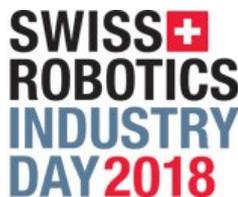


COMMUNITY NEWSLETTER

LATEST NCCR NEWS

Swiss Robotics Industry Day

Members of the industry are invited to be part of this unique opportunity to gain insight into the Swiss Robotics ecosystem on 01st of November 2018 at the SwissTech Convention Center. [Read more](#)



Front cover of Neuron

Micera lab's was featured in the front cover of Neuron for their work *Biomimetic Intra-neural Sensory Feedback Enhances Sensation Naturalness, Tactile Sensitivity, and Manual Dexterity in a Bidirectional Prosthesis*. [Read more](#)



25 women in robotics you need to know about-2018

Our Review Panel member Katherine J. Kuchenbecker, has been listed amongst this year's 25 women in Robotics you need to know about. [Read more](#)



FES-ABILITY New Spin-off

The Spin Fund committee has granted Andrea Crema the 12th NCCR Robotics Spin Fund for FES-ABILITY, hosted at [Micera lab](#). FES-ABILITY aims at developing proprietary technology... [Read more](#)



sevensesense New Spin-off

The Spin Fund committee has granted Gianluca Cesari the 13th NCCR Robotics Spin Fund for Sevensesense, hosted at [Siegwart lab](#). Service robots have the potential to drastically increase efficiency in various... [Read more](#)



Francesco Mondada heads the new Centre for Learning Sciences

The new EPFL LEARN Centre, launched earlier this month, will promote innovation in teaching and help formulate responses... [Read more](#)



NCCR Robotics at IROS 2018

We are glad to announce that once again, NCCR Robotics was present at IROS 2018. Several of our PIs attended and presented their work. [Read more](#)



EPFL Drone Days

Last month, the EPFL Drone Days welcomed close to 5,000 people. The highlight of the event was the spectacular drone race, won by three Swiss pilots after several days of intense battle involving over sixty international... [Read more](#)



CONGRATULATIONS

Peter Eckert PhD defense



In this issue...

- Swiss Robotics Industry Day
- Front cover of Neuron
- 25 women in robotics you need to know about-2018
- FES-ABILITY New Spin-off
- sevensesense New Spin-off
- Francesco Mondada heads the new Centre for Learning Sciences
- NCCR Robotics at IROS 2018
- EPFL Drone Days
- Congratulations: Peter Eckert PhD defense, Tomislav Horvat PhD defense, Three NCCR Robotics Spin-offs in the top 100 Swiss Startup Awards, Flyability amongst the 6 SVC Award finalists, European Commission mentions SensArs as success story.
- Open Positions: Ijspeert lab, intento, ANYbotics
- We will be at...
- Press coverage
- New videos
- New members
- Selected Publications

ROBOTICS WORLD

Top News

- [25 women in robotics you need to know about – 2018](#)
- [The impact of AI on work: implications for individuals, communities, and societies](#)
- [A fleet of miniature cars for experiments in cooperative driving](#)
- [Rethink Robotics closes its doors](#)
- [Model helps robots navigate more like humans do](#)

World events

- [IOT Solutions World Congress \(16-18 Oct\)](#)
- [World Robot Summit \(17-21Oct\)](#)
- [ICCAS \(17-20 Oct\)](#)
- [Ai-HRI \(18-20 Oct\)](#)
- [CBS \(25-27 Oct\)](#)
- [CoRL \(29-31 Oct\)](#)
- [ROBOEXPO \(1-2 Nov\)](#)
- [HUMANOIDS \(6-9 Nov\)](#)
- [HFR \(13-14 Nov\)](#)
- [TECHFEST \(14-16 Dec\)](#)

Peter ([Ijspeert lab](#)) presented his public PhD thesis defense entitled: "*Towards Agility: Definition, Benchmark and Design Considerations for Small, Quadrupedal Robots*" last June and will continue his work at [Paik lab](#).



