

LATEST NCCR NEWS

Education committee

We are pleased to announce Francesco Mondada as chair of the NCCR Robotics Education Committee as of December 2016. We also take this opportunity to thank Aude Billard for her valuable work as previous chair of this committee.



Cyathlon 2020 & updates

The executive board of ETH Zurich has officially announced that [Cyathlon](#) will take place 2020 in Zurich! Also, discover the Cyathlon [set of stamps](#) issued by Sierra Leone & find out which [Cyathlon image](#) was selected as part of the BBC's most striking photos of 2016.



Teleoperation of robotic hand

Muscular activity contains information on motion intention. By decoding the muscular activity of an arm during reaching-to-grasp motions, [Billard Lab](#) were able to detect grasp type in the early stages of a reaching motion which enables fast activation of a robotic hand by teleoperation. [Video](#)



Summer School on Rehabilitation Robotics

The [Riener Lab](#) is organising a Summer School on Rehabilitation Robotics which will take place at the Biomedical Engineering School, Shanghai Jiao Tong University (SJTU). [Read more](#)



R2T2americaraibe

Using the robot Thymio created out of NCCR Robotics, on 24th January a special edition of the R2t2 event took place in America and the Caribbean with 100 kids and teenagers competing. [Read more](#)



TWIICE finalists in Robotics for Good

The TWIICE exoskeleton (Bleuler Lab) has been selected as one of 10 finalists in the UAE Robotics for Good competition. [Read more](#).



CONGRATULATIONS

PhD defense Volker Bartenbach

Congratulations to Volker Bartenbach from [Riener Lab](#) who successfully defended his PhD thesis on the design and control of robotic exoskeletons last December. The title was: Constraints Caused by Lower Extremity Exoskeletons.



SIMPAR Best Paper & Industrial Robot Innovation Award

Congratulations to Michael Neunert and [Buchli Lab](#) for winning first prize for the [SIMPAR](#) Best Paper Award and first prize as well for the [Industrial Robot](#)



In this issue...

Education Committee

Cyathlon 2020 & Updates

Teleoperation of robotic hand

Summer School on Rehabilitation Robotics

R2T2americaraibe

Congratulations:

PhD Defense Volker

Bartenbach/SIMPAR Best Paper & Industrial Robot Innovation Award

NCCR Calls:

International Journal of Social Robotics/FSR

Open Positions:

Postdoctoral Appointments in Paik Lab / Project Development and Coordination

We will be at...

Press Coverage

New Videos

New Members

Publications

ROBOTICS WORLD

Top News

[Building character AI through machine learning](#)

[The art of drone flight: Creating drone costumes](#)

[Lady Gaga, 300 Intel drones, and the Super Bowl](#)

[Robotics, maths, python: A fledgling computer scientist's guide to inverse kinematics](#)

[When being a woman in robotics gives you the edge](#)

World events

[LIFT](#) (01-03 March)

[Swiss Robotics Going Global](#) (02 March)

[STIL](#) (02 March)

[European Robotics Forum](#) (22-24 March)

[DATE](#) (27-31 March)

[Deep Learning in healthcare summit](#) (28-01 March)

External calls

[ICRA](#)

[ICRA Workshop on Innovative Haptic Interfaces emerging from](#)



NCCR ROBOTICS CALLS

Special Issue in international Journal of Social Robotics

Aiming at collecting an overview of empirical and theoretical state-of-the-art research on human-robot interaction in educational contexts. **Submission deadline 01 March 2017.** [Read more](#)

FSR 2017 - 11th Conference on Field and Service Robotics

FSR is a single track conference with a specific focus on field and service applications of robotics technology. **Submission deadline 01 April 2017.** [Read more](#)

ROBOTS 4 LEARNING R4L



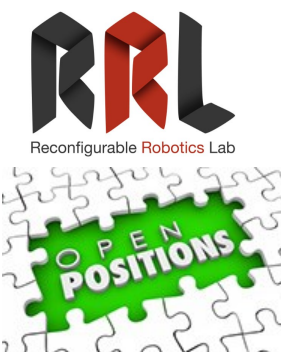
NCCR OPEN POSITIONS

Postdoc Position in Paik Lab

[Paik Lab](#) invite applications for postdoctoral appointment in the areas of soft robotics and soft pneumatic actuator modelling. [Read more](#)

Project Development and Coordination

[Floreano Lab](#) invites applications for senior project development and coordination. The position consists in preparing national and international project proposals... [Read more](#)



WE WILL BE AT:

Swiss Robotics going global

2 March 2017

Lausanne

[Read more](#)

R4L @HRI 2017

6 March 2017

Vienna

[Read more](#)

European Robotics Forum

22-24 March 2017

Edinburgh

[Read more](#)

DATE 2017

27-31 March 2017

Lausanne

[Read more](#)



PRESS COVERAGE

BBC - Spy in the Wild

"Producers from BBC approached [Ijspeert Lab](#), 2015



Soft Robotics

[Innoro - Call for innovation](#)

[IROS - Regular IROS paper submission](#)

[Venture leaders Life Science Boston](#)

[Swiss startups conquering Asian markets](#)

