# *CogSys2010*
# *Travel Kit*

## Sponsors

We like to thank our sponsor, the EC Project BACS (Bayesian Approach to Cognitive Systems) for the generous support:

## Organized by

ETH Zürich and University of Zürich

# 1 Some Important Facts about CogSys2010

## Conference site

CogSys2010 will be held in the HG building (= main building) of ETH's main campus in down-town Zurich (see map and travel information in Section 2).

Please wear your badge visible (coffee breaks..)..

## Important dates

| Wednesday,27<sup>th</sup> January – Thursday, 28<sup>th</sup> January 2010 | Conference |
| --- | --- |
| Wednesday, 27<sup>th</sup> January 2010, 5.10 pm | Poster session |
| Wednesday, 27<sup>th</sup> January 2010, 7.15 pm | Banquet |
| Thursday, 28<sup>th</sup> January 2010, 5.00 pm | Goodbye Drink |

## Opening hours of the registration desk

| Wednesday, January 27<sup>th</sup>, 2010 | 08.30 – 19.30 |
| --- | --- |
| Thursday, January 28<sup>th</sup>, 2010 | 08.45 – 16.30 |

## Phone, fax and e-mail at registration desk

Phone:  +41 44 632 90 20

Fax:    +41 44 632 90 21

E-mail: cogsys2010@bacs.ethz.ch

## Wireless LAN

Use the public WLAN

Login:          cogsys

Password:    CogSys10

# 2 Travel Information

## From Zurich Airport (Kloten)

After reclaiming baggage, follow the signs "Bahn/Railway" to ticket counters and machines. There are English instructions on the machines; follow them or simply press the left (red) key at the bottom where it says "Zurich City". The machine accepts coins as well as banknotes and gives change. The ticket is valid during the next hour for any train to Zurich as well as for the trams and buses in the city (streetcar / tram).
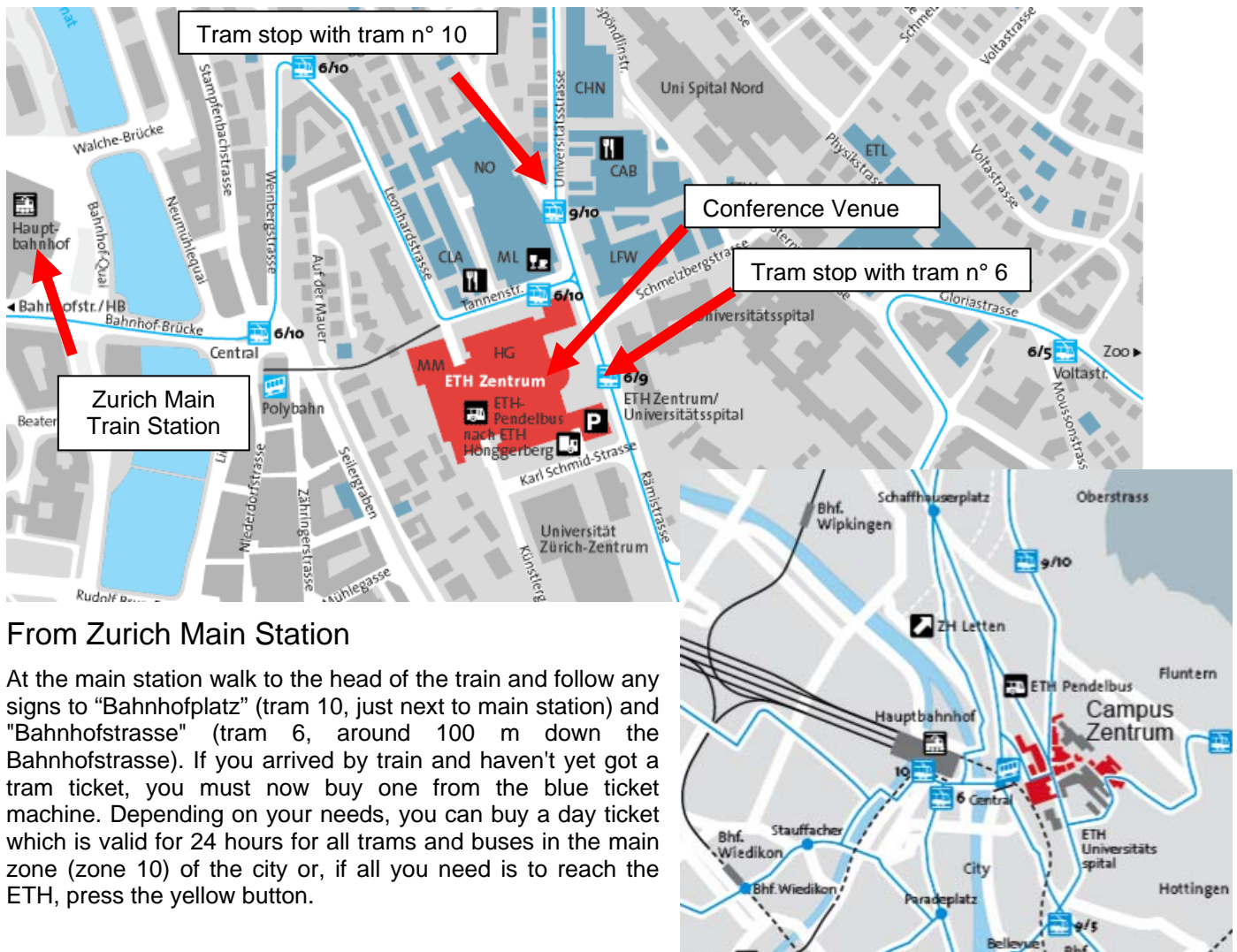
Train:

Take an escalator down to the platforms 3 or 4. Trains to city centre leave approx. every 10 minutes and take about 10 minutes to reach Zurich main station (Zurich HB). You can also purchase a 24 hour ticket for all trains, trams, and buses in Zurich by making the appropriate selection on the machine. More info is available on http://www.vbz.ch.

