

**GABRIELE SPINA**  
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## Personal Information

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Birthdate 22-10-1986

Birthplace Palermo (PA), Italy

Gender Male

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## Professional work Experience

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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.

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

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## Expertise

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**Data analysis, ubiquitous and embedded systems, biomedical devices, robotics.**

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## Education

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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

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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

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- 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

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- 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 Frame-  
work and On-Body Sensors  
4th Dutch Bio-Medical Conference, 2013, 24-25 January, 2013, Egmond aan Zee, The Nether-  
lands. (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

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## Schools and Workshops

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- 2013      KLOSTER, SWITZERLAND  
iCareNet Winter School on Human-computer interaction and context sensing
- 2012      KLOSTER, SWITZERLAND  
iCareNet Winter School on Context inference and ethics
- 2011      DALLE MOLLE INSTITUTE FOR ARTIFICIAL INTELLIGENCE, LUGANO  
*Visiting student*  
*IM-CLeVeR between-partners collaborations*
- 2011      CAPOACCIA, SARDINIA  
*Cognitive Neuromorphic Engineering Workshop*  
*First IM-CLeVeR Spring School*  
*"Intrinsic Motivation, Abstract Representations of Sensorimotor Data, Hierarchical Architectures and Cumulative Learning"*
- 2010      INTELLIGENT SYSTEMS RESEARCH CENTRE UNIVERSITY OF ULSTER  
*Focussed Workshop on Visual Perception and Novelty Detection*

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## Part time work Experience

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

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## Language Skills

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Native Italian

Fluent English

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

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<sup>1</sup>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).