Tomislav Horvat PhD defense

Tomislav ([Ijspeert lab](#)) presented his public PhD thesis defense entitled "*Control of Bio-Inspired Sprawling Posture Quadruped Robots with an Actuated Spine.*" As a next step, he plans a move towards the industry.



Three NCCR Robotics Spin-offs in the top 100 Swiss Startup Awards

NCCR Robotics [Flyability](#), [Fotokite](#) and [ANYbotics](#) were selected amongst the top 100 Swiss Startups in September. [Read more](#)



Flyability amongst the 6 SVC Award finalists

[Flyability](#), was selected amongst the six nominees for the [SVC 2018 award finals](#) taking place early November this year.



European Commission mentions SensArs as success story

NCCR Robotics spin-off [SenseArs](#) was listed amongst the highlights from some of the breakthrough innovations supported by the EU funding instruments... [Read more](#)



External calls

[esa Business Incubation Centres](#)

..

[Switzerland](#) (D/L 28 Oct)

[IMD Startup Competition](#) (D/L 12 Nov)

[ISMR 2019](#) (call for papers)(D/L 01 Nov)

[RoboSoft 2019](#) (call for papers) (D/L 01 Nov)

The Swiss contest [bugnplay](#) is now open to students for prizes. This contest is not about academic excellence, but creativity in projects, installations, robots for the under 25 years.

Equal Opportunities corner

[Workshop programme organised by the EO Offices at universities in French speaking Switzerland](#)

satw all day conference 29th January 2019 in Bern in French:

[Femmes dans la Technique et l'Informatique – exploiter les potentiels](#)

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

[INNOBOOSTER](#) – Accelerating Market Entry of Deep Tech Spin-Offs «InnoBooster» aims at speeding up innovative, science-based deep tech business cases which have already entered the Venture Kick process and promise high market potential.

[IMD Startup Competition](#) (D/L 12 Nov)

[Venturelab- Business Creation - Intensive Course for Engineering Startups courses](#)

[Venturelab 5-Day Startup Training in Business Growth for Engineers Public](#)

Swiss Robotics corner

News related to the Swiss Robotics Community

The following Swiss Robotics companies will be [present at the Industry Day](#): Bluebotics, ecoRobotix, force dimension, GCtronic, Henschel robotics, Hydromea, inivation, senseFly and WindShape

External positions

[Internships](#) (MIRobotics)

[PhD: Interactive Imitation Learning](#)

NCCR ROBOTICS OPEN POSITIONS

Postdoc position in amphibious field robotics

The [Ijspeert lab](#) (EPFL) has an open postdoc position in amphibious field robotics and biorobotics. The goal of the project is to participate to the design and ... [Read more](#)



Four open positions

NCCR Robotics spin-off [intento](#) is currently looking for engineers in embedded software, android software and also for two intern engineers in software and in material. [Read more.](#)



Open positions at NCCR Robotics Spin-off, Anybotics

Multiple open positions at [Anybotics](#): Software Engineer - Robot Navigation, Software Engineer BS/MS, Electrical Engineer BS/MS and Mechanical Design Engineer BS/Ms. [Read more](#)



2018 EVENT UPDATE - WE WILL BE AT:

SNSF Site Visit

18 - 19 October 2018

Bern



CoRL

29- 31 October 2018



Zurich

[Read more](#)

Swiss Robotics Industry Day

01 November 2018

STCC

[Read more](#)

Neuroprosthetics Annual Research Symposium

23 November 2018

Geneva Biotech Campus

[Read more](#)

Controlling Behaviour in Animal and Robots

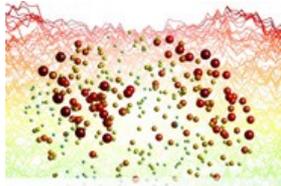
03-04 December 2018

EPFL

[Read more](#)



SWISS
ROBOTICS
INDUSTRY
DAY 2018



[PhD position in Soft Robotics \(Delft University of Technology\)](#)

[PhD position in Soft Robotics \(University of Groningen\)](#)

