Issue 37 October 2017 Public Version

COMMUNITY NEWSLETTER



Swiss Robotics Industry Day

This year's Swiss Robotics Industry Day (02 Nov) is organized in conjunction with digitalswitzerland and supported by the Canton of Vaud. Registration is still open (please note that the overall number of seats is limited).

New NCCR Robotics Spin Fund

The NCCR Robotics Spin Fund committee has granted Marco Salerno and Stefano Mintchev the Spin Fund for Foldaway haptics, hosted at Paik lab. Foldaway haptics recently won stage 1 of

haptics

SWISS

ROBOTICS

First EPFL Drone Days (1-3 Sept)

The EPFL Drone Days attracted over 5000 visitors. The event consisted of demos of NCCR robotics, a Swiss National Drone Race competition and of the first conference on drones of the FAI. Read more



Social Media Officer

Linda Seward has left her position as Communication Officer. We would like to thank her for her work and contribution. Her position has been slightly modified and recently advertised. Until it is filled, Linda will continue her Social Media Officer duties



Admin & Education Officer

We are pleased to welcome Joëlle Mottier to the Management team. We also take this opportunity to thank Michelle Wälti for all her contributions. Michelle will continue to work at Floreano Lab.

Finance Officer

We would like to welcome Stéphanie Juriens as our finance officer and take this opportunity to thank Pier Paolo Paganini for his work and contributions over the last years, he will continue his career at EPFL.



Transform TECH

Dario Floreano and David Atienza will be part of the team of experts in the 4 day IMD unique course on how technologies can transform business. Read more



EPFL unveils drone delivery on campus

This summer the PackDrone with Dronistics marked its achievements on EPFL campus with 150 Successful deliveries. Read more



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NCCR Robotics calls: SNSF PRIMA supports excellent women researchers aspiring to a professorship

NCCR Open Positions: Science Writer & Communication Officer 50%; Dillenbourg Lab recruiting; Positions at Paik Lab; Drone Research Engineer at Scaramuzza Lab

We will be at

Press coverage

New Videos

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Selected Publications

ROBOTICS WORLD

Top News

Teleoperating robots with virtual reality
National Robot Safety Conference
2017

Why engineering schools globally need more creative women

Robocar-only highways are not quite so nice an idea as expected

GM accepts all liability in robocars, and other news

World events

RoboExpo (2-3 Nov)

Future Manufacturing & Trade Summit 2017 (6-7 Nov)

IAS 2017 (07-11 Nov)

AI-HRI 2017 (09-11 Nov)

Agri Technica (12-18 Nov)

CoRL 2017 (13-15 Nov)

Humanoids (15-17 Nov)



Davide Scaramuzza appointed **Tenured Associate Professor**

Davide Scaramuzza was appointed Tenured Associate Professor with double affiliation with INI of UZH and ETH Zurich. Read more



Elias Mueggler PhD Defense

Elias Mueggler (Scaramuzza Lab), defended his PhD thesis about Event-based Vision for High-Speed Robotics in June with the final grade of Summa Cum Laude.



4 of our Spin Offs listed in the top 100 Swiss Startup Award

Flyability, Perspective Robotics, Intento and SensArs were selected in the TOP 100 STARTUP AWARD. Read more



Harshal Sonar wins Best Poster Award at IROS

Harshal Sonar (Paik Lab) won the Best Poster Award for his presentation on Interactive SPA skin this year at IROS (Vancouver, Canada). Read



Best Student Paper Award Finalist at RSS

Scaramuzza Lab received the Best Student Paper Award finalist for Fast Trajectory Optimization for Agile Quadrotor Maneuvers with a Cable-Suspended Payload Read more



NCCR ROBOTICS CALLS

SNSF PRIMA supports excellent women researchers aspiring to a professorship

First call for proposals launched on 1st August 2017, and the submission deadline: 1st November 2017. Read more



Fonds national suisse Schweizerischer Nationalfonds Fondo nazionale svizzero Swiss National Science Foundation



NCCR OPEN POSITIONS

Science Writer & Communication Officer 50%

As our NCCR Robotics Science Writer & Communication Officer, your main responsibility will be the writing of technical and scientific texts and reports of NCRR Robotics... Read more



Dillenbourg Lab recruiting

Dillenbourg lab is recruiting 3 PhD students in robotics to start in January for the new research grant within the H2020 Marie Curie ITN ETN: ANIMATAS, which will focus on Human-Robot Interaction in educational contexts. Read more



Positions at Paik Lab

Paik Lab has several open positions in Soft and Origami Robots of all levels. Read more



Engineering Expo (16-18 Nov) European Robotics Week (17-26 Nov) Robotics Expo (25-26 Nov)

External calls

IEEE RAS Micro/Nano Robotics & Automation (MNRA) Technical Committee Mobile Microrobotics Challenge 2018

Movement Brain Body Cognition Rob Arch 2018

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 nccrrobotics@epfl.ch

Bridge - for young and experienced researchers

Kickstart Accelerator

MC MassChallenge

External positions

Postdoctoral Research Fellows (ANPL) Technion-Israel Institute of Technology.