Tram:

Follow the signs to tramway "Zürich Flughafen Bahnhof". Buy a ticket for 3 zones. Depending on your needs, you can buy a day ticket valid for 24 hours for all trams and buses in the main zone. Departure with tramway No.10: From station "Zürich Flughafen, Bahnhof" to direction "Bahnhofplatz/HB" (Center). The tramway departs every 15 minutes between 6 AM and 23 PM. Exit after 31 minutes at station "ETH /Universitätsspital".
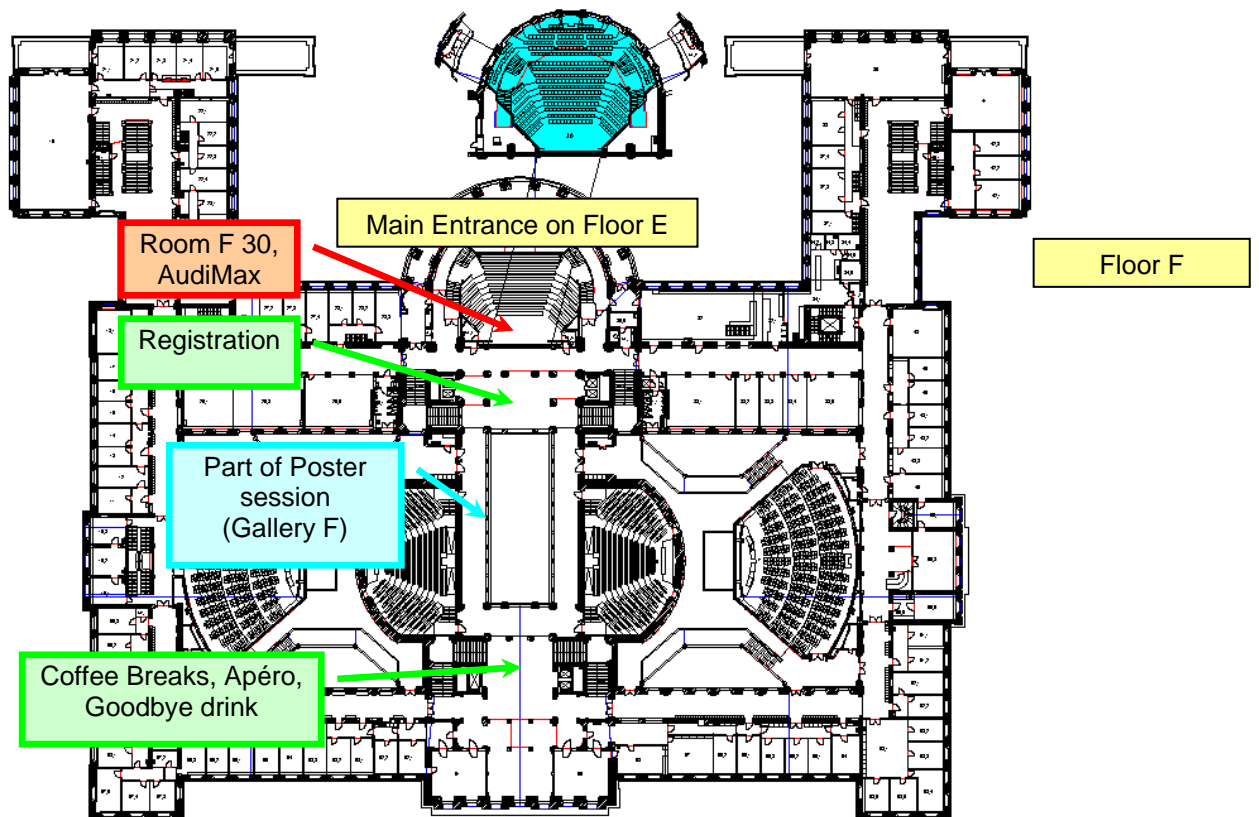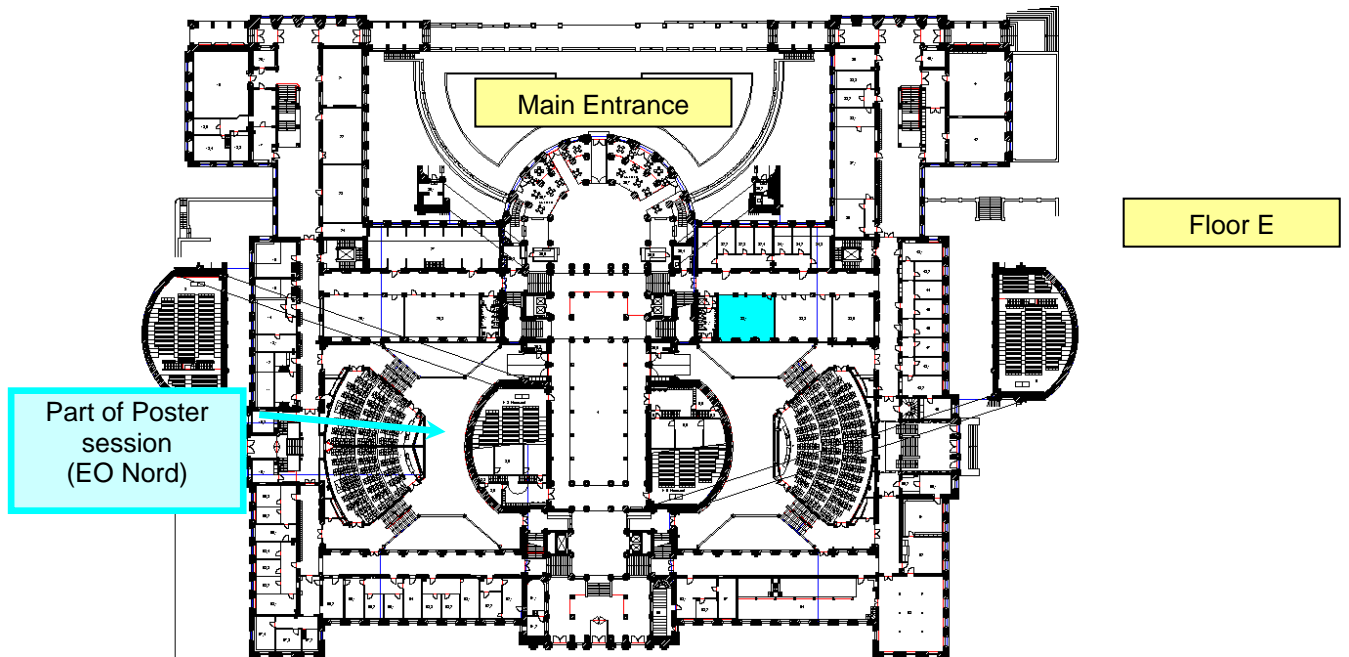
Taxi:

