and Idiap seek to attract highly motivated



International  
**Create Challenge**

Martigny • Switzerland



"entrepreneurs" to create or join a team, develop their original idea towards a "Minimum Viable Product", eventually resulting in the creation of a company.

Participants can apply as the representative of a group or as individuals interested in joining an initiative. The call is split into two successive competitive steps.

### Step 1: People

An independent Evaluation Committee will select the participants based on the:

- Quality of CV and expertise in the field of "Human & Media Computing"
- Motivation to develop ideas, create or join a team, and share skills.

The successful applicants will have the opportunity to network through the ICC'2012 platform at [www.createchallenge.org](http://www.createchallenge.org).

To be continued on page 2

## IM2, AIM2 and IDIAP launch the International Create Challenge 2012 in Martigny (continued)

### Step 2: Projects

The successful applicants will have to setup a team of 2 to 4 people, which will submit a detailed work plan further discussing their project. Ideally, projects should exploit Information and Communication Technologies (ICT).

Only complete applications successfully submitted online via the ICC'2012 platform will be considered ([www.createchallenge.org/submission](http://www.createchallenge.org/submission)). The Evaluation Committee of experts in the field of Human & Media Computing will be in charge of the selection procedures.

Successful teams commit themselves to participate in the ICC'2012, which will take place from 1 to 21 September 2012 at the Centre du Parc in Martigny, Switzerland ([www.hotelduparc.ch](http://www.hotelduparc.ch)). Selected participants will have their living expenses fully covered by ICC'2012. At the end of ICC'2012, the best projects/prototypes/teams will be awarded

between CHF 20'000.- and 150'000.- depending on their decision (or not) to create their company locally by integrating the IdeArk Incubator ([www.ideark.ch](http://www.ideark.ch)).



### Important Dates

- Step 1 deadline: 30 May 2012 (11:59 pm CET)
- Step 1 [notification of decision]: 8 June 2012
- Step 2 deadline: 15 July 2012 (11:59 pm CET)
- Step 2 [notification of decision]: 30 July 2012
- Start of the ICC'2012: 1 September 2012
- Closing ceremony: 21 September 2012

More information at [www.createchallenge.org](http://www.createchallenge.org)

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## Contribution to MPEG on evaluation of some objective quality metrics for 3D video

FEBRUARY 2012, SAN JOSE, CALIFORNIA, USA

The Moving Picture Experts Group (MPEG) has recently initiated an effort for the definition of a 3D video coding standard. To assess the advances in the design of coding technologies, objective metrics that can reliably predict the perceived quality of 3D content are of crucial importance.

Video coding experts commonly use Peak Signal to Noise Ratio (PSNR), even if its correlation with human perception

of visual quality is known to be limited. As a contribution to MPEG, MMSPG at EPFL has analyzed the performance of different PSNR-based metrics for 3D quality assessment. The same group is now benchmarking state of the art 2D metrics using the same procedure and will produce new contributions for the next MPEG meetings.

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## Multimodal Signal Processing: Human Interactions in Meetings

STEVE RENALS, HERVÉ BOURLARD, JEAN CARLETTA AND ANDREI POPESCU-BELIS, EDITORS

This book provides a detailed introduction to multimodal signal processing with a focus on the analysis, recognition and interpretation of human communication. The book presents, in a tutorial-like fashion, the most important achievements of the past decade in the field of audio, video and multimodal processing, with an application to meeting recordings, and discusses meeting support technology in terms of requirements, tools, and evaluation methods.

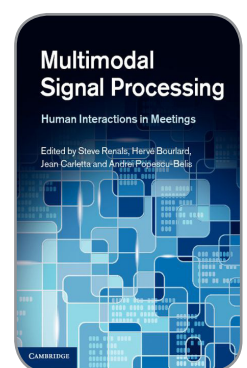
The book introduces the necessary analyses by moving from basic interpretations of the signals to richer semantic information, and from basic ideas to recent research results. Fundamental research is thus connected with prototypes that analyze what is happening and support group interactions in meetings.

