

## LATEST NCCR NEWS

### Meet Tribot, the Swiss Army knife of robots for rescue missions

NCCR Robotics scientists are developing a three-legged robot for search and rescue missions that can crawl, roll, jump... [Read more](#)



### EO Committee Kick-off Meeting

The new Equal Opportunities Committee's Kick-off meeting took place in Bern on 28th February. We are glad to announce the composition of the committee, which is constituted of volunteers from our institutions and has a ... [Read more](#)



### An excellent Annual Retreat!

This year's Annual Retreat was very successful, not only in bringing the community together but in achieving its targets in preparation for the next phase... [Read more](#)



### NEW: EPFL Master's in Robotics

[Registration](#) now open! We are glad to announce that EPFL has opened a 2-year [Master's in Robotics](#). The program provides well-rounded education and practical experience. Application deadline: 15th of April.



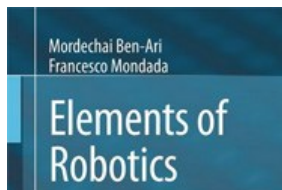
### New Science Writer

We welcome [Nicola Nosengo](#) to the NCCR Robotics Management team. Nicola is a highly experienced science writer who has written extensively for Nature and The Economist we look forward to collaborating with him.



### Over 100k chapter downloads in four months!

Described by users as easily accessible to all levels, Mordechai Ben-Ari and Francesco Mondada's new open access book, Elements of Robotics, registered an amazing 100k [chapter downloads](#) in the first four months.



### ANYmal at the World Economic Forum in Davos

ANYmal was presented at Davos during the 2018 World Economic Forum. ANYmal had to face very snowy conditions to access the event. [Read more](#)



### Information Pack

The newly updated [Information Pack](#) is now available through the website. It includes general information about NCCR Robotics, its key members, research and industry and society activities.



## In this issue...

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Congratulations: FOLDAWAY, Our feathered drone, Fotokite, MyoSwiss, FLYABILITY, Cybathlon

Calls: SNSF Project Funding, Sinergia, Conference on Collective Behavior

Open Positions: Ijspeert Lab, Karlen lab and Paik Lab

We will be at...

Press coverage

New videos

Departing members

Selected Publications

## ROBOTICS WORLD

### Top News

[European Robotics Forum 2018: Over 900 roboticists meet in Tampere, Finland](#)

[The autonomous "selfie drone"](#)

[Personalizing wearable devices](#)

[ML 2.0: Machine learning for many](#)

[Soft robots that can sense touch, pressure, movement and temperature](#)

## World events

[DATE](#) (19-23 March)

[WearRAcon18](#) (21-23 March)

[Haptics Symposium](#) (25-28 March)

## External calls

[ACIRS](#)

[AnSWeR](#)

[ARM](#)

[BioRob](#)

[CLAWAR](#)

[1st International Workshop on Deep Learning for Visual SLAM](#)

## CONGRATULATIONS

FOLDAWAY wins Venture Kick Stage

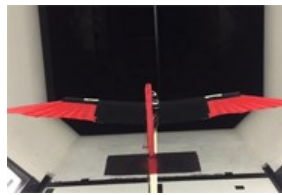


FOLDAWAY wins Venture Kick Stage 2  
NCCR Robotics spin-off Foldaway have won Venture Kick Stage 2 and take home 20,000 CHF, they are now preparing for...[Read more](#)



## La Recherche 2018 Award goes to our feathered drone

"Bioinspired Morphing Wings for Extended Flight Envelope and Roll Control of Small Drones" has been awarded the prize "La Recherche 2018" in the category... [Read more](#)



## Fotokite amongst GENIUS NY finalists

NCCR Robotics spin-off Fotokite has been selected amongst the six 2018 finalist teams of the GENIUS NY. [Read more](#)



## MyoSwiss shortlisted for start ups prizes

NCCR Robotics spin-off MyoSwiss, has been shortlisted for two prizes, in the [ZKB Pionierpreis](#) and in the [W.A. de Vigier Stiftung](#).