You may also take a taxi directly to ETH Zentrum (the down-town campus). It costs around 50-60 sFr. However, during rush hour trains are faster and always cheaper.



## From Zurich Main Station

At the main station walk to the head of the train and follow any signs to "Bahnhofplatz" (tram 10, just next to main station) and "Bahnhofstrasse" (tram 6, around 100 m down the Bahnhofstrasse). If you arrived by train and haven't yet got a tram ticket, you must now buy one from the blue ticket machine. Depending on your needs, you can buy a day ticket which is valid for 24 hours for all trams and buses in the main zone (zone 10) of the city or, if all you need is to reach the ETH, press the yellow button.

From the main station you reach ETH Campus Zentrum in six minutes with tram no. 10 (direction *Airport* or *Bahnhof Oerlikon* or *Irchel* (at night)) from tram stop Bahnhofplatz or tram no. 6 (direction *Zoo*) from tram stop Bahnhofstrasse to the stop ETH/Universitätsspital (the 3rd stop).

You may also cross the Limmat river (2-3 minutes) and take the "Polybahn" at Central.

## Public transportation

- You can find information about public transportation on the dedicated website: **http://www.vbz.ch/**. An English version is available (left, down).

- The following partial map shows the transportation network around the conference venue (ETH main campus)

## Parking

- Please note that we cannot provide any parking possibilities, so you may use public transportation!

# 3 The Conference Site

CogSys2010 will be held in the HG Building (Main Building) of ETH's main campus in down-town Zurich in the AudiMax (HG F30).

## HG building



## **Technical Sessions**



ETH Main Building (Hauptgebäude - HG)
Rämistrasse 101 - F floor

Audimax - F30

# Location of Registration Desk, Auditorium, Poster Sessions and Coffee Breaks

Main Entrance

Floor E

Part of Poster session (EO Nord)

Main Entrance on Floor E

Room F 30, AudiMax

Registration

Floor F

Part of Poster session (Gallery F)

Coffee Breaks, Apéro, Goodbye drink

# 4 The Banquet Site

The banquet will be held on Wednesday, 27<sup>th</sup> January 2010, at hotel Uto Kulm, which is located on a small mountain called Uetliberg offering a panoramic view of the entire city of Zürich including the Lake. (http://www.utokulm.ch/)

## How to get there

To reach the banquet location, you have to take a train from Zürich main station (Hauptbahnhof). You will get the train ticket at the registration desk with the rest of the material or – depending on the delivery of the tickets – it will be given to you at the train station. This train is the **S10** from the special Sihltal – Zürich – Uetliberg (SZU) train line. It leaves from platform 2, which is located on the lower level of the main station at the southern edge of the area (see map below). A special train booked exclusively for COGSYS2010 conference participants will leave the station at **19:15**. If unfortunately you would miss this train, regular trains are scheduled every half-hour (every 05 and 35 from 9:00 to 22:00) and take about 20 minutes to reach the final station: Uetliberg. To get back to Zürich after the banquet, you can take the same train, which leaves Uetliberg every 06 and 36 until 23:00 (last departure: 23:36, don't miss it!).

If – for any reasons – you don't have a ticket, don't enter the trains without, but get a return-ticket to "Uetliberg". Otherwise the penalty fees are up to 100 CHF.