[Postdoctoral Research Fellow in AI for Long-Term Autonomy \(University of Lincoln\)](#)

[Doctoral Student in Artificial Intelligence Robotics \(DSII\) \(Tampere University\)](#)

[Postdoctoral Position in Surgical Robotics \(University of Leuven, Belgium\)](#)

[PhD position in Soft Robotics \(University of Groningen\)](#)

[Post doc in 3d soft mechanical sensing \(iit\)](#)

NCCR Robotics Director

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PRESS COVERAGE

L'histoire des drones s'écrira en Suisse

La première édition du congrès «Drone Innovators Network» a rassemblé une centaine d'acteurs du milieu, hier à Zurich. Dans une volonté... [Read more](#) or [English translation](#)



Bundesrätin Doris Leuthard eröffnet den ersten Drohnen-Kongress in Zürich

Ob Sicherheitsbereich, Landwirtschaft oder medizinische Transporte: Schweizer Drohnen haben ein...[Read more](#) or [English translation](#)

Des drones « bio-inspirés » passent partout

Des perruches, des poissons, des crocodiles et des mouches ont permis d'élaborer des engins originaux...[Read more](#) or [English translation](#)



What has four legs, is all-terrain, and battery-operated?

He has four legs, runs, and can cover any terrain from snowy mountains to sandy beaches. Weighing in at just.. [Read more](#)



The scientist giving robots eyes

Margarita Chli is a professor at ETH Zurich and leader of its Vision for Robotics Lab. One of her goals is to give robots and drones "eyes" to help them navigate through potential...[Read more](#)



NCCR Robotics @HUBweek

Swissnex Boston gathered a selection of some of the most exciting drone early October at Aerial Futures: The Drone Frontier and Several NCCR Robotics projects participated attracting media attention. [Read more](#)



Drohnen mit dem Körper steuern

Statt mit dem Joystick steuern Forschende der ETH Lausanne Drohnen nun mit ihrem Oberkörper. Dies ist intuitiver und präziser und verleiht dem Piloten oder der Pilotin das Gefühl, wie... [Read more](#) or [English translation](#)

Hilfe
Neue Zürcher Zeitung

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

NEW VIDEOS

Micro-Aerial Vehicles (MAVs) for Search and Rescue Applications



ETH robots in World Cup



RELab tenoexo: functions and grasp types



RELab tenoexo: setup, donning and doffing



RELab tenoexo: gesture classification training routine



An insect-inspired drone deforms upon impact



Amputees feel as though their prosthetic limb belongs to their own body



Semi-Dense 3D Reconstruction with a Stereo Event Camera (ECCV'18)



Deep Drone Racing: Learning Agile Flight in Dynamic Environments



Foldable Drone flying through narrow gap



NEW MEMBERS

Philipp Föhn ([Scaramuzza lab](#))

Philipp is a PhD student working on control, estimation, and planning for quadrotors. His research focused on optimal control and now transitions to estimation and control problems for applications coupled with machine learning.



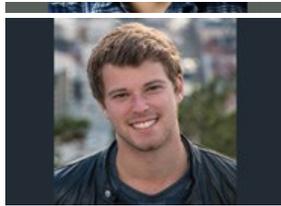
Yuhuang Hu ([Delbruck lab](#))

Yuhuang Hu is a PhD student at UZH and studying Deep Learning algorithms. His research focuses on exploring novel Deep Neural Networks for event-based processing, Incremental Learning in videos.



Elia Kaufmann ([Scaramuzza lab](#))

Elia is a PhD working on robotic learning. His research focuses on the combination of learning and classic control for agile drone flight and other general navigation tasks.



Jauwairia Nasir ([Dillenbourg lab](#))

Jauwairia is one of the selected Early Stage Researcher (ESR) under the Marie Skłodowska Curie European Training Network ANIMATAS. Her research interests revolve around social robotics, cognitive modelling, multi-modal robot-human interaction, etc.



