

IM2 Last Newsletter

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Contents

COVER STORY

- The IM2 NCCR comes to a close in December 2013 1

FOCUS

- IM2 Final Event 2
- Idiap opens its doors to school children during the "Osez tous les métiers" day 2
- Results of the ICC' 2013 3
- Completed Thesis:
 - Dr. Gelareh Mohammadi, Idiap 3

INSIDE IM2

- News
- Selected publications

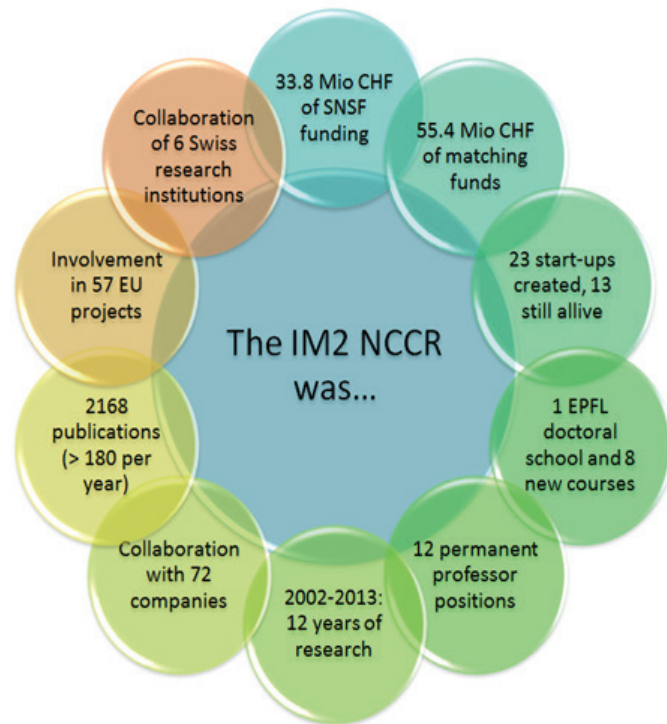
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The IM2 NCCR comes to a close in December 2013

After 12 years of research, training and technology transfer, the IM2 NCCR comes to its end.

We would like to thank everybody for their hard work and contribution to the success of IM2.

Below, we present some of the key facts summarizing what the IM2 NCCR was.



Cover Story

We thank you again for 12 years of great collaboration and wish you all the best in your future research. We also look forward to working with you in the future and meeting you on the AIM2 web site: www.aim2.ch

IM2 Final Event – Two days of workshop to celebrate the end of IM2



In December 2013, the IM2 NCCR will come to its end. To celebrate 12 years of research, development and technology transfer in the domain of

Interactive Multimodal Information Management, a final event in the form of a 2-days workshop, targeting a general audience, took place at the EPFL Rolex Learning Center in Lausanne on October 17-18.

These 2 days provided the opportunity to discuss the achievements of the IM2 NCCR as well as the scientific and structural impacts of such a long-term collaborative project. Talks by IM2 alumni and IM2 spin-off representatives showed how the work of IM2 continues outside and beyond the NCCR. Furthermore, three top-class speakers and key representatives of some of the

IM2 fields, Prof. Maja Pantic, Dr. Jerome Bellegarda and Prof. Mor Naaman, gave an overview of their specific research interests.

Also, an interactive poster session on large TV screens, representing all groups and institutions within the IM2 NCCR, attracted a large public and was an outright success. On the second day of the workshop, a round table discussion - including IM2 scientists as well as scientists involved in similar initiatives outside Switzerland, one SNSF NCCR representative and one representative of the Science Foundation Ireland - concluded the event.

Finally, a book called «Interactive Multimodal Information management» (published by EPFL-Press, 2013), summarizing the IM2 achievements of 12 years, was released during the workshop and distributed to its participants.

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Idiap opens its doors to school children during the “Osez tous les métiers” day

Once more, IM2 and Idiap have welcomed a group of 19 children - 16 girls and 3 boys of around 12 years - from all over the Canton of Valais during the “Osez tous les métiers” day on November, 14th.

After a short introduction, the Idiap staff presented to the children the different types of professions reunited within the Idiap Research Institute. The young visitors were of course familiar with the most known of them: “researcher”. Yet, they discovered that it takes a whole bunch of other professions surrounding the



one of researcher to make a research institute function well: IT engineers, project managers, finance managers, etc.

However, the most interesting part for them was, without any doubt, the demonstration of our NAO robot and the different demos in the showroom: the children were curious, asking many “very pertinent” questions. During the afternoon, the young visitors were able to build a “LEGO robot” and then control it with the help of a computer: a simple software allowed them to “write” their own little program to command the robot.

The children finished their day with the visit of the datacenter in the basement of the institute, where they saw that research in Computer Engineering is supported by numerous “machines” and “kilometers of cables”.

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Results of the International Create Challenge 2013



After three weeks of hard work and friendly competition the results of the second edition of the International Create Challenge, assembling 10 promising teams at the Idiap Research Institute, were announced during a celebratory dinner on Thursday, October 10th:

- **3 x 10'000 CHF:** Luma7, POWZY, ReMeeting
- **IMD Startup Competition:** Exo-Brain, ReMeeting, POWZY, Luma7
- **Venture Kick:** Exo-Brain, ReMeeting, POWZY
- **Eurofin Ventures:** Luma7

Furthermore, on Friday, October 11th, during the event "Oser entreprendre", François Foglia, Deputy Director of Idiap Research Institute and organizer of the ICC'2013, awarded the Ideark Incubator prize to Luma7.

