# Issue 35 May 2017 Public Version

# **OMMUNITY NEWSLETTER**



# LATEST NCCR NEWS W II in D







#### Meet the Paik Lab

Welcome to the second of our Lab videos section where we introduce the NCCR Robotics lab. Pl. NCCR Robotics members and their work. On this occasion we present Paik Lab.



# Zurich Urban Micro Aerial Vehicle **Dataset**

Scaramuzza Lab released the Zurich Urban Micro Aerial Vehicle Dataset. The first public, large-scale dataset recorded with a drone in an urban environment... Read more



### Launch of the Chairless Chair

NCCR Robotics spin-off noonee, announced the start of series production and sales launch of their Chairless Chair which was nominated for Hermese Award 2017...Read more



# Stroke patients take the lead in their rehabilitation

NCCR Roboitcs spin-off Intento has developed a patient-controlled electrical-stimulation device that helps stroke victims regain mobility in paralyzed arms. The promising... Read more



### Rescue Grand Challenge meeting

On 9th May, six labs from NCCR Robotics met with professional rescue workers in order to showcase our technologies and to receive feedback on how to develop robots to be used in the field.



### Twiice & Cybathlon in Japan

TWIICE presented their exoskeleton project at Medtec Asia and at the Technology and Social Inclusion. The Cybathlon Approach was also featured in Tokyo, organised by the Swiss Science and Technology Office



# Jonas Buchli

We would like to inform our members that Jonas Buchli ceased his activities with NCCR Robotics end of March 2017. He will be taking up a position in the private sector... Read more



#### CONGRATUI ATIONS

# Aude Billard awarded with an ERC Advanced Grant

Congratulations to Aude Billard who has been awarded with an ERC Advanced Grant for her proposal entitled: Skill Acquisition in Humans and Robots. Read more



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Launch of the Chairless Chair

Stroke patients take the lead in their rehabilitation

Rescue Grand Challenge meeting

Twiice & Cybathlon in Japan

Jonas Buchli

Congratulations: Aude Billard awarded with an ERC Advanced Grant / 2017 Misha Mahowald Prize for Neuromorphic Engineering / Nicolas Sommer PhD defense / Twiice awarded first stage of Venture Kick

NCCR Robotics Calls: Summer school in robotics and artificial intelligence / FSR 2017 -11th Conference on Field and Service Robotics

Job opening: Administrative Specialist

We will be at

Press Coverage

New Videos

**New Members** 

Selected Publications

#### **ROBOTICS WORLD**

#### Top News

Machine Learning with OpenAl Gym on ROS Development Studio

Thoughts on the EU's draft report on robotics

JANUS creates a new era for digital underwater communications

LIDAR vs RADAR: A detailed comparison

Hardhat bots take over construction sites

# World events

C-AR2017 (16-17 May)

Innorobo (16-18 May)

ICRA (29 May-03 June)

**AUVSI Intelligent Ground Vehicles** Competition (2-5 June)

CES ASIA (7-9 June)

Unmanned Cargo Innovation Ground Vehicle (14 June)

ICAPS (18-23 June)

Hamlyn Symposium on Medical

# 2017 Misha Mahowald Prize for **Neuromorphic Engineering**

Scaramuzza Lab won the 2017 Misha Mahowald Prize, which recognises outstanding achievement in the field of neuromorphic engineering. Read more

#### Nicolas Sommer PhD defense

Nicolas Sommer's, (Billard Lab), public thesis defense will take place 19th May at EPFL, the title will be Multi-contact tactile exploration and interaction with unknown objects.

# Twiice awarded first stage of **Venture Kick**

NCCR Robotics spin-off Twiice was awarded the Venture Kick Stage 1. Read more



ROBOTICS &

PERCEPTION GROUP



# NCCR ROBOTICS CALLS

# Summer school in robotics and artificial intelligence

Summer school for high school students (10-13<sup>th</sup> July, EPFL). Prerequisites: Programming skills, some programming experience (any language). Read more



# FSR 2017 -11<sup>th</sup> Conference on Field and Service Robotics

FSR is a single-track conference with a specific focus on field and service applications of robotic technologies. Early registration deadline: 15th July. Read more





