robotics Swiss National Centre of Competence in Research

COMMUNITY NEWSLETTER

Issue 18
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Public Version

NCCR NEWS

EDB Singapore visit NCCR Robotics

On 17th March a delegation from the Singapore Development board visited the NCCR to discuss ways to include robotics in the future development of Singapore and future collaborations that could benefit Switzerland and Singapore.

CONGRATULATIONS

Exchange Programme

Congratulations to our six succesful candidates for the education grants awarded to Master's, PhD and Posdocs by NCCR Robotics. Read more about the winners and about the experiences of three students who participated in the programme.

Thesis Defense

Phase 1 NCCR Robotics member Florian Vaussard (LSRO), presented his PhD Thesis, entitled "*A Holistic Approach to Energy Harvesting for Indoor Robots: Theoretical Framework and Experimental Validations*" on 20th March 2015.

NCCR OPEN POSITIONS

Robot Eye Camera PhD/Postdoc position

Open NCCR Robotics position for developing a robot eye camera at sensors Institute of Neuroinformatics Zurich (ETH / UZH).

WE WILL BE AT:

REHAB

23 April

Karlsruhe Trade Fair Centre

Read more

Society for Neural Control of Movement

24th April

South Carolina

Read more

Innorobo

1-3 July

Lyon

Read more

ROBOTICS WORLD

Top News

- Quadrotor automatically recovers from failure or aggressive launch, without GPS
- Intuitive Surgical da Vinci Surgical System gets big endorsement
- Europe agrees on regulatory drone framework to move industry forward
- Would you feel sorry for a simulated robot? Study shows people empathize more with the real thing
- MATLAB Robotics System Toolbox and ROS

World events

- New Frontiers in Human-Robot Interaction (Apr 21-22)
- VEX Robotics World Championships (Apr 22-25)
- RoboBusiness Europe (Apr 29-30)
- Disruptive Week (Apr 27-30)
- AUVSI Unmanned Systems (May 4-7)
- RoboUniverse (May 11)
- astra 2015 (May 11-13)
- RoboUniverse new York (May 11-13)
- TePRA (May 11-12)
- CMEF (May 15-18)
- MES (June 13-17)

External calls

- RSS workshop on open Review
- TAROS - call for papers
- ICIRA - call for papers
- ICMAA - call for papers
- IIC - call for papers
- Robotics Summer School in Vienna
- IEEE Transactions on Haptics: Call for Papers
- ICMA - Proposals for tutorials and workshops

External positions

- postdoctoral researcher positions at Harvard Microrobotics Lab

PAST EVENTS

UN World Conference on Disaster Risk Reduction

14-18 March

Japan

Read more...

Bertarelli Symposium

17 April

EPFL, Lausanne

Read more

START UPS INSIDE SWISS ROBOTICS

Swiss Robotics

Swiss Robotics is an expanding and successful NCCR Robotics initiative that provides Swiss Start Ups with a unique opportunity to co-exhibit with NCCR Robotics at selected conferences and trade fairs. Discover some of these Start Ups:

ecoRobotix

ecoRobotix designs autonomous robots for agriculture. Its first development is a solar-powered robot for ecological and economical weeding of row crops, allowing herbicide-free and carbon-neutral weeding, contributing to a more sustainable agriculture. Read more

NCCR PRESS COVERAGE

IEEE Spectrum: Pleurobot Is an Eerily Lifelike Robotic Salamander

It's not particularly difficult to make a robot that looks like an animal. It's much harder to make a robot that behaves like an animal. Read more

More press coverage available through NCCR Robotics website

NEW VIDEOS

New education video series: Careers in Robotics

Careers in Robotics - introduction

Careers in Robotics - Sahar El Khoury

Careers in Robotics - Michael Neunert

GUESS WHO?

Cool links by Alexander Winkler (ADRL)

Spot Is Boston Dynamics' Nimble New Quadruped Robot

Game-playing software holds lessons for neuroscience

Computer Conquers Texas Hold 'Em, Researchers Say

Interesting links

What It Took These Four Women To Get Into Robotics

NCCR Robotics Director

Prof. Dario Floreano

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Can you guess who this NCCR professor is?

This professor grew up in an academic environment and started to pursue robotics by building the simplest robot that had not been built yet at a workshop for another discipline. Read more

NEW MEMBERS

Iason Batzianoulis LASA

Iason is a PhD student at LASA, EPFL. His research focuses on the development of human-oriented controllers for grasping objects with a robotic hand and their implementation on wearable robotics.

Simone Duis IRP

Simone is a Technical Assistant in the IRP, EPFL. Her skills focus mainly on animal-related neurorehabilitation, which uses a combination of robot-assisted training and electrochemical stimulation.

SELECTED NCCR PUBLICATIONS *

R. Chavarriaga, A. Sobolewski and J. d. R. Millán, "Errare machinale est: The use of error-related potentials in brain-machine interfaces," *Frontiers in Neuroscience,* vol. 8, num. 208, 2014.

M. Faessler, F. Fontana, C. Forster, E. Mueggler, M. Pizzoli and D. Scaramuzza, "Autonomous, Vision-based Flight and Live Dense 3D Mapping with a Quadrotor Micro Aerial Vehicle" *Journal of Field Robotics*, 2015. DOI: 10.1002/rob.21581

A. P. Gerratt, H. O. Michaud and S. Lacour, "Elastomeric Electronic Skin for Prosthetic Tactile Sensation," *Advanced Functional Materials*, 2015.

I. Iturrate, R. Chavarriaga, L. Montesano, J. Minguez and J. d. R. Millán, "Latency correction of error-related potentials reduces BCI calibration time," *In 6th Brain-Computer Interface Conference*, Graz, Austria, 2014.

E. Y. Lew, R. Chavarriaga and J. d. R. Millán, "Single trial prediction of self-paced reaching directions from EEG signals," *Frontiers in Neuroscience*, vol. 8, pp. 222, 2014.

S. Saeedi, T. Carlson, R. Chavarriaga, I. Iturrate and J. d. R. Millán, "Prediction of Command Delivery Time for BCI," In *IEEE International Conference on Systems, Man, and Cybernetics*, San Diego, CA, USA, 2014.

*Selected publications include publications which have been made known to the editor. All members are kindly encouraged to inform the management team of new pulbications.

NCCR Robotics

The Swiss National Center of Competence in Robotics (NCCR Robotics) is a federally funded programme bringing together robotics laboratories from EPFL, ETH Zurich, University of Zurich and University of Lugano to work on wearable, rescue and educational robots.

EPFL ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE

ETH zürich

Universität Zürich

USI SUPSI Istituto Dalle Molle di studi sull'intelligenza artificiale IDSIA

Photos: Pleurobot courtesy EPFL.