Utku Norman ([Dillenbourg lab](#))

Utku is a Marie Skłodowska-Curie ITN fellow of the ANIMATAS project, investigating mutual modelling methods in order to improve human-robot interaction in the context of collaborative learning with robots.



Fabrizio Schiano ([Floreano lab](#))

Fabrizio is a scientific collaborator. He is interested in swarms of aerial robots (drones) and how to use them to change, and improve society.



SELECTED NCCR ROBOTICS PUBLICATIONS *

T. Asselborn, T. Gargot, Ł. Kidziński, W. Johal, D. Cohen, C. Jolly and P. Dillenbourg "Automated human-level diagnosis of dysgraphia using a consumer tablet" *npj Digital Medicine* volume 1, Article number: 42, 2018.

P. Bai, B. Guerreiro, R. Cunha, P. Komatowski, D. Floreano and C. Silvestre "Wall-contact sliding control strategy for a 2D caged quadrotor" 18th International Conference on Control, Automation, and Systems (ICCAS), Korea, 2018.

M. Bjelonic, D.C. Bellicoso, E.M. Tiryaki and M. Hutter, "Skating with a Force Controlled Quadrupedal Robot" IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Madrid, 2018.

P. Fankhauser, M. Bloesch and M. Hutter, "Probabilistic Terrain Mapping for Mobile Robots with Uncertain Localization" IEEE Robotics and Automation Letters (RA-L), 2018.

D. Gehrig, H. Rebecq, G. Gallego and D. Scaramuzza, "Asynchronous, Photometric Feature Tracking using Events and Frames" European Conference on Computer Vision (ECCV), Munich, 2018.

I. Iturrate, R. Chavarriaga, M. Pereira, H. Zhang, T. Corbet, R. Leeb and J. del R. Millán, "Human EEG reveals distinct neural correlates of power and precision grasping types" *NeuroImage*, Nov. 2018.

E. Kaufmann, A. Loquercio, R. Ranftl, A. Dosovitskiy, V. Koltun and D. Scaramuzza "Deep Drone Racing: Learning Agile Flight in Dynamic Environments" Conference on Robot Learning (CoRL), 2018.

S. Kim, D. Falanga and D. Scaramuzza "Computing The Forward Reachable Set for a Multirotor Under First-Order Aerodynamic Effects" IEEE Robotics and Automation Letters (RA-L), 2018.

P. M. Komatowski, "Last-Centimeter Personal Drone Delivery: Field Deployment and User Interaction" IEEE Robotics and Automation Letters (RAL), 2018.

M. Liu and T. Delbruck "Adaptive Time-Slice Block-Matching Optical Flow Algorithm for Dynamic Vision Sensors" *BMVC* 2018.

K. Mohta, M. Watterson, Y. Mulgaonkar, S. Liu, C. Qu, A. Makineni, K. Saulnier, K. Sun, A. Zhu, J. Delmerico, K. Karydis, N. Atanasov, G. Loianno, D. Scaramuzza, K. Daniilidis, C. Jose Taylor and V. Kumar "*Fast, Autonomous Flight in GPS-denied and Cluttered Environments*" Journal of Field Robotics, 2018.

E. Mueggler, G. Gallego, H. Rebecq and D. Scaramuzza "*Continuous-Time Visual-Inertial Odometry for Event Cameras*" IEEE Transactions on Robotics, 2018.

R. Spica, D. Falanga, E. Cristofalo, E. Montijano, D. Scaramuzza and M. Schwager "*A Real-Time Game Theoretic Planner for Autonomous Two-Player Drone Racing*" Robotics: Science and Systems (RSS), 2018.

Z. Zhakypov, F. Heremans, A. Billard and J. Paik, "*An Origami-Inspired Reconfigurable Suction Gripper for Picking Objects With Variable Shape and Size*" IEEE Robotics and Automation Letters (RA-L), 2018.

Y. Zhou, G. Gallego, H. Rebecq, L. Kneip, H. Li and D. Scaramuzza "*Semi-Dense 3D Reconstruction with a Stereo Event Camera*" European Conference on Computer Vision (ECCV), Munich, 2018.

*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.