**platform - departure from the SZU train to Uetliberg**

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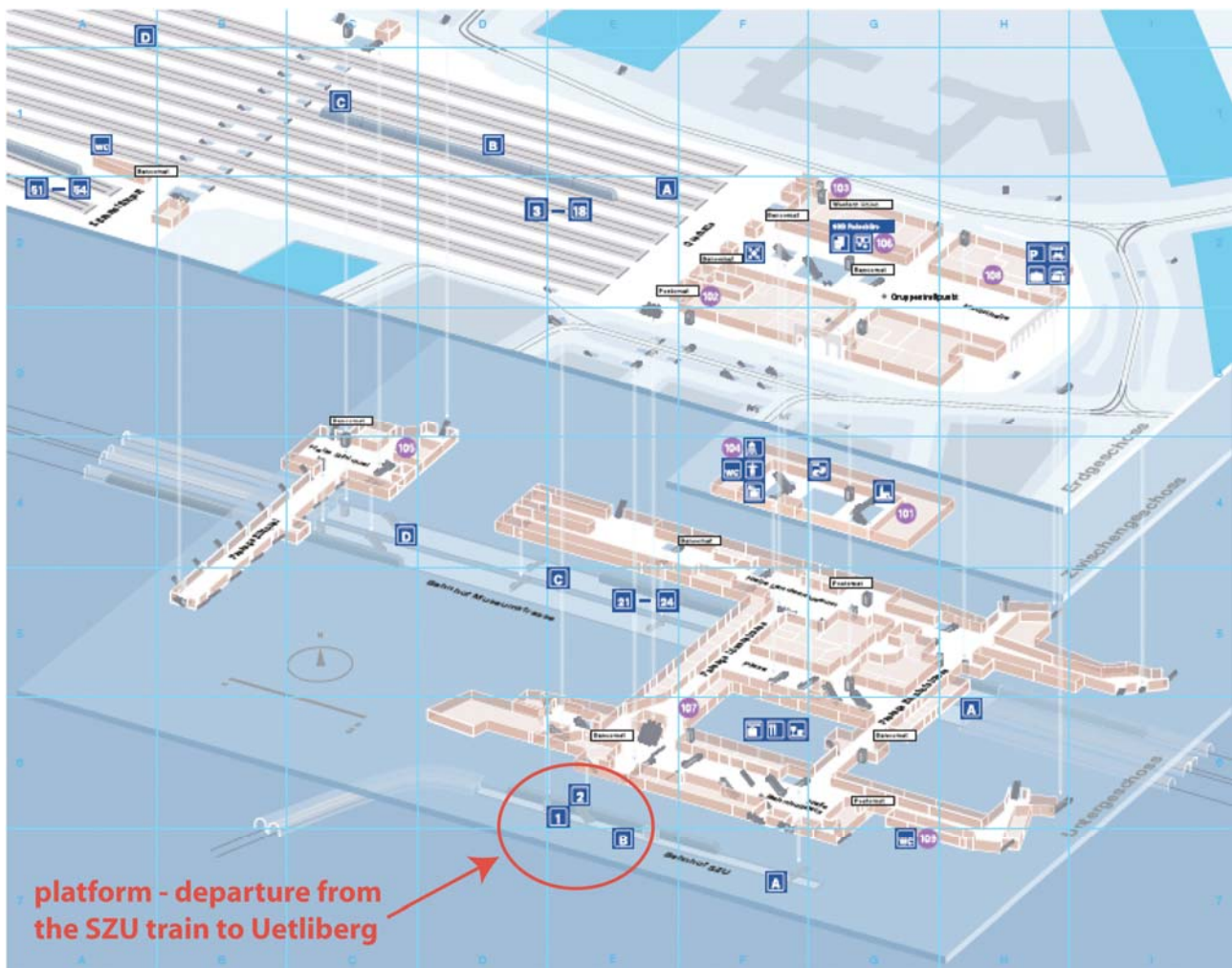
# 5 Restaurants at the Conference Site

There are various restaurants and snack bars on ETH Zentrum campus. The menu of the day costs around 11 sFr. Restaurants and snack bars are listed below and are indicated on the map. You can find more information on the following website: http://www.gastro.ethz.ch/.
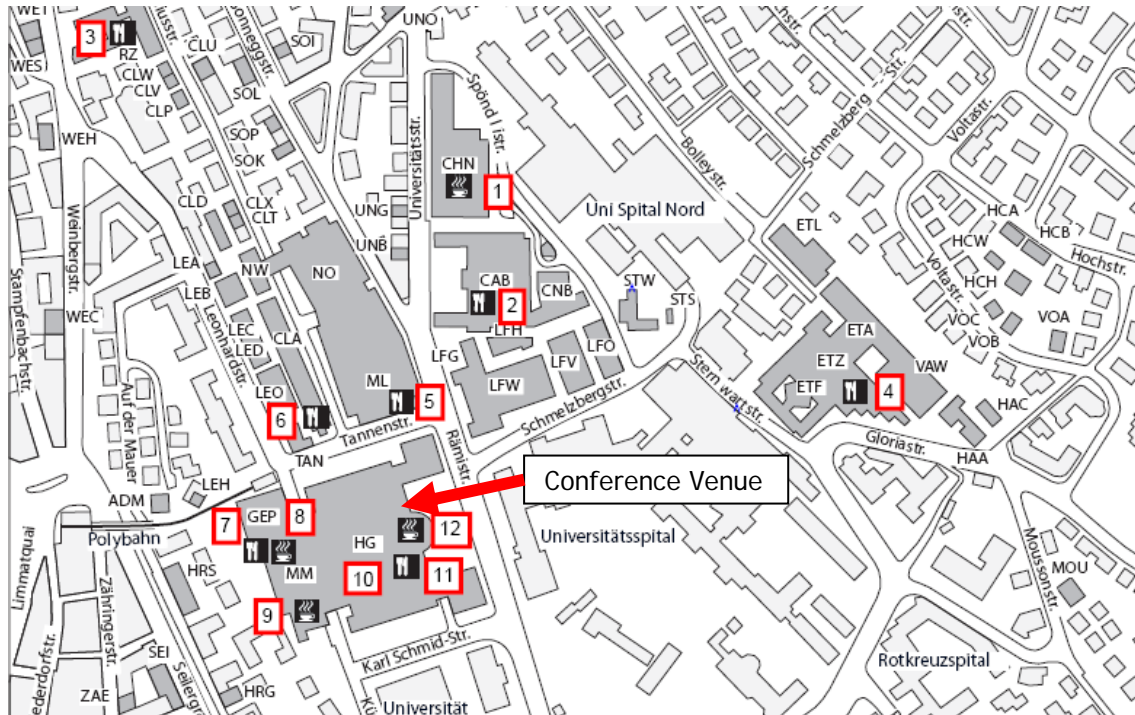