Al & Robotics Perception Engineer Intelligent Flying Machines, Inc. (IFM)

Experienced Robotics Engineers and Robotics Researchers InnoTecUK

Robotics at Georgia Tech Is Hiring

Institute for Robotics and Intelligent Machines

Robotics Assistant / Associate / Full **Professor Oregon State University**

Assistant/Associate/Professor in Robotics University of Utah

NCCR Robotics Director

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IMPRESSUM

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Design

Drone Research Engineer

Scaramuzza Lab is looking for a Drone Research Engineer. As an integral part of the lab, the responsibilities will be: continuous improvements of our robotic systems; maintaining a fleet of quadrotors... Read more





WE WILL BE AT:

Swiss Robotics Industry Day

02 Nov 2017

STCC, Lausanne

Read more





PRESS COVERAGE

An Edible Actuator for Ingestible **Robots**

We're one gelatin-based gripper closer towards robots that you can eat... Read more



Re-establishing Communications After Hurricanes Irma and Maria

Davide Scaramuzza speaks to the BBC about the drones that keep flying and navigating even in the dark. Read more



How We Won Gold in the Cyborg Olympics' Brain Race

With our brain-computer interface, paralyzed athletes sped their avatars across the finish line... Read more



More press coverage available through NCCR Robotics website



NEW VIDEOS

Interactive Soft Pneumatic Actuator Skin for Tactile Feedback



06 foldaway intro long



New soft robots suck!



Hybrid, Frame and Event based VIO for Robust, **Autonomous Navigation of** Quadrotors



Smart Walking Assistant



A foldable cargo drone



Jonathan Cornel van den Hoorn

Jonathan is a research engineer at Riener Lab and currently works on a weight support system for spinal cord injured primates. He is responsible for the development of the mechanics, electronics, and control aspects.



Jeff Delmerico

Jeff is a Postdoc at Scaramuzza Lab. He works on perception and navigation for flying robots.



Matteo Macchini

Matteo is a PhD student at Floreano Lab studying human-robot interfaces based on body motion. His research focuses on the study and development of natural control interfaces for multimodal, nonanthropomorphic machines.



DEPARTING MEMBERS

Martina Coscia

Martina Coscia (Micera Lab) is now working at the Wyss Center in Geneva she is looking forward to continue to have collaborations with the NCCR Robotics groups in future.



SELECTED NCCR ROBOTICS PUBLICATIONS *

- T. L. C. Asselborn, W. Johal and P. Dillenbourg. Keep on Moving! Exploring Anthropomorphic Effects of Motion during Idle Moments. 26th IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN), Lisbon, Portugal, 2017.
- S. Chandra, P. Dillenbourg and A. Paiva. Classification of Children's Handwriting Errors for the Design of an Educational Co-writer Robotic Peer. IDC 2017, Stanford University, California, USA, June 2017.
- T. Cieslewski, E. Kaufmann, D. Scaramuzza. Rapid Exploration with Multi-Rotors: A Frontier Selection Method for High Speed Flight. IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Vancouver, 2017.
- Y. Ye, T. Cieslewski, A. Loquercio, D. Scaramuzza. Place Recognition in Semi-Dense Maps: Geometric and Learning-Based Approaches. British Machine Vision Conference (BMVC), London, 2017.
- J. Delmerico, S. Isler, R. Sabzevari, D. Scaramuzza. A comparison of volumetric information gain metrics for active 3D object reconstruction. Autonomous Robots, April 2017.
- D. Falanga, A. Zanchettin, A. Simovic, J. Delmerico, D. Scaramuzza. Visionbased Autonomous Quadrotor Landing on a Moving Platform. IEEE/RSJ International Symposium on Safety, Security and Rescue Robotics (SSRR), Shanghai, 2017.
- P. Foehn, D. Falanga, N. Kuppuswamy, R. Tedrake, D. Scaramuzza. Fast Trajectory Optimization for Agile Quadrotor Maneuvers with a Cable-Suspended Payload. Robotics: Science and Systems (RSS), Boston, 2017.
- W. Johal, P. Vogt, J. Kennedy, M. de Haas and A. Paiva et al. Workshop on Robots for Learning: R4L. HRI ACM/IEEE International Conference on Human-Robot Interaction, Vienna, Austria, 2017.
- P. Kornatowski S. Mintchev, D. Floreano. An origami-inspired cargo drone. Presented at: IEEE/RSJ International Conference on Intelligent Robots and Systems, Vancouver, September 24-28, 2017.
- E. Mueggler, C. Bartolozzi, D. Scaramuzza. Fast Event-based Corner Detection. British Machine Vision Conference (BMVC), London, 2017.
- A. Ozgur, W. Johal, F. Mondada and P. Dillenbourg. Windfield: Demonstrating Wind Meteorology with Handheld Haptic Robots. HRI ACM/IEEE International Conference on Human-Robot Interaction, Vienna, Austria, 2017.
- T. A. P. Paschal, J. Shintake, S. Mintchev and D. Floreano. Development of Bioinspired Underwater Robot with Adaptive Morphology Capable of Multiple

Swimming Modes. IEEE/RSJ International Conference on Intelligent Robots and Systems, Vancouver, Canada, 2017.

- J. Shintake, H. A. Sonar, E. Piskarev, J. Paik and D. Floreano. Soft Pneumatic Gelatin Actuator for Edible Robotics. IEEE/RSJ International Conference on Intelligent Robots and Systems, Vancouver, Canada, 2017.
- O. Wetzel, A. R. Schmidt, M. Seiler, D. Scaramuzza, B. Seifert, D. R. Spahn, P. Stein. *A smartphone application to determine body length for body weight estimation in children: a prospective clinical trial Journal of Clinical Monitoring and Computing*, June 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.











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