## FLYABILITY awarded investors' favorite idea at WFES in the clean mobility category

NCCR Robotics spin-off Flyability, has been awarded "Investors favorite idea" in the clean mobility category during the World...[Read more](#)



## Cyathlon shortlisted for sport awards

The Cyathlon has been shortlisted for two sport awards: Best New Concept & Best Participation Technology by the [Sports Technology Awards](#).



## NCCR ROBOTICS CALLS

### NSF Project Funding Call

Researchers can apply for coverage of research costs and staff salaries as well as for the funding of scientific cooperation, networking and communication; however, they may not apply for their own salaries. [Read more](#)



### Sinergia - interdisciplinary, collaborative and breakthrough

Sinergia promotes the interdisciplinary collaboration of two to four research groups that propose breakthrough research. [Read more](#)



### Conference on Collective Behavior

Dario Floreano is co-organizing a conference on Collective Behavior, 7-11th May in Trieste, Italy. [Read more](#)



## NCCR ROBOTICS LAB'S OPEN POSITIONS

### Ijspeert Lab - PostDoc & PhD open positions

PhD & PostDoc open position in neuromechanical models of human locomotion at Ijspeert Lab. [Read more](#)



[Deep Learning for visual SLAM](#)

[ISR](#)

[ROSCon](#)

## Equal Opportunities corner

[International Women's Day: Top female scientists reveal the records and people who inspired them](#)

## 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 [nccr-robotics@epfl.ch](mailto:nccr-robotics@epfl.ch)

[Venturelab](#) [Scale-up Bootcamp](#)

## External positions

[PostDoc positions](#) (Oxford University)

[Doctoral student in Formal Methods for Robotics](#) (KTH)

[Specialist Technical Instructor in Robotics & Computer Science](#) (Royal College of Art)

[PhD research fellowship position in Robotic Vision and Data Driven Learning on Autonomous Robotic Platforms](#) (Norwegian University of Science and Technology)

[Various positions in Robotics](#) (CCAM)

## NCCR Robotics Director

Prof. Dario Floreano

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## IMPRESSUM

### Publisher

NCCR Robotics Management Team

### Editor

Mayra Lirot

### Contributing Editor

Jan Kerschgens / Joëlle Mottier

### Web Editing

Mayra Lirot

### Design

Alternative Communication SA / Pascal Briod

## Karlen lab - PostDoc position

PostDoc open position at Karlen lab in wearable and embedded electronics and signal processing programs in mobile sleep enhancement and gait rehabilitation. [Read more](#)



## Paik Lab - Multiple Positions

Paik Lab has various open positions at different levels. [Read more](#)



We recommend you to keep up to date with:

[CYBATHLON](#)



[DRONE DAYS](#)



## 2018 EVENT UPDATE - WE WILL BE AT:

### Forward

19 April 2018

Lausanne

[Read more](#)



HANNOVER MESSE 2018

### Hannover Messe

23-27 April 2018

Germany

[Read more](#)



### Conference on Collective Behavior

07-11 May 2018

Italy

[Read more](#)



### ICRA

21-25 May 2018

Australia

[Read more](#)



## PRESS COVERAGE

### AI-Powered Drone Mimics Cars and Bikes to Navigate Through City Streets

Deep-learning algorithm uses car and bicycle dataset to fly a drone autonomously [Read more](#)



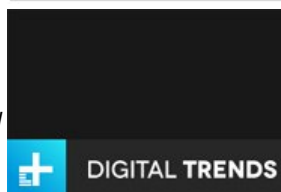
### Diese Drohne lernt durch Imitation

Drohnen der Uni Zürich können selbstständig Strassen entlangfliegen, Velofahrer erkennen und Hindernissen ausweichen. [Read more](#)



### The DroNet algorithm teaches drones to navigate city streets like cars

Drones can be dangerous. From hacking unprotected devices to falling from... [Read more](#)