| Nr | Name | Building | Open |
|----|------|----------|------|
| 1 | CHN Bistro | CHN | Mo – Fr 08.00 – 16.00 |
| 2 | Restaurant foodLAB | CAB | Mo – Fr 08.30 – 15.30 |
| 3 | Informatikbar | IFW | Mo – Fr 08.00 – 16.30 |
| 4 | Gloriabar | ETZ | Mo – Fr 07.30 – 16.30 |
| 5 | Tannenbar | ML | Mo – Fr 07.00  - 17.00 |
| 6 | Clausiusbar | CLA | Mo – Fr 07.30 – 16.00 |
| 7 | Mensa Polyterrasse (main canteen) | MM B | Mo – Fr 11.15 – 13.30, |
| 8 | Cafeteria Polyterrasse | MM C | Mo – Fr 06.45 – 19.45 |
| 9 | bQm | MM C | Mo – Th 11.30 – 22.00; Fr            – 20.00 |
| 10 | Dozentenfoyer, faculty club (restricted access) | HG J | Mo – Fr 09.00 – 16.30 |
| 11 | Polysnack | HG F | Mo – Fr 07.30 – 17.00 |
| 12 | CafeBar | HG Entrance Hall | Mo – Fr 07.00 – 19.00 |

# 6 Guidelines and Equipment for Presentations

- **Please contact your chairman before the start of your session.**

- Each presentation is scheduled according to the program. Please prepare your presentation accordingly.

- The presentation room will be equipped with an overhead projector and a beamer for presenting from your own laptop. If you need specific equipment, please inform us well in advance (dellacasa@mavt.ethz.ch).

- We will have an ETHZ/UniZ staff member (red T-shirt) to help you with all technical and organizational issues.

- Please inform us as soon as possible if you have any problem with your presentation time.

# 7 Other Useful Information

## WEF (World Economic Forum)

- 27th – 31st January 2010 in Davos

  For further information: http://www.weforum.org/en/events/index.htm

## Climate

- The climate in Switzerland is usually pretty cold at the end of January, it may be sunny but it may also rain or snow. You should expect temperatures between -3°C and 3°C. January is an excellent season for skiing!

## Sightseeing in Zürich and Switzerland

- Zürich offers various attractions and museums and has a nice down-town shopping area. Here are some highlights:

    o Kunsthaus – Switzerland's most important art gallery contains a collection from all the important periods of European art – from the Middle Ages through to the present.

    o Rietberg Museum – the museum houses non-European art, particularly from India, China and Africa.

    o Bahnhofstrasse – the mile-long street of banks featuring exclusive fashion boutiques is the place to go shopping.

    o Zurich Zoo – Tram 6 will take you uphill to get a beautiful view of Zürich City, with the possibility to take a very nice walk to the impressive Zurich Zoo.

    o Old town – full of art galleries, antique and book shops, roaming in the old town is a pleasant way to discover the historical side of Zurich.

    o Niederdorf - during the day this is a pedestrian zone and a shopper's paradise with lots of boutiques hidden away in a patchwork of alleys. At night the many bars, restaurants and street artists turn the Niederdorf into an exciting and colorful center of entertainment.

- Finally, Zürich can be considered as the gateway to the Alps. For more information please have a look to the tourist office web site: **http://www.zuerich.com**. Further information will also be available at the registration desk or at your hotel.

## Power Plugs

- Be aware that Switzerland has an own power plug system. So please bring your international plug with you.

- We have a limited number of plug adapters to be given out for a deposit

# 8 Technical Program of CogSys2010

## Wednesday, January 27, 2010

**09:00  Registration and Welcome Coffee**

**09:30  Opening of Conference,** *Roland Siegwart & Rolf Pfeifer*

| 09:40 | EU Initiative | Cognitive Systems, Interaction, Robotics<br>*Libor Kral, Head of Unit E5* |
|---|---|---|

**10:00  Keynote Talk 1** *(Chairman: Cedric Pradalier)*

| **J. Kevin O'Regan, "***How to Make a Robot that Feels***"** |
|---|

**10:50  Auditory and Visual Sensing** *(Chairman: Cedric Pradalier)*

| DIRAC | Detection and Identification of Rare Audio-visual Cues<br>*Fabian Nater* |
|---|---|
| POP | Perception on Purpose<br>*Radu Horaud* |
| SEARISE | Smart Eyes: Attending and Recognizing Instances of Salient Events<br>*Daniel Oberhoff* |
| SCANDLE | Acoustic Scene Analysis for Detecting Living Entitie<br>*Susan Denham* |

**12:10  Lunch**

**13:30  Keynote Talk 2** *(Chairman: Rolf Pfeifer)*

| **Yasuo Kuniyoshi, "***Towards Emergence of Meaning in Embodied Cognitive Systems***"** |
|---|

**14:20  Multi-Robot Systems** *(Chairman: Rolf Pfeifer)*

| JAST | Joint-Action Science and Technology<br>*Ruud Meulenbroek* |
|---|---|
| HERMES | Human-Expressive Representations of Motion and their Evaluation in Sequence<br>*Michael Breitenstein* |
| sFly | Swarm of Micro Flying Robots<br>*Davide Scaramuzza* |
| URUS | Ubiquitous Networking Robotics in Urban Settings<br>*Alberto Sanfeliu* |

**15:40  Coffee Break**

**16:10  Natural Languages and Content Analysis** *(Chairman: Rolf Pfeifer)*

| POETICON | The "Poetics" of Everyday Life: Grounding Resources and Mechanisms for Artificial Agents<br>*Katerina Pastra* |
|---|---|
| CLASS | Cognitive-Level Annotation Using Latent Statistical Structure<br>*Vittorio Ferrari* |
| ITALK | Integration and Transfer of Action and Language Knowledge in Robots<br>*Angelo Cangelosi* |

