

Dear subscribers and
former NCCR Robotics members,



Welcome to Phase 2 of the NCCR Robotics programme with ETHZ as co-leading house! We have many exciting activities and events in store for the next four years. The NCCR Robotics will organise a Swiss Robotics Industry Day in autumn 2015 at EPFL. We will also have an NCCR presence at IROS 2015 with an NCCR Robotics booth and Swiss Robotics presence.

We wish you relaxing Christmas holidays and a great start to the renewed NCCR Robotics. The infoletter will be back in February.

Dario Floreano and Robert Riener



RR-GC trial robots

On Monday 1st Dec, 17 NCCR Robotics members of the Rescue Robotics Grand Challenge (RR-GC) trialled four robots at the Ecogia disaster training centre near Geneva. The Pleurobot, *Salamandra robotica II*, [Read more](#)



Cyathlon Newsletter launched

Subscribe to the new [Cyathlon newsletter](#): keep updated with the latest Cyathlon news and follow the build up to this unique event closely.



New office premises for noonee

Spin fund grantee [noonee AG](#), inventors of the Chairless Chair, have moved to their [new office](#) in the industrial area of Rüti (ZH). The team is at full speed further developing the device so that it will allow you to sit anywhere at anytime. Stay tuned for more news to come soon.



CONGRATULATIONS

SNSF Starting Grant

Davide Scaramuzza has received one of the 27 [SNSF Starting Grants](#) for young researchers for his project "Low-latency, Vision-based Agile Quadrotor Flight".



IMD start-up competition

Flyability has been shortlisted for the IMD start-up competition. This competition provides a unique opportunity for regional start-ups to benefit from help and insights from participants in the IMD MBA and the Executive MBA programmes. [Read more](#)



NCCR CALLS

Women Master's exchange programme

Women Master's students from any institution studying



ROBOTICS WORLD

Top News

[Evolving swimming robots to study origins of extinct vertebrates](#)

[New CAA rules govern use of drones in built up areas](#)

[25% of KUKA shares trade hands](#)

[Kidbotics review: Thymio II](#)

[Ocean-going robot fleet successfully completes fish-tracking mission](#)

World events

[ICIAfS \(22-24 Dec\)](#)

[Techfest \(02 Jan\)](#)

[AIAA Guidance, Navigation, and Control Conference \(5-9 Jan\)](#)

[A3 Business Forum \(21-23 Jan\)](#)

[RE Work \(29-30 Jan\)](#)

[lift \(4-6 Feb\)](#)

[International CES \(6-9 Jan\)](#)

External calls

[Advanced Postdoc.Mobility](#)

[eurathlon](#)

[IEEE CIS and RAM](#)

[IEEE RAS Summer School on Agricultural Robotics](#)

[IJCNN - Special Session on Computational Intelligence applied to Vision and Robotics](#)

[International Journal of Humanoid Robotics - Papers Special Issue on Whole-Body Control for Robots in the Real World](#)

[International Symposium on New Frontiers in Human-Robot Interaction](#)

[RSS](#)

[RTEX](#)

[The Man and the Machine: When Systems Take Decisions Autonomously](#)

[WHC](#)

External positions

[Assistant Professor](#)

[Distributed Systems Group](#)

[Endowed Chair in Spinal Cord Research](#)

[Flight Operations Engineer - Prime Air](#)

[Lecturer in Intelligent Robotics](#)

[Tenure Track Position Mechanical](#)

an appropriate field of robotics may apply to spend time working in an NCCR Robotics lab....[Read more](#)

PhD/Postdoc fellowship Programme

External female and male PhD and Postdocs from any institution studying an appropriate field of robotics may apply to spend time working in an NCCR Robotics lab, or NCCR Robotics members may apply to visit an external lab [Read more](#)



WE WILL BE AT:

European Robotics Challenges

[Read more...](#)



PAST EVENTS

ICT Swiss Computer Awards

05 Nov 2014

Lucerne

[Read more](#)

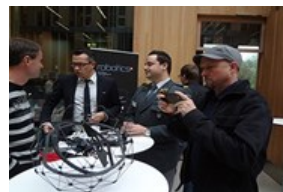


Swiss Drone Day

18 Nov 2014

Bern

[Read more](#)

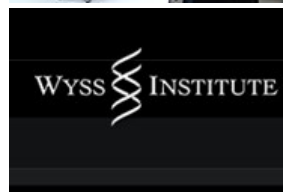


Bio-mimetic Drones: From Collision Free to Collision Friendly

02 Dec 2014

USA

[Read more](#)



Talk Prof. A.E. (Gusz) Eiben

09 Dec 2014

EPFL

[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:



GCtronic

GCtronic, based in Lugano, develops, produces and sells small mobile robots for education, research and entertainment. Three platforms are available: e-puck, Elisa-3 and Wheelphone. [Read more](#)



NEW VIDEOS

Light painting thymio

Let's play and hunt robots!

