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COMMUNITY NEWSLETTER

LATEST NCCR NEWS

Neurorestore

NeuroRestore is a new Center set up by the Defitech Foundation, CHUV, UNIL and EPFL to harness expertise in neurorehabilitation and neurosurgical implant technologies. It will be run by Grégoire Courtine and Jocelyne Bloch. [Read more](#)



Infinity Room

The installation "Shadows of drones" is on display at the EPFL ArtLab, as part of the "Infinity room 2.0 exhibition" that opened on 13 September and will remain open until 26 January 2020. Many of the drones on display were developed by Floreano's lab with support from NCCR Robotics. [Read more](#)



CONGRATULATIONS

ERC consolidator grants

Davide Scaramuzza and Stelian Coros are among the winners of the ERC Consolidator Grants, with their research projects on "Low-latency Perception and Action for Agile Vision-based Flight" and "Computational Models of Motion for Fabrication-aware Design of Bioinspired Systems". [Read more](#)



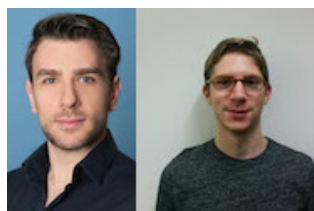
New IEEE fellows

Aude Billard and Auke Ijspeert are among the professors at EPFL's School of Engineering who have earned the prestigious title of 2020 IEEE Fellows. The title is reserved for IEEE members who have achieved extraordinary accomplishments. [Read more](#)



PhD defences

Davide Falanga (pictured on the left) and Henri Rebecq, both members of the Scaramuzza lab, successfully passed their PhD defences. Their thesis are titled, respectively, "Agile, Vision-Based Quadrotor Flight: from Active, Low-Latency Perception to Adaptive Morphology" and "Event Cameras, from SLAM to High Speed Video".



AlphaPilot challenge

In this issue...

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- Congratulations: ERC winners, IEEE fellows, PhD defences, AlphaPilot challenge.
- NCCR Robotics open positions: Postdoc on neurorehabilitation, positions at Sevensense.
- NCCR Robotics calls: ICRA 2020
- We will be at...
- Press coverage
- New videos
- Selected publications

ROBOTICS WORLD

Top News

- Robots that repair themselves
- Alphabet X' "Everyday robot" project
- The Robonet video database

World events

- ICMLA 2019 (16-19 Dec)
- Techfest (3-5 Jan)
- CES (7-10 Jan)
- SII 2020 (12-15 Jan)

External calls

- Open Soft Robotics Research
- Ubiquitous Robots 2020
- SAB 2020: From animals to animats
- MESROB 2020

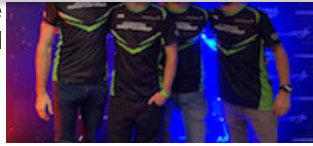
Start-up corner

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

- Venture leaders technology 2020

- Apply to be one of the 10 members of the Swiss National Startup Team the Venture Leaders Technology 2020 for

Gehrig (Scaramuzza's lab) has ranked 2nd in the AlphaPilot Autonomous Drone Racing World Championship. [Read more](#)



· INNOSUISSE Start-up training - aimed at entrepreneurs who have already founded their start-up.

Equal Opportunities Corner

· International Day of Women and Girls in Science - 11 February 2020
· ETH Zurich Equal Opportunities: profile of Margarita Chli

External positions

· Tenured/Tenure Track position at Texas A&M University
· Postdoc position at Agile Robotics and Perception Lab (NYU)
· PhD/Postdoc in Robotics and Cognitive Science (TU Berlin)
· Post-doc and PhD opportunities in Aerial robotics, Swarms, and Motion planning

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NCCR ROBOTICS OPEN POSITIONS

Postdoc on robotic neurorehabilitation

The Marchal lab at the University of Bern is seeking a post-doctoral researcher with strong knowledge in robotic neurorehabilitation and transcutaneous electrical stimulation. [Read more](#)



Opportunities at Sevensense

Several positions available at NCCR Robotics' spin-off Sevensense, including Machine Learning Engineer and Robotics System Engineer. [Read more](#)



NCCR ROBOTICS CALLS

ICRA 2020

The conference, which features NCCR Robotics members Roland Siegwart as general co-chair and Aude Billard as outreach chair, will take place in Paris from 31 May to 4 June. The final deadline for papers and early bird registration is 28 February. [Read more](#)



2019 EVENT UPDATE - WE WILL BE AT:

DARPA Subterranean challenge - Urban Circuit

February 2020

OLYMPIA, WA (USA)

The Hutter and Siegwart labs and Flyability are part of the Cerberus Team. [Read more](#)



Mohamed Bin Zayed International Robotics Challenge (MBZIRC)

February 2020

ABU DHABI (UAE)

A biennial robotic competition focusing on UAV/UGV collaboration. The ETH Zurich team includes the Hutter and Siegwart groups. [Read more](#)



PRESS COVERAGE

ANYmal in Nature's top 10 papers

A *Science Robotics* paper on the ANYmal robot is featured in a list of "10 remarkable papers" published in 2019, compiled by Nature. [Read more](#)



Alpha Pilot challenge

up in second place. Hear more (in German)



NeuroRestore on RTS

On 5 December, the new Centre headed by G. Courtine and involving EPFL, UNIL and CHUV was profiled by RTS in their 19:30 news. Read more. The new centre was also covered by Le Matin and 24Heures.



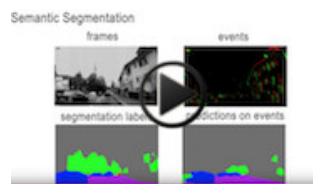
More press coverage available through NCCR Robotics website.

NEW VIDEOS

Going further: hiking with the Myosuit



Towards low-latency control of quadrotors with event cameras



DARPA SubT Challenge: preview of the urban circuit



Soft skin-like robots you can put in your pocket



SELECTED NCCR ROBOTICS PUBLICATIONS *

R. Chavez-Garcia, J. Guzzi, A. Giusti, L.M. Gambardella, "Trajectory features estimation for legged robots", ICRA 2019

G. Gallego, M. Gehrig, Mathias, D. Scaramuzza, "Focus Is All You Need: Loss Functions For Event-based Vision", *arXiv*, 2019

K. Melo, T. Horvat and A. J. Ijspeert, "Minimalist Design of a 3-Axis Passive Compliant Foot for Sprawling Posture Robots," 2019 2nd IEEE International Conference on Soft Robotics (RoboSoft), Seoul, Korea (South), 2019.

Mintchev, S., Salerno, M., Cherpillod, A. et al., "A portable three-degrees-of-freedom force feedback origami robot for human-robot interactions", *Nature Machine Intelligence*, 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. Read all publications.

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

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Images: Bionic leg: Federica Barberi, Hillary Sanctuary/EPFL; Foldable drone: University of Zurich; Robotics engineer position: ETH Zurich; Cybathlon symposium: Cybathlon 2020 website.



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