# NCCR OPEN POSITIONS

# Job opening: Administrative **Specialist**

We are looking for an administration specialist to work in our Management team at EPFL. Read more





# WE WILL BE AT:

# InnoRobo

16-18 May 2017

**Paris** 

Read more



# ICRA Workshop on Eventbased Vision

02 June 2017

Singapore

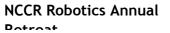
Read more

# Summer School on **Rehabilitation Robotics**

05-10 June 2017

Singapore

Read more





Workshop on Event-based Vision







# External calls

Robotics (25-28 June)

Autonomous Machines World (26-

Advanced Materials 2017

FTC 2017

Kickstart Accelerator

**SNSF Professorships** 

Drone Berlin

2017 Call For IoT Solutions

**EPFL Instagram Contest** 

# 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 nccrrobotics@epfl.ch

She started it - A documentary following 5 female founders towards success

### **External positions**

Postdoctoral researcher in Computer Science (Örebro University)

2 PhD studentships (University College London)

Professors, associate professors and tenure track assistant professors in Robotics and Drones (University of Southern Denmark)

21 positions to the three-year Ph.D. Program in BioRobotics (BioRobotics Institute, Scuola Superiore Sant'Anna)

### Interesting links

When robots go to art school

# **NCCR Robotics Director**

Prof. Dario Floreano

#### CONTACT

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#### **IMPRESSUM**

#### Publisher

NCCR Robotics Management

reu eau

12-13 June 2017

Fribourg

**RSS Workshop:** Challenges in Dynamic **Legged Locomotion** 

15 July 2017

Cambridge, MA, USA

Read more

**Building Bodies for Brains** & Brains for Bodies / 3rd Japan-EU Workshop on **Neurorobotics** 

15 - 16 July 2017

Geneva

Read more





Mayra Lirot / Linda Seward **Contributing Editor** Jan Kerschgens Web Editing Mayra Lirot / Linda Seward Design Alternative Communication SA / Pascal Briod



# PRESS COVERAGE

# L'ingénieure et les robots mous

"Dans le laboratoire de robotique reconfigurable qu'elle a créé en 2012 à l'EPFL, Jamie Paik travaille à MIGROS MAGAZINE.ch révolutionner notre futur proche. Un avenir où des machines souples et inoffensives" Read more

# Stéphanie Lacour & Grégoire Courtine Live at SXSW 2017

Listen to Stéphanie and Grégoire: Elastic Interfaces for your body from SXSW 2017 recorded by Swissnex Boston. Read more



More press coverage available through NCCR Robotics website



# NEW VIDEOS

### Meet the Paik Lab



#### **Exoskeleton prevents seniors** from falling



EduExo: The First Robotic **Exoskeleton Kit for STEM** Education



### ANYmal at ARGOS Finals -**Highlights**



**Chairless Chair nominated** for Hermese Award 2017





# Arzu Güneysu Özgür

Arzu is a PhD student at the <u>Dillenbourg lab</u> studying human-robot interaction in rehabilitation robotics. Her research focuses on hand and lower arm stroke rehabilitation with the tangible robots Cellulo.





### **SELECTED NCCR ROBOTICS PUBLICATIONS \***

- C. Belke and J. Paik, "Mori: A Modular Origami Robot" IEEE/ASME Transactions on Mechatronics, 2017.
- J. Delmerico, S. Isler, R. Sabzevari and D. Scaramuzza, "A comparison of volumetric information gain metrics for active 3D object reconstruction" *Autonomous Robots*, 2017.
- V. Monaco, et al., An ecologically-controlled exoskeleton can improve balance recovery after slippage. Sci. Rep., 7, 46721, 2017; doi: 10.1038/srep46721.
- J. Rey, K. Kronander, F. Farshidian, J. Buchli and A. Billard, "Learning motions from demonstrations and rewards with time-invariant dynamical systems based policies" Autonomous Robots, 2017.
- D. Pardo, M. Neunert, A. Winkler and J. Buchli, "Hybrid direct collocation and control in the constraint-consistent subspace for dynamic legged robot locomotion", Robotics: Science and Systems (RSS-2017).
- \*Selected publications include publications which have been made known to the <u>editor</u>. 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.











SWISS NATIONAL SCIENCE FOUNDATION

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