

GABRIELE SPINA
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Personal Information

Birthdate 22-10-1986

Birthplace Palermo (PA), Italy

Gender Male

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

Expertise

Data analysis, clinical trials, wearable systems, biomedical devices.

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 Chandrashekharah (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 wearable 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)
- 2000–05 SECONDARY SCHOOL GALILEO GALILEI
ITALIAN SECONDARY SCHOOL DIPLOMA, SCIENTIFIC CERTIFICATE (100 OUT 100)

Computer Skills

Packages Matlab, OpenCV, Cisco Packet Tracer, Eagle, SolidWorks, Proteus, Latex, MS Office
OS Linux, Windows
Languages c++, c

Certificate CCNA Discovery: Networking for Home and Small Businesses (January 29, 2010)

Patent Applications

- 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

- 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 International 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 health-care 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")
- 2011 Quan Wang, Pramod Chandrashekhariah and **Gabriele Spina**
Attention shift in infant habituation: a conceptual and computational model motivated by learning
ICDL-EpiRob, 2011, IEEE Conference on Development and Learning, and Epigenetic Robotics, 24-27 August, 2011, Frankfurt am Main, Germany

Part time work Experience

- 2012-13 Teaching assistant for the course "**Ubiquitous Computing and Activity Recognition**"
- 2012-13 Teaching assistant for the course "Statistical signal processing"

Language Skills

- Native Italian
- Fluent English
- Basic Dutch (attended and passed the exam "Dutch for Beginners", study hours: 160)