COMMUNITY INFOLETTER

Issue 09 March 2014 Public Version

NCCR NEWS

Rolf Pfeifer's Farewell Lecture

The farewell lecture on his views on robotics. artificial intelligence, and his life as an academic in a globally networked society will take place at UZH, 23rd May.



NCCR Robotics is Tweeting!

The official Swiss Robotics Twitter account has been launched. Follow and stay tuned!



Lifehand 2 prosthetic grips and senses like a real hand

In a paper published in Science Translational Medicine (Feb. 2014), Silvestro Micera's team from EPFL and Santa Anna (Italy) presented an entirely new Read more



FIFA World Cup Kick off

The LSRO has been actively involved in the Walk Again Project. The goal of this project is to have a paralyzed teenager give the first ceremonial kick off at the FIFA World Cup 2014 in Brazil. Read more



3rd Approved Robotics Spin Fund

The third approved NCCR Robotics Spin Fund has officially been granted to Adrien Briod and Patrick Thévoz for GimBall. The project is hosted by LIS. Their vision is to empower rescuers and inspection technicians with a collision-resilient robot that can fly where no others can.



Postdoc Exchange Grants

The Education Committee has awarded the Exchange Grants to the members mentioned below, for the following destinations: Moria Fisher (SMS) Illinois USA; Anna Pagel (SMS) TU Delft; Soha Pouya (BioRob) Standord USA; Camila Shirota (RELAB) Northwestern Univ.



NCCR ROBOTICS CALLS

Wearable Scenario Robots demos

NCCR Robotics will attend the international trade fair Automatica (June 3-6, 2014, Munich). We are launching a call for NCCR Robotics wearable scenario robots. The contact person is Anne-Christine Butty before 28th March.



ROBOTICS WORLD

Top News

Putting the IV into Intelligent Virtual Assistants

Robots Podcast: Privacy, Google, and big deals

Commercial drone use legal in USA? Who's willing to make bail?

Why robots will not be smarter than humans by 2029

Academic and industry collaboration (Part 4): Interview with Raffaello D'Andrea

World events

Innorobo

Robosoft

We Robot

Mini Maker Fair - Fresno

The Vision Show and Conference

External calls

Robot Startup competition

Call for Papers - Global Summit on Computer & Information Technology SMC 2014 Call for Papers

External Positions

Feedback Control using Finite Element Models of Soft-Robots

Multiple Job Openings in Wearable Robotics at Harvard Biodesign Lab

Research Assistant / PhD Candidate in the area of Modeling and Control of Soft Robotic Actuators for **Architectural Applications**

D. Scaramuzza's favourite links:



Automaton IEEE Spectrum

Google Scholar

CONTACT

NCCR Robotics



Aude Billard appointed Full **Professor**

Aude Billard has been appointed Full Professor of Microtechnology in the School of Engineering (STI-EPFL). Read more



HRI 2014 Award for the Best Late **Breaking Report**

Séverin Lemaignan, Julia Fink, and Pierre Dillenbourg were granted the HRI 2014 Award for the Best Late Breaking Report for their paper *The* Dynamics of Anthropomorphism in Robotics.



Gimball amongst 25 European finalist

Gimball, new spin-off of LIS and NCCR Robotics, is selected among 25 European finalists in the Hello Tomorrow Challenge.



Public Thesis Defense

Konstantinos Dermitzakis' (AlLab) thesis defense was on March 4th. It focused on identifying the factors influencing upper-limb prosthesis acceptance and showcasing, through casestudies, that novel solutions towards acceptance can emerge by collectively addressing these factors.



