GABRIELE SPINA
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Personal Information

Birthdate   22-10-1986

Birthplace   Palermo (PA), Italy

Gender   Male

Personal summary

A bright, talented and self-motivated biomedical engineer who has excellent organisational skills, is highly efficient and has a good eye for detail. Has extensive experience of data analysis, signal processing and presentation of findings. Able to play a key role in analysing problems and come up with creative solutions as well as producing methodologies and files for effective data management. A quick learner who can absorb new ideas and can communicate clearly and effectively.

Expertise

Machine learning, data analysis, wearable systems, biomedical devices.

Professional work Experience

2012–now   **PhD Student** at Philips Research, Smart Professional Spaces Group and Eindhoven University of Technology, Dept. of Electrical Engineering.

- Unobtrusive technologies, signal processing and data mining algorithms for modular patient training and monitoring systems - iCare4COPD Project of Agentschap NL under Contract PNE101005.

2011–11   **Internship** (Italian Institute of Technology)

- EU project: Robots Bootstrapped through Learning from Experience

2010–11   **Research Assistant** (Frankfurt Institute for Advanced Studies)

- EU project: Intrinsically Motivated Cumulative Learning Versatile Robots

Achievements

2015   First Runner up at Philips Sleep and Respiratory Care's first Creative Playground

- Idea selected for Startup Bootcamp and a project was initiated within Philips business.

Education

2008–10   UNIVERSITY CAMPUS BIO-MEDICO OF ROME
MASTER DEGREE IN BIOMEDICAL ENGINEERING WITH HONORS (110 cum laude out 110)
Specialization in Robotics and Bio-Microsystems
Thesis: "Bio-inspired robotic vision system for active visual perception based on intrinsic motivation"
*Supervisor: **Prof. Dr. Eugenio Guglielmelli** (University Campus Bio-Medico of Rome)*
*Co-Supervisors: **Prof. Dr. Jochen Triesch**, **Eng. Pramod Chandrashekhariah** (Frankfurt Institute for Advanced Studies)*

2005–08   UNIVERSITY CAMPUS BIO-MEDICO OF ROME
BACHELOR DEGREE IN BIOMEDICAL ENGINEERING (110 OUT 110)
Thesis: "Study and realization of a system for the remote control of a wereable device for the monitoring of the face"
*Supervisor: **Prof. Dr. Eugenio Guglielmelli** (University Campus Bio-Medico of Rome)*
*Co-Supervisor: **Dr. Giuseppina Schiavone** (University Campus Bio-Medico of Rome)*

Computer Skills

Packages   Matlab, R, MS Office, OpenCV, Cisco Packet Tracer, Eagle, SolidWorks, Proteus, Latex

OS   Linux, Windows

Languages   c++, c

Patent Applications

2016   Apparatus and methods relating to monitoring or assisting breathing in patients, European Patent application 28-01-2016, Philips Internal Reference 2015PF01649

2015   Breathing support system for COPD patients to overcome shortness of breath (breathing tool with feedback), European Patent application 30-10-2015, Philips Internal Reference 2015PF01437

2015   Breathing support system for COPD patients to overcome shortness of breath (breathing tool for use with pressurized gas canister), European Patent application 30-10-2015, Philips Internal Reference 2015PF01532

2014   System and method to detect respiration markers, European Patent application 12-12-2014, Philips Internal Reference 2014PF01453

Research Publications

2016   **Gabriele Spina** et al.
Objective evaluation of nocturnal sleep impairment in patients with COPD and its association with daytime physical activity
Submitted to European Respiratory Journal, 2016.

2015   Rafael Mesquita, **Gabriele Spina** et al.
Physical activity patterns and clusters in 1001 patients with COPD
Submitted to PLOS ONE, 2015.

2015   **Gabriele Spina** et al.
Identifying Physical Activity Profiles in COPD Patients Using Topic Models
IEEE Journal of Biomedical and Health Informatics, 2015.

2014   Rafael Mesquita, **Gabriele Spina** et al.
Cluster analysis of objectively measured physical activity in 1001 COPD patients
ERJ September 1, 2014 vol. 44 no. Suppl 58 3486.

2014   Pramod Chandrashekhariah, **Gabriele Spina** and Jochen Triesch
A Curious Vision System for Autonomous and Cumulative Object Learning
Computer Vision, Imaging and Computer Graphics–Theory and Applications, Springer Berlin Heidelberg, 2014, Volume 458, pp 195-211.

2013   **Gabriele Spina** and Oliver Amft
Toward smartphone assisted personal rehabilitation training
XRDS crossroads, ACM 2015, Volume 20, pp 33-37.

2013   **Gabriele Spina**, Guannan Huang, Anouk Vaes, Martijn Spruit and Oliver Amft
COPDTrainer: A smartphone-based motion rehabilitation training system with real-time acoustic feedback
Ubicomp 2013, ACM Internetional Joint Conference on Pervasive and Ubiquitous Computing, 8-12 September, 2013, Zurich, Switzerland.

2013   **Gabriele Spina**, Frank Roberts, Jens Weppner, Paul Lukowicz and Oliver Amft
CRNTC+: A smartphone-based sensor processing framework for prototyping personal healthcare applications
PervasiveHealth 2013, IEEE International Conference on Pervasive Computing Technologies for Healthcare, 5-8 May, 2013, Venice, Italy.

2013   **Gabriele Spina**, Pramod Chandrashekhariah and Jochen Triesch
Let it Learn: A Curious Vision System for Autonomous Object Learning
International Conference on Computer Vision Theory and Applications, 21-24 February, 2013, Barcelona, Spain.

2013   Frank J.M. Roberts, **Gabriele Spina**, Constantin Ungureanu, Oliver Amft
Daytime Monitoring of Patients with Epileptic Seizures Using a Smartphone Processing Framework and On-Body Sensors
4th Dutch Bio-Medical Conference, 2013, 24-25 January, 2013, Egmond aan Zee, The Netherlands. (Abstract)

2012   Jurgen Leitner, Pramod Chandrashekhariah, Simon Harding, Mikhail Frank, **Gabriele Spina**, Alexander Forster, Jochen Triesch and Jurgen Schmidhuber
Autonomous Learning Of Robust Visual Object Detection And Identification On A Humanoid
ICDL-EpiRob paper, 2012, IEEE Conference on Development and Learning, and Epigenetic Robotics, 7-9 November, 2012, San Diego, USA. (Winner of the "Paper of Excellence Award")

Language Skills

Native   Italian

Fluent   English

Basic   Dutch (attended and passed the exam "Dutch for Beginners", study hours: 160)

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[1]I hereby authorize the processing of the personal data contained in this CV in compliance with the Italian Personal Data Protection Code (Legislative Decree no. 196 of 30 June 2003).