### Issue 16 February 2015 Public Version

# COMMUNITY NEWSLETTER

Dont miss out on our new section, Guess who?



### Control strategies for active lower extremity prosthetics and orthotics

Much has been made of the numerous advances in robotic prosthetics and orthotics (P/O) over recent years, and the question of how to control these devices so that they work in.. Read more



### Flyability announces completion of a seed round of financing

As announced in the Swiss Startup news channel, Flyability, a spin off company from NCCR Robotics announced the completion of its first external financing round of equity.... Read more



### Cybathlon at Tokyo 2020

Negotiations with stakeholders of the Summer Olympics 2020 in Tokyo continue with discussions on how to transfer the Cybathlon or elements of it to Tokyo. Sign up for the Cybathlon newsletter and keep up to date with the build up to the event!



#### **CONGRATULATIONS**

### Flyability wins UAE Drones for Good prize: 1M USD

Flyability, a spin off company from NCCR Robotics have won the first UAE Drones for Good competition with Gimball, the world's first crash resilient drone. Read more



#### RPG celebrates 3-year anniversary

Watch the summary video of the main achievements, projects, awards, exhibitions of RPG in the past thre years.



#### **AAAI Video Competition winner**

The Phase 1 CoWriter sub-project, A Robot Which Children Can Teach to Write, won Best Video of the AAAI competition. Read more





### MCCR OPEN POSITIONS

#### Open positions at LIS

PhD Fellowships in Foldable Flying Robots Postdoctoral Fellowship in Control and Simulation of Drones / Postdoctoral Fellowship in Insect-inspired Vision for Drones / Technical Engineer in Embedded **Electronics and Programming** 





#### **ROBOTICS WORLD**

#### **Top News**

UAE launches "Robotics for Good" competition on the heals of Drones for Good success

Flyability wins \$1M Drones for Good competition

Introducing Spot, a new smaller 4legged robot from Boston **Dynamics** 

Recent robotics transactions

Programming safety into selfdriving cars

#### World events

Proxinnov (Feb 17)

**RE.WORK Internet of Things** Meetup (Feb 18)

Startup Weekend Lausanne (Feb 20-22)

Saphari NMMI Winter School (Feb 20-25)

Intl Expert Days Service Robotics (Feb 25-26)

EPFL Startup Essentials (Feb 25)

HRI 2015 - (March 02-05)

AUVSI's Unmanned Systems Europe (March 03-04)

European Robotics Forum (March11-13)

Soft Robotics Week (April 13-17applications before Feb 28)

#### External calls

ICRA 2015 Soft Robotics Full-day Workshop Poster abstracts and Live Demos submission

Fifth Joint IEEE International Conference on Development and Learning and on Epigenetic Robotics Papers, Tutorials and **Thematic Workshops** 

Hello Tomorrow Challenge

Paper Submission Hamlyn Symposium

The Public end-user Driven **Technological Innovation** 

Living Machines 2015 - Call for papers

ARSO 2015 - sessions and papers call

RO-MAN - workshops, tutorials and papers

FM - call for papers

RAM Special Issue: Bioinspired Motor Control for Articulated

Talk: Pre-impact fall detection

17 February EPFL

Read more

#### Augmented Human 2015

Singapore

Read more

#### **Eurobotics Forum**

11-13 March

Vienna

Read more

#### Just do it!

12-13 March

Dresden

Read more...

#### **TAR**

12-13 March

Berlin

Read more...

### **UN World Conference on Disaster Risk Reduction**

14-18 March

Japan

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:

#### **ROVENSO**

The mission of ROVENSO is to design, manufacture and market agile Remote Operated Vehicles that preserve human life from hazardous situations that can occur in nuclear decommissioning or emergency response operations. Read more



### III NCCR PRESS COVERAGE

### Revolutionary implant revitalises broken spinal cord

After the release of the News Bulletin last January announcing publication in Science of this revolutionary implant, the news went viral amongst international media including BBC health.