[Engineering](#)

[Postdoctoral Research Fellow \(Fixed Term\)](#)

[Senior Mechanical Engineer](#)

Cool links



by

Linda Seward

Communication Officer

[Robots vs Animals](#)

[Watch a turtle robot and other 'spies' infiltrate wildlife](#)

[Penguin robot helps researchers get close and personal](#)

[tech news](#)

[book](#)

Useful links

[SPARC](#)

[Federal Councillor Schneider](#)

[Ammann signs agreement on Switzerland's partial association to Horizon 2020](#)

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ShanghAI Lectures - Flyability



WHO IS WHO ?

Chrisitan Forster ([RPG](#))

Christian is 27, he grew up close to Zurich. He has a Bachelor's degree in mechanical engineering and a Master's degree in robotics, systems and control, both from ETHZ. In summer 2012, he joined [RPG](#) as a PhD student where they work on robot vision for flying robots. [Read more](#)



NEW MEMBERS

Kamilo Melo ([Biorob](#))

Kamilo is a Postdoc at [Biorob](#) (EPFL) working in several aspects of Robotic Salamander systems. His main research focuses on the development and integration of hyper-redundant mobile systems as well as locomotion control.



DEPARTING MEMBERS

Anna Pagel ([SMS](#))

Anna will leave NCCR Robotics at the end of the year. She will continue at [SMS](#) until spring 2015 and finish her PhD in the field of active knee exoprosthetics. Afterwards, she would like to continue research in the field of robot-assisted rehabilitation, therapy and diagnosis, either at a university hospital or at a company.



SELECTED NCCR PUBLICATIONS *

F. Boufera, F. Debbat, F. Mondada and M. F. Khelfi, "Fuzzy Control System for Autonomous Navigation and Parking of Thymio II Mobile Robots," *International Journal of Computer and Electrical Engineering* (IJCEE), vol. 6, num. 4, p. 321-325, 2014.

C. Brandli, T. A. Mantel, M. Hutter, M. A. Höpfinger and R. Berner, "Adaptive pulsed laser line extraction for terrain reconstruction using a dynamic vision sensor," *Frontiers in Neuroscience*, vol. 7, p. 275, 2014.

J. Fink, S. Lemaignan, P. Dillenbourg, P. Rétornaz and F. C. Vaussard, "Which Robot Behavior Can Motivate Children to Tidy up Their Toys? Design and Evaluation of "Ranger", " In *9th ACM/IEEE International Conference on Human-Robot Interaction* (HRI'14), Bielefeld, Germany, 2014.

C. Forster, M. Pizzoli and D. Scaramuzza, "Appearance-based Active, Monocular, Dense Reconstruction for Micro Aerial Vehicles," *Robotics: Science and Systems* (RSS), Berkely, CA, 2014.

S. Kradolfer, S. Dubois, F. Riedo, F. Mondada and F. Fassa, "A sociological contribution to understanding the use of robots in schools: the Thymio robot," In *Fifth International Conference on Social Robotics*, Sydney, Lecture Notes in Computer

S. Magnenat, J. Shin, F. Riedo, R. Siegwart and M. Ben-Ari, "Teaching a Core CS Concept through Robotics," In *19th Annual Conference on Innovation and Technology in Computer Science Education (ITiCSE'14)*, Uppsala, Sweden, 2014.

E. L. Di Mario, I. Navarro Oiza and A. Martinoli, "Analysis of Fitness Noise in Particle Swarm Optimization: From Robotic Learning to Benchmark Functions," In *IEEE Congress on Evolutionary Computation*, Beijing, China, 2014.

E. L. Di Mario, I. Navarro Oiza and A. Martinoli, "Distributed Learning of Cooperative Robotic Behaviors using Particle Swarm Optimization," In *International Symposium on Experimental Robotics*, Marrakech, Morocco, 2014.

E. Mueggler, M. Faessler, F. Fontana and D. Scaramuzza, "Aerial-guided Navigation of a Ground Robot among Movable Obstacles", In *IEEE International Symposium on Safety, Security, and Rescue Robotics (SSRR)*, Toyako-cho, 2014.

R. De Souza, S. El Khoury, J. Santos-Victor and A. Billard, "Towards comprehensive capture of human grasping and manipulation skills," In *Thirteenth International Symposium on the 3-D Analysis of Human Movement*, Lausanne, Switzerland, 2014.

A. K. Tanwani, J. d. R. Millán and A. Billard, "Rewards-Driven Control of Robot Arm by Decoding EEG Signals," In *IEEE Engineering in Medicine and Biology Society Conference (EMBC)*, Chicago, USA, 2014.

F. Vaussard, J. Fink, V. Bauwens, P. Retornaz and D. Hamel, "Lessons learned from robotic vacuum cleaners entering the home ecosystem," In *Joint Conferences of the 13th Conference on Towards Autonomous Robotic Systems (TAROS) and 15th Robot World Congress of the Federation-of-International-Robot-Soccer-Association (FIRA)*, 2014.

F. C. Vaussard, J. Fink, V. Bauwens, P. Rétornaz and D. Hamel, "Lessons Learned from Robotic Vacuum Cleaners Entering in the Home Ecosystem," *Robotics and Autonomous Systems*, vol. 62, no. 3, pp. 376–391, 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 publications.

