



## LATEST NCCR NEWS

**Swiss Robotics Industry Day**

We inform our readers that due to a conflict with a major Robotics conference, the next [Swiss Robotics Industry Day](#) will be taking place on the 5th November 2020. Our technology and spin-off demonstrations will be showcased this year at the [EPFL Open Days](#) 14-15th September, we hope to see you there.

**NCCR Robotics third phase is fully funded by SNSF after highly positive evaluation**

For the next four years of the final phase, NCCR Robotics will be structured around three Grand Challenges: Wearable Robotics, Rescue Robotics and Educational Robotics. [Read more](#)

**Prof. Hannes Bleuler**

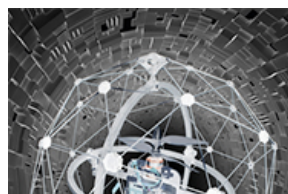
We inform our readers that [Prof. Hannes Bleuler](#) (EPFL), who has been part of NCCR Robotics since the beginning of the programme, officially retired at the end of last month. We take this opportunity to wish him a wonderful retirement and all the best.

**Finance officer**

We would like to welcome [Frances Ryser](#) as our new finance officer. We also take this opportunity to thank [Stéphanie Juriens](#) for her work and contributions over the last years.

**EPFL Master in Robotics**

We are glad to announce the success of the EPFL Master in Robotics launched last year. Its visibility multiplied by ten the number of external applications to our robotics studies. This program provides a well-rounded education with a strong practical component. [Applications for autumn 2019 are open till 15th April.](#)

**Revised rule book for CYBATHLON 2020 published**

An updated version of the competition rules for CYBATHLON 2020 has been published and can now be downloaded. The updated version of the Race task Description for CYBATHLON 2020 has been enriched with experts feedback. [Read more](#)

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**ROBOTICS WORLD****Top News**

- Women in robotics on International Women's Day 2019 – updated
- A prosthetic that restores the sense of where your hand is
- Controlling false discoveries in large-scale experimentation: Challenges and solutions
- Robots track moving objects with unprecedented precision
- Learning preferences by looking at the world

**World events**

- Hannover Messe (01-05 April)
- Automate 2019 (08-11 April)
- SIDO (10-11 April)
- Aquatic Soft Robots (14 April)
- RoboSoft (14-18 April)
- CVC 2019 (25-26 April)
- Global Robot Expo (8-9 May)
- ICRA (20-24 May)

## Federal Council Alain Berset discovers MyoSuit

The MyoSuit was among 7 selected new technology projects shown to Federal Council Alain Berset earlier this month during his visit to ETH Zurich themed "The future of health".



## Investment from Credit Suisse

NCCR Robotics spin-off Fotokite, won investment from Credit Suisse Entrepreneur Capital Ltd to support growth and to create local jobs. [Read more](#)



## NCCR ROBOTICS OPEN POSITIONS

### Postdoctoral researcher in HRI

The Educational Grand Challenge of the NCCR Robotics at Dillenbourg Lab is looking for a postdoctoral researcher in human-robot interaction (HRI), geared towards educational applications. [Read more](#)



### Several open positions in Fotokite

Join the NCCR Robotics spin-off Fotokite, various positions available. [Read more](#)



## NCCR ROBOTICS CALLS

### Toward online optimal control of dynamic robots

Our member Farbod Farshidian ([Hutter lab](#)) is part of the organizing committee of the *Toward Online Optimal Control of Dynamic Robots*, ICRA 2019 workshop. Submission deadline of extended abstracts: 1st April 2019. [Read more](#)



### ETH Zurich Robotics summer school

The ETH Zurich Robotics Summer School is a great transition from the RSS conference to ARCHE. It offers lectures and hands-on tutorials to grasp the fundamental concepts that every roboticist around the world should possess. Submission deadline: 15th April 2019.

