

PERSONAL INFORMATION **Stefano Bertuletti**

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Gender Male | Date of birth 16/11/1989 | Nationality Italian

## WORK EXPERIENCE

09/10/2012 – 30/12/2012 **Worker (weekender)**

Brembo Spa  
Viale Europa 2, 24040 Stezzano (BG) – Italy  
Brake components production

04/06/2012 – 05/08/2012 **Worker (weekender)**

Brembo Spa  
Viale Europa 2, 24040 Stezzano (BG) – Italy  
Brake components production

17/11/2008 – 14/01/2009 **Employee**

Gros Market Italia Srl  
Via Provinciale 80, 24044 Dalmine (BG) – Italy  
Management and preparation of stocks

## EDUCATION AND TRAINING

15/11/2018 – Present **Postdoctoral Research Fellow**

Università degli Studi di Sassari - Department of Biomedical sciences  
Viale San Pietro 43/B, 07100 Sassari (SS) – Italy

- Research Projects**
- **Mobilise-D**: European Research Project H2020-JTI-IMI2-2017-13-two-stage: "Connecting digital mobility assessment to clinical outcomes for regulatory and clinical endorsement"
  - **DoMoMEA**: "Azioni Cluster Top-Down" (POR FESR Sardegna 2014 – 2020): "Home-based neuromuscular telerehabilitation for stroke patients by means of advanced electronic devices"

01/11/2015 – 31/10/2018 **Ph.D. in Automatic Control, Bioengineering e Operation Research (ABRO)**

Università degli Studi di Roma 'La Sapienza' – Roma  
Piazzale Aldo Moro 5, 00185 Roma (RM) – Italia

**Research Project** Human movement analysis by means of custom-made wearable sensors

**Classification** with Honors

**Thesis** Development, validation and applications of an innovative wearable system based on time-of-flight technology for the measurement of the human movement

19/01/2018 – 29/07/2018 **Research Period Abroad (Ph.D.)**

INSIGNEO Institute - University of Sheffield

- Pam Liversidge Building, Mappin Street, Sheffield, S1 3JD, UK
- Research Project** Analysis of gait in patients with ataxia, vestibular disorders and multiple sclerosis by using an innovative wearable system integrating magneto-inertial and distance sensors.
- 01/05/2015 – 31/10/2015 **Post-Graduate Grant Holder**  
 Università degli Studi di Sassari – Sassari
- Research Project** Indoor localization and fall detection using custom-made devices with Bluetooth Low Energy
- 09/2012 – 04/2015 **Master's Degree in Computer Engineering**  
 Università degli Studi di Bergamo – Bergamo
- Final mark** 110/110  
**Thesis** Development of a wearable sensor platform to monitor skin and environmental parameters
- 09/2008 – 10/2012 **Bachelor's Degree in Computer Engineering**  
 Università degli Studi di Bergamo – Bergamo
- Final mark** 98/110  
**Thesis** Converter for configuration database for packaging machines
- 2003 – 2008 **Secondary School Degree in IT**  
 I.T.I.S. G. Marconi (Indirizzo informatico progetto Abacus) – Dalmine (BG)
- Final mark** 78/100

**PERSONAL SKILLS**

**Mother tongue** Italian

Other languages	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B1	B1	B1	B1	B1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user  
 Common European Framework of Reference (CEF) level

**Communication skills** Proven adaptability to differing cultural environments.

**Organisational / managerial skills** Enjoy working as a team member as well as independently.

- Computer skills**    Operating systems:
- Windows
  - Mac OS
- Software:
- Office: Word, Excel, Power Point, Access and Visio
  - Pages, Numbers and Keynote
  - Eagle
  - SolidWorks
- Programming languages:
- Most experienced with MATLAB, C, C++, C#, Visual Basic, Java, C for embedded systems and Java for Android applications
  - Some experienced with phyton
- Driving licence**    A3, B

## PUBLICATIONS

## International Peer-Reviewed Journals

- S. Bertuletti, U. Della Croce, and A. Cereatti (2019). “A wearable solution for accurate step detection based on the direct measurement of the inter-foot distance”. In: *Journal of Biomechanics* 84, pp. 274–277. ISSN: 0021-9290. DOI: <https://doi.org/10.1016/j.jbiomech.2018.12.039>. URL: <http://www.sciencedirect.com/science/article/pii/S0021929018309382>
- S. Bertuletti, A. Cereatti, D. Comotti, M. Caldara, and U. Della Croce (2017). “Static and Dynamic Accuracy of an Innovative Miniaturized Wearable Platform for Short Range Distance Measurements for Human Movement Applications”. In: *Sensors* 17.7. ISSN: 1424-8220. DOI: 10.3390/s17071492. URL: <http://www.mdpi.com/1424-8220/17/7/1492>