## Robots - Call for Papers

PhD student for MarineUAS project (Marie Curie ITN H2020) -Praha-Chodov-Honeywell

**External positions** 

Postdoc and PhD positions -University of Bonn

PhD student openings in roboticsUniversity of Arkansas

Tenure-Track Assistant/Associate Professor-University of Alberta

Autonomous Driving R&D Engineer: Planning and Decision Making-Bosch

two Research Associates in the fields of haptic teleoperation and haptic human-robot collaboration-The Bristol Robotics Laboratory, University of the West of England

Research Fellow possiitons in robotic exoskeletons-Sweden

Tenure track positions-Italian Institute of Technology

PhD and PostDoc positions available in Control of Networked and Cloud Robotic Systems-**NCKU** 

Computer Vision & UAV Flight Algorithms Engineering Positions-Skybotix

Autonomous Driving R&D Intern-Bosch

Tenure Track Faculty Openings-University of Illinois



#### **Anne-Christine Butty Programme Manager**

Camp to camp

Nature

Strategyzer

Dilbert

#### **Usefu Links**

UN policy on UAVs used in humanitarian situations

#### **NCCR Robotics Director**

Prof. Dario Floreano

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#### **IMPRESSUM**















### A Flying Robot that can Walk

Extensive media coverage followed the release of the News Bulletin last month, amongst which were Robohub and IEEE Spectrum. It was also posted across the social media including by the Consulate General of Switzerland in New York.





### Robots in Education

Séverin Lemaignan (CHILI) talked on the Tribu show (RadioTeleSuisse) on 6th February about robots of the future. You can listen to his interview on the Tribu website.

More press coverage available through NCCR Robotics website



### **NEW VIDEOS**

#### **Autonomous Christmas Lab**



Three year anniversary of the **Robotics and Perception Group** 



#### A flying robot that can walk



Flyability win UAE Drones for **Good competition** 





### GUESS WHO?



#### Can you guess who this NCCR professor is?

His favourite hobby is magic which he started at the age of 6 when his father gave him a box of magic tricks as a present. He is now one of the youngest NCCR Robotics professors. Read more and find out.





### NEW MEMBERS

### Ehsan Karim (LSRO)

Ehsan is a PhD student at LSRO, EPFL. He is interested in the design and control of simplistic biologically inspired robotic systems: aerial, mobile, and legged robots.



### Eduardo Feo (IDSIA)

Eduardo Feo Flushing is a PhD student at IDSIA. His research focuses on swarm and wireless networked robotics, combinatorial optimization and metaheuristics.



### Jérôme Guzzi (IDSIA)

Jérôme holds a degree in physics from ETHZ and is pursuing a PhD in computational science at IDSIA. He focus his research on human-robot interaction, multirobot systems and resilient path planning.



#### **Publisher**

NCCR Robotics Management Team

#### Editor

Mayra Lirot

#### Web Editing

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#### Contributor

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#### Design

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Pascal Briod



### Sahar El Khoury (LASA)

After finishing her postdoctoral studies at LASA, EPFL, Sahar is due to occupy the position of data analyst in Zurich.





#### **SELECTED NCCR PUBLICATIONS \***

L. Daler, S. Mintchev, C. Stefanini and D. Floreano, "A bioinspired multi-modal flying and walking robot," *Bioinspiration & Biomimetics*, vol. 10, num. 1, p. 016005, 2015.

I.R. Minev, P. Musienko, A. Hirsch, Q. Barraud, N. Wenger, E.M. Moraud, J. Gandar, M. Campogrosso, T. Milekovic, L. Asboth, R.F. Torres, N. Vachicouras, Q. Liu, N. Pavlova, S. Duis, A. Larmagnac, J. Vörös, S. Micera, Z. Suo, G. Courtine and S. Lacour, "Electric dura mater for long-term multimodal neural interfaces," *Science*, Vol. 347 (6218), pp. 159-163, 2015.

M.R. Tucker, J. Olivier, A. Pagel, H. Bleuler, M. Bouri, O. Lambercy, J. del R. Millán, R.Riener, H. Vallery and R. Gassert, "Control Strategies for Active Lower Extremity Prosthetics and Orthotics: A Review," *Journal of neuroengineering and rehabilitation*, vol. 12 (1), p. 1, 2015.

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

#### **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.









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