### CVPR 2019 workshop on event-based vision

Workshop dedicated to event-based cameras and algorithms. Live Demos submission deadline: 1st May 2019. [Read more](#)



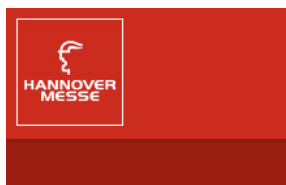
## 2019 EVENT UPDATE - WE WILL BE AT:

### Hannover Messe

1-5 April 2019

Hannover

[Read more](#)



(23-24 May)

### External calls

- FSR (D/L 01 April)
- Human movement science for physical human-robot collaboration - ICRA workshop (D/L 7 April)
- Do good robotics symposium (D/L 28 May)

### Equal Opportunities corner

- PSI Career Return Program – applications now open
- You can apply to this programme if...
- You have been on a career break due to family commitments or mobility of your partner for at least 9 months.
  - You hold a PhD degree in natural science up to five years after graduation or a master in engineering up to ten years after graduation and have gained relevant experience.
  - You live in Switzerland when you take up your position.
  - You are proficient in English and willing to learn German.
  - Science for All: Social Psychological Insights to Attract and Retain Women in STEM (15 April, ETH Zurich)

### Start-up corner

Please find the following links related to start-up support. If you would like to promote your events through our channel, please contact us at [nccr-robotics@epfl.ch](mailto:nccr-robotics@epfl.ch)

- 4 ways to make a better first impression with investors

### External positions

- Robotics and machine learning engineer (Agri-Technologist KTP Associate, Prospects)
- Lecturer/Senior Lecturer (Assistant/Associate Professor) in Robotics and autonomous systems (University of Bristol)
- Postdoctoral researchers (Harvard Microbotics Laboratory)
- Robotics programme manager (Imperial College London)
- University teaching Associate in Robotics (the University of Sheffield)

### NCCR Robotics Director

Prof. Dario Floreano

### CONTACT

**NCCR Robotics**  
Office MED 1 1526,

and Sevensense. Yago and Volaly showcases featured at the NCCR Robotics corporate booth.

## RoboSoft 2019

14-18 April 2019

Korea

[Read more](#)

## RoboSoft 2019

April 14~18, 2019  
COEX, Seoul, Korea

EPFL CH-1015 Lausanne  
Switzerland  
+41 21 693 76 64  
[nccr-robotics@epfl.ch](mailto:nccr-robotics@epfl.ch)  
[nccr-robotics.ch](http://nccr-robotics.ch)

For Technology Transfer enquiries please contact:  
Jan Kerschgens

## Focus robots workshop

03 May 2019

Bern

[Read more](#)



FOCUS ROBOTS

## IMPRESSUM

### Publisher

NCCR Robotics Management Team

### Editor

Mayra Lirot

### Contributing Editors

Jan Kerschgens / Ana Caldas / Nicola Nosengo

### Web Editing

Mayra Lirot / Ana Caldas

### Design

Alternative Communication SA / Pascal Briod

## ARCHE 2019 training days & main event

Different training dates from January - May,

Main event in July

[Read more](#)

## ARCHE

## PRESS COVERAGE

### Self-folding drone could speed up search and rescue missions

Researchers at the University of Zurich have developed a foldable drone to be used in disaster response scenarios. [Read more](#)



### Neural network teaches drones to navigate cities autonomously

Delivery, surveillance, building inspection, and maintenance are just a few of the possible uses of autonomous drones in urban areas. But their use has been limited because of the challenges ... [Read more](#)



### New prosthetic hand can sense objects' form and position

The newly developed prosthetic hand can sense the position of an object in a purse, for example. [Read more](#)



### Startup-Unternehmen Flyability Drohnen zum Schutz von Leben

Mit dem fliegenden Roboter ist es möglich, Schornsteine, Tanks, Belüftungsrohre oder Reaktoren zu inspizieren, ohne Menschenleben zu gefährden. (DE) [Read more](#)



### Scientists teach a robot dog to get back up after they kick it down

The relationship between humans and dog-like robots seemingly follows this timeline... [Read more](#)





## NEW VIDEOS

**Robots enable bees and fish to talk to each other**



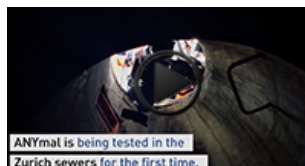
**Marron presenta el 'perro robot'-El hormiguero 3.0**



**Keep rollin' – whole-body motion control and planning for wheeled quadrupedal robots**



**Inspector ANYmal - high tech deep beneath Zurich**

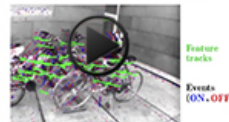


**PL-SLAM: a stereo SLAM system through the combination of points and line segments**



**Asynchronous, photometric feature tracking using events and frames (ECCV'18)**

We track features at high rate using a small number of frames. In this example, the frame rate was artificially lowered to 1 Hz.