Finally, Charles Roussin from Eurofin Hospitality endowed Exo-Brain and CloudGuide with the pitch award. The winning teams will profit from one week of communication training.

The organizers of the ICC'2013 would like to thank ALL the 10 teams for their intensive work and their commitment during the three weeks of the challenge and wish them all the best for their entrepreneurial future.

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PHD THESIS Dr. Gelareh Mohammadi

AUTOMATIC PERSONALITY PERCEPTION: INFERRING PERSONALITY TRAITS FROM NONVERBAL VOCAL BEHAVIOR



Whenever we meet a person for the first time, we tend to attribute personality traits to him/her. The process takes place in less than a second and it is spontaneous and unconscious. While not necessarily accurate (attributed traits do not necessarily correspond to the actual traits of the person), the process still influences significantly our behavior towards others, especially when it comes to social interactions.

The phenomenon is so pervasive that it takes place not only when we meet others in person, but also when we observe them in video recordings or we simply interact with an artifact displaying human-like behaviors (robots, artificial agents, animated characters, etc.). This thesis focuses on one aspect of the phenomenon above, namely the spontaneous attribution of personality traits to speakers we never heard before. More specifically,

the thesis presents automatic approaches aimed at inferring the personality traits that listeners attribute to unacquainted speakers using nonverbal vocal behavior. The prediction of traits attributed to others is important because it can help to better understand the social behavior of people. Furthermore, it can help to design artificial agents capable of eliciting the perception of predefined desirable traits.

The main contributions of this thesis to the Automatic Personality Perception (APP) research can be categorized into three blocks: First, the collection of a benchmark data set for speech based APP; second, a quantitative analysis of the nonverbal vocal cues influence on APP effectiveness; and finally developing a pairwise ranking framework to rank subjects along each trait, a task that better fits the actual cognitive processes aimed at personality perception.

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News

Results of the Dalle Molle Foundation Competition 2013

For the third time in a row, the Dalle Molle Foundation has organized a competition to foster the realization of public interest projects.

The first prize of 10'000 CHF was awarded to an interdisciplinary R&D project, which is a collaborative effort of the Institute of Information Systems of HES-SO Valais and the Health School of the HES-SO in Geneva. It aims at promoting the self-management of patients thanks to IT tools. The second prize went to a project by Dr Roger Seiler from the Institute of Marketing Management of the ZHAW School of Management and Law in Winterthur. It brings forward a new technology which allows nursing staff to quickly access the key information about hospitalized patients.

The project "Valais*Wallis Digital", submitted by Dr François Foglia, Deputy Director of Idiap, has received the jury's praise. However, the jury did not think it opportune to award a prize to Idiap, which is part of the research institutes created by Angelo Dalle Molle.

Source: Le Nouvelliste

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Team led by Idiap wins ACM Multimedia Grand Challenge on video lecture annotation and search

The MUST-VIS system proposed by a team led by Idiap and including members of the inEvent consortium, with additional support from the IM2 Aroles project, has been declared the winner of the MediaMixer / VideoLectures.NET Grand Challenge. The organizers have selected the MUST-VIS system for its "appealing visualization of video-to-video and segment-to-segment linking based on video analysis and tagging, and their associations".

This challenge was one of the five composing the ACM Multimedia 2013 Grand Challenge plenary session, where the MUST-VIS has been presented and demonstrated. The inEvent team included members from Idiap's Natural Language Processing group, Klewel SA, Fraunhofer's Heinrich-Hertz Institute, and the University of Edinburgh.

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Selected publications

Inferring Mood in Ubiquitous Conversational Video

D. Sanchez-Cortes, J.-I. Biel, S. Kumano, J. Yamato, K. Otsuka, and D. Gatica-Perez

in Proc. Int. Conf. on Mobile and Ubiquitous Multimedia (MUM), Lulea, Dec. 2013.

Keyword Extraction and Clustering for Document Recommendation in Conversations

Habibi M. and Popescu-Belis A

submitted on Sept. 25 to IEEE Transactions on Audio, Speech and Language Processing.

Pointing in the air: Measuring the effect of hand selection strategies on performance and effort

Schwaller, M. and Lalanne, D.

Human Factors in Computing and Informatics. In SouthCHI 2013, First International Conference on Human Factors in Computing and Informatics, pp. 732-747

One-Shot Person Re-Identification with a Consumer Depth Camera

Matteo Munaro, Andrea Fossati, Alberto Basso, Emanuele Menegatti, and Luc Van Gool

In: Person Re-Identification, Springer, 2014.

Multiple Local Curvature Gabor Binary Patterns for Facial Action Recognition.

A. Yuce, N. M. Arar and J.-P. Thiran.

4th International Workshop on Human Behavior Understanding, in conjunction with ACM Multimedia, Barcelona, Spain, October, 2013.

Automatic Social Role Recognition In Professional Meetings Using Conditional Random Fields

A. Sapru and Hervé Boulard

in: Proceedings of Interspeech, 2013.

Social orienting of children with autism to facial expressions and speech: a study with a wearable eye-tracker in naturalistic settings, Frontiers in Psychology.

S. Magrelli, P. Jermann, B. Noris, F. Ansermet, F. Hentsch, J. Nadel, and A. Billard.

in press

THANK YOU

It would be too long to specifically name all people who actively contributed to the success of IM2 over the last 12 years, in a collegial and friendly spirit.

Please know that we warmly thank all of them, as well as the institutions they represented.



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