**17:10  Poster Session (In front of AudiMax)**

**19:15  Departure at train station for Conference Banquet (Uetliberg)**

## Thursday, January 28, 2010

**09:20   Keynote Talk 3** *(Chairman: Rudolph Triebel)*

| | |
|---|---|
| Benjamin Kuipers, *"How Can a Robot Learn the Foundations of Knowledge?"* | |

**10:10   Robotics**

| ECCEROBOT | Embodied Cognition in a Compliantly Engineered Robot<br>*Owen Holland* |
|---|---|
| ROSSI | Emergence of Communication in Robots through Sensorimotor and Social Interaction<br>*Anna Maria Borghi* |

**10:50   Coffee Break (AudiMax)**

**11:20   Sensory-Motor Systems** *(Chairman: Rudolph Triebel)*

| CogX | Cognitive Systems that Self-Understand and Self-Extend<br>*Jeremy Wyatt* |
|---|---|
| DIPLECS | Dynamic Interactive Perception-Action Learning in Cognitive Systems<br>*Liam Ellis* |
| ROBOSKIN | Skin-based Technologies and Capabilities for Safe, Autonomous and Interactive Robots<br>*Giorgio Cannata* |
| PACO-PLUS | Perception, Action und Cognition through Learning of Object-Action Complexes<br>*Norbert Krüger* |

**12:40   Lunch**

**14:00   Keynote Talk 4** *(Chairman: Thierry Buecheler)*

| | |
|---|---|
| Karl Grammer *"Analogue Communication and the Emergence of Meaning"* | |

**14:50   Special Projects**

| EUROP / euRobotics | *The European Robotics Technology Platform*<br>*Anne Wendel* |
|---|---|
| ECHORD | *European Clearing House for Open Robotics Development*<br>*Alois Knoll / Norberto Pires* |

**15:10   Coffee Break**

**15:40   Neuro-Science and Bio-Inspired Systems** *(Chairman: Thierry Buecheler)*

| BACS | Bayesian Approach to Cognitive Systems<br>*Pierre Bessiere* |
|---|---|
| Decisions-in-Motions | Neural Decision-Making in Motion<br>*Florian Raudies* |
| SPARK II | Spatial-Temporal Patterns for Action-Oriented Perception in Roving Robots II: An Insect Brain Computational Model<br>*Paolo Arena* |
| ChiRoPing | Developing Versatile and Robust Perception Using Sonar Systems that Integrate Active Sensing, Morphology<br>*John Hallam* |

**17:00   Closing of Conference, Goodbye Drinks**

# 9 Poster Session (Wednesday, 27th January 2010, 5.10 pm in front of AudiMax and Foyer EO-Nord)

The posters will be displayed during the whole duration of the conference and therefore also accessible during the coffee and lunch breaks.

| No | Poster / Authors |
|---|---|
| **Auditory and Visual Sensing** | |
| 10 | *Learning invariances from examples* by Rolf Würtz |
| 11 | *Evaluation of Agent Motion in Video: Online Tracking-by-Detection* by Michael Breitenstein, Bastian Leibe, Luc Van Gool |
| 18 | *Stereo Vision for Cognitive Robotics Tasks: Navigation, Localisation, Attention and Detection* by Markus Vincze |
| 26 | *Induction of the Human Perception-Action Hierarchy Employed in Junction-Navigation Scenarios* by Affan Shaukat, David Windridge, Erik Hollnagel, Luigi Macchi, Josef Kittler |
| 29 | *A Virtual Reality Tool for Benchmarking Active Stereo Vision Systems in the Peripersonal Space* by Manuela Chessa, Silvio Sabatini, Fabio Solari |
| 36 | *A new cognitive object detection and orientation system for impaired people* by Guillermo Peris Fajarnes, LARISA DUNAI, Victor Santiago Praderas, Ion Dunai |
| 40 | *Tracker trees: hierarchies to spot rare events* by Fabian Nater, Helmut Grabner, Tobias Jaeggli, Luc Van Gool |
| 42 | *Tracking Known and Unknown Human Activities* by John Darby, Baihua Li, Costen P Nicholas |
| 52 | *3D Object Class Recognition: Using the web as knowledge* repository by Walter Wohlkinger |
| 60 | *A Bayesian Hierarchy as a Model of Human Active Visuoauditory Perception* by João Ferreira, Alexandre Malhão, Miguel Castelo-Branco, Jorge Dias |
| 64 | *Learning object tracking in image sequences* by Michael Felsberg, Fredrik Larsson |
| 66 | *Social Force Based Motion Prediction* by Matthias Luber, Johannes A. Stork, Gian Diego Tipaldi, Kai O. Arras |
| 74 | *Towards robust scene analysis: A versatile mid-level feature framework* by Engel David, Cristobal Curio |
| 77 | *Representing Ultrasonic Maps Using Active Snake Contours* by Kerem Altun, Billur Barshan |
| 82 | *SCOVIS project* by Emmanuel Sardis |
| 86 | *European Robotic Pedestrian Assistant (POSTER)* by Cyrill Stachniss, Wolfram Burgard |
| 99 | *Software architecture and middleware for artificial cognitive systems* by Johan Wiklund, Klas Nordberg, Michael Felsberg |
| 100 | *Structure and ground plane extraction from optical flow* by Vasileios Zografos |
| 105 | *Biologically Inspired Reactive Optical Flow for Control of Flying Micro Air Vehicles* by Stowers John, Friedrich Fraundorfer |
| 110 | *Plant Detection, Mapping and Discrimination for Autonomous Agricultural Robots* by Ulrich Weiss |
| 115 | *Human motion classifier based on Laban Movement Analysis* by Luís Santos, Jorge Dias |
| 123 | *Bio-inspired vision system for depth perception in humanoids* by Flavio Mutti, Giuseppina Gini |
| 134 | *Visual Human - Robot Interaction within the INDIGO project* by Haris Baltzakis, Maria Pateraki, Panos Trahanias |
| 137 | *The Virtual Facial Mirror project: Revealing Dynamic Facial Self-Perception in Humans* by Mario Kleiner, Martin Breidt, Cristobal Curio |
| 144 | *Semantic-aided visual grasping using a fuzzy description logic* by Vitucci Nicola, Mario Arrigoni Neri, Giuseppina Gini |
| 150 | *Evaluation of Stereo Reconstruction for 3D Mapping* by Francois Pomerleau, Francis Colas |
| **Learning** | |
| 25 | *Motivated Learning as an Extension of Reinforcement Learning* by Janusz Starzyk, Pawel Raif, Ah-Hwee Tan |
| 41 | *Self-organized chaos through heterostatic optimization* by Dimitrije Markovic, Claudius Gros |
| 49 | *Coherent oscillations and learning-related reorganization of spike timing* by Karim Benchenane, Adrien Peyrache, Mehdi Khamassi, Patrick Tierney, Vincent Douchamps, Francesco Battaglia, Sidney Wiener |
| 51 | *Prediction of Pushing Affordances using Recurrent Neural Networks* by Sergio Roa, Geert-Jan Kruijff |
| 56 | *A learning by imitation model handling multiple constraints and motion* alternatives by Sylvain Calinon |
| 84 | *Using Geometric and Algebaric Properties of Bayesian Networks to Predict the Behavior of Others* by Rainhard BENGEZ |
| 89 | *Unsupervised learning of sensorimotor representations* by Daniel Weiller, Robert Märtin, Peter König |
| 90 | *Unsupervised learning of canonical image features* by Robert Märtin, Cornell Schreiber, Johannes Schumacher, Thomas Lampe, Madhusudhana Rao, Daniel Weiller, Peter König |
| 102 | *Information Driven Self Organisation of Physically embedded controllers* by Fabio Bonsignorio |
| 117 | *Learning Driving Behaviour using Holistic Image Descriptors* by nicolas pugeault, Richard Bowden |
| 127 | *Robot-assisted learning of redundant tasks* by Angelo Basteris, Lino Bracco, Vittorio Sanguineti |
| 130 | *Synergy-based affordance learning for robotic grasping* by Tao Geng, James Wilson, Mark Lee |
| 142 | *On the Motor Learning of "Fully Dynamic Systems"* by Liyu Wang, Nandan Maheshiwari, Keith Gunura, Fumiya Iida |