### So kommen Drohnen sicher durch die Stadt

Dank einem an der Universität Zürich entwickelten Algorithmus können Drohnen völlig selbstständig entlang der Strassen... [Read more](#)





## Autonomous high flying drones learn to navigate by watching traffic below



GPS-dependent drone delivery is all but impossible in cities, but this... [Read more](#)

## Drones learn to navigate autonomously by imitating cars and bicycles

A new algorithm allows drones to fly completely by themselves through the streets... [Read more](#)



## Drones learn to navigate autonomously by imitating cars and bicycles

All today's commercial drones use GPS, which works fine above building roofs... [Read more](#)



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

### NEW VIDEOS

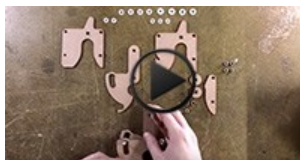
#### Meet Tribot, the Swiss Army knife of robots for rescue missions



#### ANYmal on snow



#### Highly Functional DIY Studio – Backdrop Mechanism



#### Robust, Visual-Inertial State Estimation: from Frame-based to Event-based Cameras



#### Ultimate SLAM? Combining Events, Images, and IMU for Visual SLAM in HDR and High-Speed Scenarios



#### Dronet: Learning to Fly by Driving



### DEPARTING MEMBERS

#### Jun Shintake ([Floreano Lab](#))

Jun has started his own research group at the University of Electro-Communications in Japan, supported by the MEXT/JSPS Leading Initiative for Excellent Young Researchers. He works to create soft materials based elements and robots.



### SELECTED NCCR ROBOTICS PUBLICATIONS \*

J. Delmerico, D. Scaramuzza, "A Benchmark Comparison of Monocular Visual-Inertial Odometry Algorithms for Flying Robots" in IEEE International Conference on Robotics and Automation (ICRA), 2018.

A. Fomin, V. Glazunov, V. Didenko, J. Paik, "The Design of A New Rotary Hexapod with A Single Active Degree of Freedom," in 5th IFToMM International Symposium on Robotics & Mechatronics (ISR2017) 2017

A. Loquercio, A.I. Maqueda, C.R. Del Blanco, D. Scaramuzza, "*DroNet: Learning to Fly by Driving*" in IEEE Robotics and Automation Letters (RA-L), 2018.

D. Liu, W. Chen, R. Chavarriaga Lozano, Z. Pei, J. Millán del R., "*Decoding of Self-paced Lower-Limb Movement Intention: A Case Study on the Influence Factors*" Frontiers In Human Neuroscience, 11, 560, 2017.

M. A. Robertson, J. Paik, "*Low-inertia vacuum-powered soft pneumatic actuator coil characterization and design methodology*" in the first IEEE-RAS International Conference on Soft Robotics, 2018.

T. Rosinol Vidal, H.Rebecq, T. Horstschaefer, D. Scaramuzza, "*Ultimate SLAM? Combining Events, Images, and IMU for Robust Visual SLAM in HDR and High Speed Scenarios*" in IEEE Robotics and Automation Letters (RA-L), 2018.

J. Shintake; V. Cacucciolo, D.Floreato, H. Shea, "*Soft Robotic Grippers*" in Advanced Materials, 2018.

H. Tassilo, A. Urs, T. Butzer, O. Lamercy, R. Gassert, "*Design and Evaluation of a Bowden-Cable-Based Remote Actuation System for Wearable Robotics,*" in IEEE Robotics and Automation Letters, PP (99), 2018.

Z. Zhakypov, J. Paik, "*Design Methodology for Constructing Multimaterial Origami Robots and Machines*" in IEEE Transactions on Robotics, 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](#), [IDSIA](#) and [UNIBE](#) to work on wearable, rescue and educational robots.**

Leading House



Co-leading House



Universität  
Zürich



SWISS NATIONAL SCIENCE FOUNDATION