The book includes chapters on advanced speech processing and computer vision technologies, language understanding, interaction modeling and abstraction, as

well as meeting support technology. More than half of the chapters are co-authored by current or former IM2 researchers: H. Bourlard, G. Friedland, Ph. Garner, D. Gatica-Perez, D. Lalanne, S. Marcel, I. McCowan, J.-M. Odobez, A. Popescu-Belis, and F. Valente.

Multimodal Signal Processing: Human Interactions in Meetings. Edited by Steve Renals, Hervé Bourlard, Jean Carletta and Andrei Popescu-Belis. xii+274 pages, 76 b/w illustrations and 40 tables, hardback, ISBN: 9781107022294. Cambridge University Press. To appear in May 2012. More information at <http://www.cambridge.org/9781107022294>

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## The Third General Meeting of the Qualinet COST NoE

FEBRUARY 1-3 2012, PRAGUE, CZECH REPUBLIC

In February 2012, the third general meeting of the COST Network of Excellence (NoE) Qualinet, with MMSPG (EPFL) as a core partner, took place at Czech Technical University in Prague, Czech Republic.

Summaries of the major achievements in each of the working groups during the first project year were made, and goals for 2012 were set. Partners within Qualinet had in depth discussions on Quality of Experience (QoE) definitions by answering the question: What does QoE mean to you? Contributions to different task forces were also discussed: challenges for QoE via crowdsourcing, the influence of affective states (e.g. emotions) on the perceptual and judgment process (e.g. attention), modeling of attention mechanisms in multimedia QoE assessment, inventory of publicly available objective multimedia quality metrics,



standardization activities in multimedia quality evaluation through benchmarking efforts, multimedia datasets of various modalities, testing conditions and methods and new objective metrics for upcoming standards, including 3DV. Within the framework of Qualinet, online training schools are organized on a regular basis.

For more information please consult the website <http://www.qualinet.eu>.

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## Koemei on stage at the Demo Spring 2012

SILICON VALLEY, SANTA CLARA, CALIFORNIA, APRIL 17- 9 2012

The IM2 startup Koemei is one of 80 companies chosen by VentureBeat to launch at the DEMO Spring 2012 event taking place in Silicon Valley.

Koemei, the leader in large scale video and audio transcription announced at DEMO Spring 2012 the launch of Koemei Web Service, a cloud-based platform and API for the next generation of video transcription and captioning.

This announcement means that transcription and captioning of video and audio content can now be performed automatically and more accurately, replacing

costly and cumbersome manual transcription methods. The Koemei Web Service platform enables transcription of video and audio content for captioning, indexing, search and discovery and SEO. At the core of Koemei Web Service is its speech decoding engine which converts the audio of every speaker into text.

Best of all, the company has estimated it only takes one hour for its platform to turn around an entire hour's worth of audio. More information at <http://www.koemei.com>

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## MediaSense 2012: Summer School on Multi-modal Data Analytics

MAY 21-22 2012, DUBLIN, IRELAND

The MediaSense 2012 Summer School will be held on May 21-22, 2012 in Dublin City University, Ireland. The school is co-organized by VideoSense and 3DLife EU Networks of Excellence.

Effective multimedia content analysis has become a key area of research for use in a broad spectrum of applications, from the field of privacy-respecting and ethnically-aware video analysis in security to supporting real-time realistic interaction between humans in online

virtual and immersive environments. One of the speakers at MediaSense summer school will be Prof. T. Ebrahimi (MMSPG at EPFL, an IM2 Deputy Director) with a lecture "Privacy protection of visual information" on image and video processing tools that can be applied to digital content to protect privacy of individuals. More information at <http://mediasense.dcu.ie>.

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## News

### AERFAI Summer School on Pattern recognition in Multimodal Human Interaction

Vigo, Spain. June 4-8, 2012

This Summer School is co-organized this year by groups from the University of Vigo, the GRADIANT Research Center, and the University of Porto. The focus in 2012 is on techniques to analyze and understand the variety of information conveyed in human audiovisual communication, which is an active research area in IM2.