## Conference Proceedings published on International Journals

- F. Salis, S. Bertuletti, M. Caruso, U. Della Croce, C. Mazzà, and A. Cereatti (2019). “Multi-sensor integration and data fusion for enhancing gait assessment In and Out of the laboratory”. In: *Gait & Posture*. SIAMOC 2019
- A. Zedda, E. Gusai, M. Caruso, S. Bertuletti, S. Spanu, A. Pibiri, M. Monticone, A. Cereatti, and D. Pani (2019). “A home-based tele-rehabilitation system for stroke patients exploiting magneto-inertial measurement units”. In: *Gait & Posture*. SIAMOC 2019
- S. Bertuletti, F. Salis, A. Cereatti, L. Angelini, E. Buckley, K. P. S. Nair, C. Mazzà, and U. Della Croce (2019). “Inter-leg distance measurement as a tool for accurate step counting in patients with multiple sclerosis”. In: *2019 41st Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*
- S. Bertuletti, A. Cereatti, and U. Della Croce (2017b). “Development of a novel wearable system for real-time measurement of the inter-foot distance during gait”. In: *Gait & Posture* 57. SIAMOC 2017, pp. 6–7. ISSN: 0966-6362. DOI: <https://doi.org/10.1016/j.gaitpost.2017.07.054>. URL: <http://www.sciencedirect.com/science/article/pii/S0966636217307658>
- S. Bertuletti, A. Cereatti, M. Caldara, and U. Della Croce (2016). “A proximity sensor for the measurement of the inter-foot distance in static and dynamic tasks”. In: *Gait & Posture* 49. SIAMOC 2016, S15. ISSN: 0966-6362. DOI: <https://doi.org/10.1016/j.gaitpost.2016.07.044>. URL: <http://www.sciencedirect.com/science/article/pii/S0966636216301813>
- S. Bertuletti, A. Cereatti, M. Caldara, M. Galizzi, and U. Della Croce (Apr. 2016). “Indoor distance estimated from Bluetooth Low Energy signal strength: comparison of regression models”. In: *Proceedings of IEEE Sensors Applications Symposium (SAS)*, pp. 1–5. DOI: 10.1109/SAS.2016.7479899

- National Conference Proceedings**
- F. Salis, S. Bertuletti, M. Caruso, T. Bonci, K. Scott, R. Rossanigo, U. Della Croce, C. Mazzà, and A. Cereatti (2020). “A novel multi-sensor system for gait assessment in real-world conditions: preliminary results”. In: *Proceedings of GNB 2020*
  - R. Rossanigo, S. Bertuletti, M. Caruso, M. Knaflitz, U. Della Croce, and A. Cereatti (2020). “Estimation of the base of support during gait with an unobtrusive wearable system”. In: *Proceedings of GNB 2020*
  - S. Bertuletti, U. Della Croce, and A. Cereatti (2018). “A wearable prototype device for direct bilateral step detection by instrumenting a single foot”. In: *Proceedings of SIAMOC*
  - S. Bertuletti, A. Cereatti, and U. Della Croce (2018c). “Inter-foot distance measurement in healthy adults during gait using a wearable prototype device: validation on straight walking and turning for different distance sensor locations”. In: *Proceedings of SIAMOC*
  - S. Bertuletti, A. Cereatti, and U. Della Croce (2018a). “A wearable system based on Time-of-Flight technology for direct derivation of step number and step width on healthy gait”. In: *Proceedings of GNB*
  - S. Bertuletti, A. Cereatti, and U. Della Croce (2017a). “Detection of the turn switch during alpine skiing using a novel wearable system: a preliminary investigation”. In: *Proceedings of SIAMOC*
  - S. Bertuletti, A. Cereatti, and U. Della Croce (2016). “Measurement of the inter-foot distance using a Time-of-Flight proximity sensor: preliminary evaluation during leg oscillation exercises”. In: *Proceedings of GNB*
  - S. Bertuletti, A. Cereatti, M. Caldara, M. Galizzi, D. Comotti, and U. Della Croce (2015). “Fall detection localization using Bluetooth Low Energy devices: a preliminary investigation”. In: *Proceedings of SIAMOC*
- International Conference Proceedings**
- A. Zedda, E. Gusai, M. Caruso, S. Bertuletti, G. Baldazzi, S. Spanu, D. Riboni, A. Pibiri, M. Monticone, A. Cereatti, and D. Pani (2020). “DoMoMEA: a Home-Based Telerehabilitation System for Stroke Patients”. In: *2020 42nd Annual International Conference of the IEEE Engineering in Medicine Biology Society (EMBC)*, pp. 5773–5776. DOI: 10.1109/EMBC44109.2020.9175742
  - M. Caruso, A. Zedda, E. Gusai, S. Bertuletti, S. Spanu, A. Pibiri, M. Monticone, D. Pani, and A. Cereatti (2020). “Real-time kinematics estimation in tele-rehabilitation”. In: *Proceedings of GNB 2020*
  - A. Cereatti, S. Bertuletti, M. Caruso, and F. Salis (July 2019). “Multi-sensor integration and data fusion for enriching gait assessment In and Out of the laboratory”. In: *Proceedings of XXVII Congress of the International Society of Biomechanics (ISB)*
  - S. Bertuletti, F. Salis, Della Croce U., L. Angelini, E. Buckley, K. P. S. Nair, C. Mazzà, and A. Cereatti (July 2019). “A novel bilateral step counter based on the direct measurement of the distance between lower limbs during gait in persons with multiple sclerosis”. In: *Proceedings of XXVII Congress of the International Society of Biomechanics (ISB)*
  - S. Bertuletti, A. Cereatti, and U. Della Croce (2018b). “A wearable system for step width measurement and step detection based on Time-of-Flight technology: preliminary validation on healthy subjects”. In: *Proceedings of 3-D Analysis of Human Movement*
  - S. Bertuletti, V. Camomilla, A. Cereatti, M. Caldara, M. Galizzi, and U. Della Croce (2016). “Comparison of regression models for interdistance estimate between two BLE devices based on RSSI”. in: *Proceedings of 3-D Analysis of Human Movement*
- PATENT**
- A. Cereatti, S. Bertuletti, M. Caldara, and U. Della Croce (2017). “Sistema per l’analisi dell’attività motoria di una persona e relativo metodo”. Pat. 102017000003986. Italy