| No | Poster / Authors |
|---|---|
| **Multi-Robot Systems and Collaboration** | |
| 8 | *Goal Inferencing And Error Detection In Joint Action* by Ruud Meulenbroek |
| 16 | *Adaptive navigation in a heterogeneous swarm robotic system* by Frederick Ducatelle, Gianni Di Caro, Luca Gambardella |
| 30 | *CHRIS project: Cooperative Human Robot Interaction Systems* by Giorgio Metta |
| 31 | *Towards Cooperative Cognitive Control for Autonomous Underwater Vehicles (AUV)* by Andreas Birk |
| 38 | *Evaluating Human-Robot Teamwork in a Mixed Reality Environment* by Jurriaan van Diggelen, Nanja Smets, Mark Neerincx |
| 39 | *Managing situated dialogue in collaborative activity* by Geert-Jan Kruijff, Miroslav Janicek |
| 94 | *Approach and Handover for Human-Robot Interaction* by Patrizia Basili |
| 97 | *Joint and Individual Walking in an Immersive Collaborative Virtual Environment* by Stephan Streuber, Astros Chatziastros, Heinrich Buelthoff, Stephan de la Rosa |
| 98 | *Living with Robots and Interactive Companions* by Patricia Vargas, Peter W. McOwan |
| 107 | *When to assist? - A human model for hybrid assembly systems* by Markus Huber, Helmuth Radrich, Cornelia Wendt, Stefan Glasauer, Alois Knoll, Berthold Färber, Thomas Brandt |
| 116 | *SoPHIE: Social Robotic Platform for Human Interactive Experimentation* by José Prado, Jorge Lobo, Jorge Dias |
| 131 | *Collective Perception in a Robotic Swarm* by Giuseppe Morlino, Elio Tuci, Vito Trianni |
| 133 | *Agent-Space Architecture* by Andrej Lucny |
| 146 | *Numerical Analysis of Morphological Influence on Self-Assembly Robots* by Maurice Göldi, Tientcheu Ngouabeu Aubery Marchel, Shuhei Miyashita, Rolf Pfeifer |
| 149 | *Achieving Self-Sorting In Self-Assembly Systems* by Tientcheu Ngouabeu Aubery Marchel, Maurice Göldi, Shuhei Miyashita, Ruedi Füchslin, Rolf Pfeifer |
| **Natural languages and content analysis** | |
| 2 | *ITALK: Integration and Transfer of Action and Language Knowledge in robots - Project Progress* by Cangelosi Angelo |
| 4 | *Follow the white rabbit, or how complexity science and linguistics can inform AI* by Michal B. Paradowski |
| 46 | *How to build a machine that people enjoy talking to* by Marc Schröder, Roddy Cowie, Dirk Heylen, Maja Pantic, Catherine Pelachaud, Björn Schuller |
| 75 | *PRAXICON: a grounded, compositional and generative concept world* by Katerina Pastra |
| 81 | *Contents-oriented Dynamic Service Composition Framework for Networked Cognitive Robots* by Woo Young Kwon, Gi Hyun Lim, Il Hong Suh, Kyoung Jin Kim |
| 96 | *Language sensorimotor informativeness enhances situated simulation* by Barbara Marino, Vittorio Gallese, Patricia Gough, Giovanni Buccino, Lucia Riggio |
| 125 | *Abstract and concrete sentences, embodiment and languages* by claudia scorolli, Ferdinand Binkofski, Giovanni Buccino, Roberto Nicoletti, Lucia Riggio, Anna Borghi |
| 136 | *Emergence and Evolution of Human Communication Systems* by Angel Stone |
| 141 | *ECHOES: Technology-Enhanced Learning for Exploring and Improving Social Interaction Skills* by Katerina Avramides, Sara Bernardini, Jingying Chen, Mary Ellen Foster, Christopher Frauenberger, Oliver Lemon, Kaska Porayska-Pomsta |
| 151 | *FaceBots: Shared Memories and Shared Friends towards meaningful long-term HRI* by Nikolaos Mavridis, Michael Petychakis, Wajahat Kazmi, Panos Toulis |
| **Neuro-Science and Bio-Inspired** | |
| 6 | *Bio-plausible robot control via the Mirror Neuron System* by Serge Thill, Boris Duran, Paul Hemeren, Tom Ziemke |
| 9 | *ConsScale: A Cognitive Scale Inspired on Consciousness* by Raul Arrabales, Agapito Ledezma, Araceli Sanchis |
| 17 | *Modelling the mirror neuron system with dynamic fields* by Boris Duran, Serge Thill, Tom Ziemke |
| 20 | *Do robots have goals? How agent's morphology influences goal attribution in marmoset monkeys* by Aleksandra Kupferberg |
| 28 | *A Joint Bioinspired Architecture for Fast Optic Flow and Two-dimensional Disparity Estimation* by Manuela Chessa, Silvio Sabatini, Fabio Solari |
| 45 | *Affective Interaction with an Expressive* Robot by Nadia Magnenat-Thalmann, Zerrin Kasap, Maher Ben Moussa |
| 47 | *Smart Biosonar Sensors from Bats -- the ChiRoPing Project* by J Hallam, Herbert Peremans, Annemarie Surlykke, Robert B Fisher, Elisabeth K V Kalko, Peter Møller Juhl |
| 50 | *Emotion and Metacontrol* by Ricardo Sanz, Carlos Hernández, Guadalupe Sánchez, Adolfo Hernando |
| 54 | *Neural mechanisms in motion transparency and figure-ground segregation to control visual navigation* by Heiko Neumann, Florian Raudies, Mark Greenlee, Pieter Roelfsema, Antonio Frisoli |
| 55 | *Grid continuation in the Entorhinal Cortex* by multimodal integration by Gábor Szirtes, Andras Lorincz |
| 58 | *Psychological State Estimation During Robot Assisted Gait* Training by Alexander Koenig, Ximena Omlin, Lukas Zimmerli, Carmen Krewer, Mark Sapa, Friedemann Müller, Robert Riener |
| 70 | *Realistic circuit modeling: large-scale simulations of the cerebellar granular layer* by Egidio D'Angelo, Sergio Solinas, Eduardo Ros, Jesus Garrido, Henrik Jorntell, Patrick van der Smagt |
| 71 | *Enhancing Companion Dialogue with Episodic Memory* by Gregor Sieber, Brigitte Krenn |