## NEW MEMBERS

**Karin Buetler** (Marchal-Crespo lab)

Karin is a cognitive neuroscientist currently working as postdoctoral researcher. She supervises projects focusing on the cognitive and neural correlates of motor learning during robotic training aiming at improving neurorehabilitation.



**Patrik Schmuck** (Chli lab)

Patrik is a PhD student. His research focus is on collaborative ego motion and scene estimation, with the aim of enabling a team of robots to collaboratively perceive their environment with vision sensors, in order to leverage efficiency and robustness of SLAM.



**William Stewart** (Floreano lab)

William is a post-doctoral researcher studying aerospace engineering. His focus is on developing and implementing core technologies for unmanned systems in the fields of sensors development, composite structures, aerodynamics, and system modeling.



## DEPARTING MEMBERS



After nearly three years as postdoc in the Dillenbourg Lab, for the Educational Grand Challenge of the NCCR Robotics, Dr. Wafa Johal will be joining the University of New South Wales (Sydney Australia) as Tenure Track

Assistant Professor in August 2019.



## SELECTED NCCR ROBOTICS PUBLICATIONS \*

M. Bjelonic, C. D. Bellicoso, Y. de Viragh, D. Sako, F. Dante Tresoldi, F. Jenelten and M. Hutter *"Keep Rollin' - Whole-Body Motion Control and Planning for Wheeled Quadrupedal Robots"* IEEE Robotics and Automation Letters, vol. 4: no. 2, pp. 2116-2123, New York, NY: IEEE, 2019.

D. Falanga, K. Kleber, S. Mintchev, D. Floreano and D. Scaramuzza. *"The Foldable Drone: A Morphing Quadrotor that can Squeeze and Fly"* IEEE Robotics and Automation Letter, 2018.

D. Falanga, S. Kim, and D. Scaramuzza *"How Fast is Too Fast? The Role of Perception Latency in High-Speed Sense and Avoid"* IEEE Robotics and Automation Letters 2019.

R. Gomez-Ojeda, F.A. Moreno, D. Scaramuzza and J. Gonzalez-Jimenez *"PL-SLAM: a Stereo SLAM System through the Combination of Points and Line Segments"* IEEE Transactions on Robotics, 2019.

J. Hwangbo, J. Lee, A. Dosovitskiy, D. Bellicoso, V. Tsounis, V. Koltun and M. Hutter *"Learning agile and dynamic motor skills for legged robots, Science Robotics"* Vol. 4, Issue 26, 2019.

H. Moon, J. Martinez-Carranza, T. Cieslewski, M. Faessler, D. Falanga, A. Simovic, D. Scaramuzza, S. Li, M. Ozo, C. De Wagter, G. de Croon, S. Hwang, S. Jung, H. Shim, H. Kim, M. Park, T. C. Au and S. J. Kim *"Challenges and implemented technologies used in autonomous drone racing"* Springer: Intelligent Service Robotics Series 2019.

\* 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, IDSIA and UNIBE to work on wearable, rescue and educational robots.



The National Centres of Competence in Research are a research instrument of the Swiss National Science Foundation.

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Images: Phase III: Setup organized by Ayberk Özgür of EPFL Dillenbourg Lab and GC - Cognitive Maintenance Robotics Games Community, Photograph by Valentin Flauraud of vfpix; Hannes Bleuler: Alain Herzog EPFL; Cybathlon: Alessandro Della Belle and ETH Zurich; MyoSuit: ETH Zürich, Sebastian Wagner; ICRA: ICRA website; Focus robots: Focus robots website.