The School features five days of intensive courses. The list of lecturers includes Daniel Gatica-Perez (Idiap), Alex Acero (Microsoft Research), Fernando de la Torre (CMU), Ivan Laptev (INRIA), Dirk Heylen (University of Twente), Bjorn Schuller (TUM), and Albert A. Salah (Bogazici University). More information available at <http://webs.uvigo.es/aerfaiss12>

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### Course on Machine learning algorithms

Septembre 5-7 2012, UNIL-EPFL

This 3-day intensive course presents core Machine Learning algorithms, emphasizing when and how to use them. The course will be held at the UNIL-EPFL campus, Lausanne, Switzerland. The objectives are the followings:

- Introduction to main ML algorithms for pattern recognition, classification, non-linear regression, and time series analysis,
- Computer-based training through concrete examples,
- Learn methodologies for the evaluation of performance of ML algorithms, and

- Learn how to set ML algorithms' parameters to achieve optimal performance, to recognize when results are too good to be true, and to characterize the domain of applicability of the inference.

Registration deadline: 1<sup>st</sup> of June 2012

More information at: [www.formation-continue-unil-epfl.ch/en/machine-learning-algorithms-formation-courte](http://www.formation-continue-unil-epfl.ch/en/machine-learning-algorithms-formation-courte)

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### Announcement of Qualinet Newslet

#### COST Action IC 1003

Qualinet Newslet is a newsletter that appears twice a year and which is published by the COST Action IC 1003, European Network on Quality of Experience in Multimedia Systems and Services (Qualinet). The April 2012 edition of Qualinet's Newslet provides a report on the recent tests for MPEG 3D video compression technology, which were organized and performed by partners in Qualinet, among which MMSPG at EPFL (also involved in IM2) gave a significant contribution. Additionally, the Newslet provides an overview of recent PhD theses dealing with quality of multimedia.

The Newslet can be downloaded from Qualinet's web site: <http://www.qualinet.eu>.

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### Selected publications

Towards Computational Proxemics: Inferring Social Relations from Interpersonal Distances.

M. Cristani, G. Paggetti, A. Vinciarelli, L. Bazzani, G. Menegaz, and V. Murino

In Proceedings of IEEE International Conference on Social Computing, 2011, pp. 290-297.

A Fast Parts-Based Approach to Speaker Verification Using Boosted Slice Classifiers

A. Roy, M. Magimai.-Doss, and S. Marcel

In IEEE Trans. on Information Forensics and Security, Volume 7, number 1, pp. 241-254, Feb. 2012.

Geotag Propagation in Social Networks Based on User Trust Model.

I. Ivanov, P. Vajda, J.-S. Lee, L. Goldmann, T. Ebrahimi

In Multimedia Tools and Applications (Springer), Special Issue on Social Mining and Search, vol. 56, num. 1, p. 155-177, January 2012..

In Tags We Trust: Trust modeling in social tagging of multimedia content.

I. Ivanov, P. Vajda, J.-S. Lee, T. Ebrahimi

In IEEE Signal Processing Magazine, vol. 29, num. 2, pp. 98-107, Mar. 2012.

Epitomize Your Photos

P. Vajda, I. Ivanov, J.-S. Lee, T. Ebrahimi

In Hindawi International Journal of Computer Games Technology, vol. 2011, num. 706893, Dec.2011.

Quality assessment of multidimensional video scalability.

J.-S. Lee, F. De Simone, N. Ramzan, E. Izquierdo, T. Ebrahimi

In IEEE Communications Magazine, vol. 50, num. 4, pp. 38-46, 2012.

Paired comparison-based subjective quality assessment of stereoscopic images

J.-S. Lee, L. Goldmann, T. Ebrahimi

In Multimedia Tools and Applications, Online first, 2012.

3DV: Objective quality measurement for the 2-view case scenario

P. Hanhart, F. De Simone, M. Rerabek, T. Ebrahimi

In ISO/IEC JTC1/SC29/WG11 Doc. M23908, San Jose, USA, Feb. 2012.