| No | Poster / Authors |
|----|------------------|
| 72 | *Robotic applications of LSAM: Large-Scale Analog Model of the Cerebellum Based on Reverse-engineerin* by Martin Nilsson, Henrik Jorntell, Patrick van der Smagt |
| 80 | *Hierarchical Analysis on Cognitive Systems* by Shuhei Miyashita, Atsushi Aoyama, Mikiro Nawa, Jin Higashijima, Kei Sakamoto, Tomoko Nozoye, Takayuki Kobayashi |
| 83 | *Neuromorphic Models of Selective Attention for Controlling Actuated Silicon Retinas* by Daniel Sonnleithner, Giacomo Indiveri |
| 87 | *State-Dependent computation on distributed networks of silicon spiking neurons* by Emre Neftci, Elisabetta Chicca, Giacomo Indiveri, Rodney Douglas |
| 88 | *The Role of Body and Tool Based Information on Joint Action Performance* by Stephan Streuber |
| 91 | *Recognition of asynchronous cognitive events from EEG* by Nicolas Bourdaud, Ricardo Chavarriaga, José del R. Millán |
| 95 | *ARMin and VR in Peripersonal Space To Improve Rehabilitation of Paretic Arm* by Katherine Grace August, Marco Guidali, Verena Klamroth-Marganska, Robert Riener |
| 108 | *A device to explore neural correlates of grasp training therapy* by Bogdan Vigaru, Julio Duenas, Olivier Lambercy, Dominique Chapuis, Roger Gassert |
| 124 | *Human Awareness to Interface Errors Improves HCI Performance* by Andrea Biasiucci, Ricardo Chavarriaga, Kilian Förster, Daniel Roggen, Gerhard Tröster, José del R. Millán |
| 128 | *The Epistemic Control Loop* by Ricardo Sanz, Carlos Hernández, Manuel Rodriguez |
| 129 | *Coupling Human's Brain Cognitive Signals and Computer Vision* by Marija Uscumlic, Ricardo Chavarriaga, José del R. Millán |
| 143 | *Cognitive Modelling of Infant Development* by Frank Guerin |
| 147 | *Learning to cope with uncertainty without knowing it: The hippocampus and a bayesian model of belief* by Sara Gonzalez Andino, Rolando Grave de Peralta, Pierre Bessiere, Jacques Droulez, Juan M. Ahuactzin, Helene Tzieropoulos |
| 148 | *Amygdala induced plasticity in an integrated computational model of the two phase theory of cond* by Martin Inderbitzin |
| 153 | *A neural circuit to read out the temporal population code* by Andre Luvizotto, Cesar Renno-Costa, Paul F. M. J. Verschure |
| **Robotics** | |
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