


## PERSONAL INFORMATION

## Carlotta Caramia

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Sex Female | Date of birth 29/04/1992 | Nationality Italian

## POSITION

## Biomedical engineer

## WORK EXPERIENCE

01/11/2018–Present

## Fellowship for research activities (6 months)

Roma Tre University, ROME (Italy)

## EDUCATION AND TRAINING

11/2015–10/2018

## Ph.D. in Applied Electronics

Roma Tre University, Rome (Italy)

- Ph.D. in: 'Wearable systems for monitoring human movement and physical activity', titled: 'Data processing methods for an in-field use of inertial sensors to investigate gait behaviour in clinical and cognitive psychology applications' – Biolab3. Gait analysis in healthy subjects (methodological and dual-task studies) and in subjects with neurodegenerative disorders (Parkinson's disease) by means of inertial sensors and stereophotogrammetric systems
- 24/02-01/07/2017 Stay at research center CSIC, Cajal Institute – Madrid, Spain – to study gait in Parkinson's patients by means of inertial sensors. Collaboration with Gregorio Marañon hospital (Madrid, Spain).
- Teaching support: Medical Devices and Systems (ING-INF/06) 2018/2019 and 2017/2018, Strumentazione Biomedica (ING-INF/06) 2016/2017
- Co-supervisor for bachelor theses

10/2013–07/2015

## Master in Biomedical Engineering

Roma Tre University, Rome (Italy)

- Thesis title: 'Implementazione in tempo reale di algoritmi per il riconoscimento di attività motorie da sensori inerziali' – carried out at Biolab<sup>3</sup>, Roma Tre University. Vote: 110/110 cum laude
- Participation in Erasmus intensive program (Erasmus IP) at Lahti University (Finland) for 15 days: 'Smart House' project

10/2010–07/2013

## Bachelor in Electronic Engineering

Roma Tre University, Rome (Italy)

- Thesis title: "Predizione di eventi di fibrillazione atriale dopo interventi di chirurgia" – carried out at Istituto Superiore di Sanità. Vote: 110/110
- Participation in Erasmus program at Tampere University – TUT (Finland) – for one semester 2012/2013

11/2015–12/2015

## Licence to Engineering profession

Roma Tre University, Rome (Italy)

PERSONAL SKILLS

Mother tongue(s) Italian

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
Spanish	B2	B2	B1	B1	B2

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user  
 Common European Framework of Reference for Languages

Job-related skills Publications:

C. Caramia, D. Torricelli, M. Schmid, A. Munoz, J. Gonzalez, F. Grandas, J. Pons IMU-based Classification of Parkinson's Disease from Gait: a Sensitivity Analysis on Sensor Location and Feature Selection, IEEE journal of biomedical and health informatics, 2018.

C. Caramia, I. Bernabucci, C. D'Anna, C. De Marchis, M. Schmid. Gait parameters are differently affected by concurrent smartphone-based activities with scaled levels of cognitive effort, PLoS one, 2017.

C. Caramia, C. De Marchis, M. Schmid. Differentiating the Effects of Motor and Cognitive Dual-Tasks on Gait Performance of Young Healthy Subjects, ICNR 2018, Pisa, Italy.

C. Caramia, C. De Marchis, C. D'Anna, M. Schmid. Gait ratios as estimated by a single inertial sensor: a feasibility analysis, in 6th Congress of the National Group of Bioengineering (GNB2018), Milan, Italy.

C. Caramia, I. Bernabucci, C. D'Anna, C. De Marchis, A. Scorza, M. Schmid. Wavelet-based detection of gait events from inertial sensors: analysis of sensitivity to scale choice, MeMea 2018, Rome, Italy.

A. Scorza, F. Orsini, C. De Marchis, C. Caramia, S. A. Sciuto, J. Galo. A Comparative Study on the Influence of Phantoms and Test objects on Quality Control Measurements in B-mode ultrasound systems: preliminary results, MeMea 2018, Rome, Italy.

C. Caramia, I. Bernabucci, C. D'Anna, C. De Marchis, M. Schmid. Gait Ratios and Variability Indices to Quantify the Effect of Using Smartphones in Dual-Task Walking, IUPESM 2018, Prague, Czech Republic.

C. Caramia, I. Bernabucci, S. Conforto, C. De Marchis, A. Proto, M. Schmid. Spatio-temporal gait parameters as estimated from wearable sensors placed at different waist levels, IECBES 2016, IEEE-EMBS Conference on Biomedical Engineering and Science, Malaysia (Best Paper Award)

C. Caramia, I. Bernabucci, B. Fida, A. Proto, M. Schmid. The influence of filtering on spatio-temporal gait parameters estimation from inertial sensors, in 5th Congress of the National Group of Bioengineering, GNB2016, Naples, Italy.

B. Fida, I. Bernabucci, D. Bibbo, C. Caramia, M. Schmid. Validation of a realtime gait event detection algorithm across different walking speeds, in 5th Congress of the National Group of Bioengineering, GNB2016, Naples, Italy.

C. Caramia, M. Schmid, I. Bernabucci, C. De Marchis, S. Conforto. Extraction of gait parameters from inertial sensor in side-by-side walking, in 17th SIAMOC National Congress 2016, Milan, Italy.