Start-up corner

Please find following links related to start-up support. If you would like to promote your events through our channel, please contact us at

nccrobotics@epfl.ch

[Startup Essentials](#)

[KICKSTART Accelerator](#)

[Swiss Robotics Going Global](#)

[Venture leaders Life Science Boston](#)

[Swiss startups conquering Asian markets](#)

External positions

[Electrical Engineer](#) (ANYbotics)

[Tenure-Track, Open Rank Faculty Position](#) (University of Southern California)

[2 Postdoc positions](#) – Bioinspired Soft Robotics - (CMBR)Network Center of IIT

Interesting links

[Meet the World's First Completely Soft Robot](#)

NCCR Robotics Director

Prof. Dario Floreano

CONTACT

NCCR Robotics

Office MED 1 1626, Station 9

EPFL CH-1015 Lausanne

Switzerland

+41 21 693 69 39

nccr-robotics@epfl.ch

nccr-robotics.ch

For Technology Transfer enquiries please contact:

[Jan Kerschgens](#)

IMPRESSUM

Publisher

NCCR Robotics Management Team

Editor

Mayra Lirot / Linda Seward

Contributing Editor

Jan Kerschgens

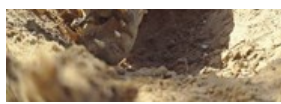
Web Editing

Mayra Lirot / Linda Seward

Design

Alternative Communication SA / Pascal Briod

to ask them to create two robots, a crocodile and a monitor lizard, to be used to get closer to crocodiles in the wild for filming purposes." [Read more](#)



Artificial Feathers Let Drones Morph Their Wings Like Birds

"Birds have been developing winged flight technology ever since they stole it from the dinosaurs back in 160 million years ago" [Read more](#)



More [press coverage](#) available through NCCR Robotics website

NEW VIDEOS

Die ETH Zürich am WEF 2017



Reptilian Robots are Spies in the Wild



ANYmal for Search & Rescue



Teleoperation of a robotic hand using muscular activity



NEW MEMBERS

Vivek Ramachandran

Vivek is a PhD student in [Floreno Lab](#). He received his MS in Mechanical Engineering from Carnegie Mellon University in 2016. His research primarily focuses on the development of variable stiffness technologies for soft, wearable systems.



Elmira Yadollahi

Elmira is a PhD student in [Dillenbourg Lab](#) and is studying Computer-Human Interaction. Her research focuses on long-term interaction between social robots and humans in educational environments.



SELECTED NCCR ROBOTICS PUBLICATIONS *

C. Cadena, L. Carlone, H. Carrillo, Y. Latif, D. Scaramuzza, J. Neira, I. Reid and J. J. Leonard, "Past, Present, and Future of Simultaneous Localization and Mapping: Toward the Robust-Perception Age", in *IEEE Transactions on Robotics*, 2016.

T. Cieslewski and D. Scaramuzza, "Efficient Decentralized Visual Place Recognition Using a Distributed Inverted Index", *IEEE Robotics and Automation Letters*, 2017.

J. Delmerico, S. Isler, R. Sabzevari and D. Scaramuzza, "A Comparison of Volumetric Information Gain Metrics for Active 3D Object Reconstruction", *Autonomous Robots*, 2017.

J. Delmerico, E. Mueggler, J. Nitsch and D. Scaramuzza, "Active Autonomous Aerial Exploration for Ground Robot Path Planning", *IEEE Robotics and Automation Letters*, 2017.

M. Faessler, D. Falanga and D. Scaramuzza, "Thrust Mixing, Saturation, and Body-Rate Control for Accurate Aggressive Quadrotor" In *Flight IEEE Robotics and Automation Letters*, 2017.

F. Farshidian, M. Neunert, A. W. Winkler, G. J. Rey and J. Buchli, "An Efficient Optimal Planning and Control Framework For Quadrupedal Locomotion", in *International Conference on Robotics and Automation (ICRA)*, Singapore, 2017.

G. Gallego and D. Scaramuzza, "Accurate Angular Velocity Estimation with an Event Camera" *IEEE Robotics and Automation Letters*, 2017

Camera, *IEEE Robotics and Automation Letters*, 2017.

M. Neunert, F. Farshidian, A. W. Winkler and J. Buchli, "Trajectory Optimization Through Contacts and Automatic Gait Discovery for Quadrupeds", in *Robotics and Automation Letters (RAL)*, Singapore, 2017.

A. Özgür, W. Johal, F. Mondada and P. Dillenbourg, "Haptic-Enabled Handheld Mobile Robots : Design and Analysis," In *ACM CHI Conference on Human Factors in Computing System (CHI)*, Denver. USA, April 2017.

H. Rebecq, T. Horstschaefer, G. Gallego and D. Scaramuzza, "EVO: A Geometric Approach to Event-Based 6-DOF Parallel Tracking and Mapping in Real Time", In *IEEE Robotics and Automation Letters*, 2017.

A. W. Winkler, F. Farshidian, M. Neunert, D. Pardo and J. Buchli, "Online Walking Motion and Contact Optimization for Quadruped Robots", in *International Conference on Robotics and Automation (ICRA)*, Singapore, 2017.

*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 Centre 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.