Ⅲ Upcoming NCCR Robotics EVENTS

Innorobo

18-20 March

Lyon, France

Read more



MESROB Workshop

10-12 July - Deadline for extended abstracts: 31 March

EPFL Lausanne, Read more



Inauguration of EPFL **Convention Centre**

5-6 April

Lausanne, Read more



IEEE SMC - Brain Machine Interface **Systems Workshop**

5-8 Oct - Deadline for paper submission: 7 April

U.S.A., Read more



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Pascal Briod

Dynamic Walking 2014

10-13 June

Zurich, Read more





Past NCCR Robotics EVENTS

5-6 March 2014

Annual Retreat

Zurich Read more



3-6 March 2014

HRI 2014

Bielefeld Read more





III NCCR PRESS COVERAGE

Lifehand 2 prosthetic grips and senses like a real hand

The bionic hand which allows patients to feel received major international press coverage

The Independent / USA today / BBC News



Thymio II

Thymio II recieved media attention for its stunning light paintings:

Mail Online / GIZMODO / IEEE Spectrum / Swiss Robotics Twitter



More press coverage available through NCCR Robotics website



SELECTED NCCR PUBLICATIONS *

K. Kronander, and A. Billard, Learning Compliant Manipulation through Kinesthetic and Tactile Human-Robot Interaction. IEEE Transactions on Haptics. 10.1109/TOH.2013.54. (2013)

N. Sommer, Li Miao, and A. Billard, Bimanual Compliant Tactile Exploration for Grasping Unknown Objects. IEEE International Conference on Robotics and Automation (ICRA), Hong Kong, (2014).

Y. Jiang, H. Chen, G. Xiong, D. Scaramuzza ICP Stereo Visual Odometry for Wheeled Vehicles based on a 1DOF Motion Prior IEEE International Conference on Robotics and Automation (ICRA), Hong Kong, (2014).

C. Troiani, A. Martinelli, C. Laugier, D. Scaramuzza 2-Point-based Outlier Rejection for Camera-IMU Systems with applications to Micro Aerial Vehicles IEEE International Conference on Robotics and Automation (ICRA), Hong Kong, (2014).

M. Faessler, E. Mueggler, K. Schwabe, D. Scaramuzza A Monocular Pose Estimation System based on Infrared LEDs IEEE International Conference on Robotics and Automation (ICRA), Hong Kong, (2014).

C. Forster, M. Pizzoli, D. Scaramuzza SVO: Fast Semi-Direct Monocular Visual Odometry IEEE International Conference on Robotics and Automation (ICRA),

Hong Kong, (2014).

A. Censi, D. Scaramuzza, Low-Latency Event-Based Visual Odometry IEEE International Conference on Robotics and Automation (ICRA), Hong Kong, (2014).

M. Pizzoli, C. Forster, D. Scaramuzza REMODE: Probabilistic, Monocular Dense Reconstruction in Real Time IEEE International Conference on Robotics and Automation (ICRA), Hong Kong, (2014).

*Selected publications include publications which have been made known to the editor. All members are kindly encouraged to inform the management team of new pulbications.



WHO IS WHO?

Michael Tucker (RELAB-ETH)

Michael Tucker is 27 and was born in Saranac Lake, a small town in northern New York State. He earned both his Bachelor's and Master's degrees in Mechanical Engineering from Clarkson University in Potsdam, NY. After two years working in industry, he accepted a PhD position ... Read more





NEW VIDEOS (Soft Robotics Workshop Lectures)

Soft Robotics - Soft living machines: controlling...



Soft Robotics - Photonics Reservoir Computing...



Soft Robotics - Soft Pneumatics for Sustainable Architecture



Soft Robotics - Ion flow through pores and morphological...



Soft Robotics - MR-compatible Bio-inspired Soft Manipulator...



Soft Robotics - Robots as soft as skin



Soft Robotics - Miniature (Soft) **Mobile Robots**



Soft Robotics - Growing and **Evolving Soft Robots**



Soft Robotics - Self Folding Microrobots for Biomedical...





Chansu Suh (RRL) is a PhD student at EPFL studying soft pneumatic actuators(SPA) which are not only light weight but also inherently compliant. His research focuses on the design and control of SPA which can be applied to wearable robots, surgical robots and rehabilitation mechanisms.



Tomislav Horvat

Tomislav Horvat is a PhD student at the Swiss Federal Institute of Technology (EPFL), where he joined Biorobotics Laboratory in January 2014. He is working on Pleurobot and its application in robotics for search and rescue scenarios.











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