

# CURRICULUM VITAE

## PERSONAL INFORMATION

Surname, First name: Carullo, Alessio

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Email: [alessio.carullo@polito.it](mailto:alessio.carullo@polito.it)

Nationality: Italian

Date of birth: December 11, 1966

## PROFESSIONAL EXPERIENCE

Since 2011/01/01 to today: Associate Professor of Electrical and Electronic Measurement at the Department of electronics and Telecommunications of Politecnico di Torino, Italy.

2001/10/01 – 2010/12/31: Assistant Professor of Electrical and Electronic Measurement at the Department of Electronics of Politecnico di Torino, Italy.

1997/09/01 – 2001/09/30: Technical Assistant at the Department of Electronics of Politecnico di Torino, Italy.

Since 2014 to today: cofounder and president of the start-up PR.O. VOICE s.r.l.

Since 2013 to today: Technical Assessor of the Calibration Department at the Italian Accreditation Body ACCREDIA.

2008-2017: Technical Assessor of the Testing Department at the Italian Accreditation Body ACCREDIA.

Since 2016 to May 2018: Technical Responsible for the calibration laboratory Can.Tar. (LAT Accredia n. 239)

2001-2009: Technical Responsible for the calibration laboratory of Politecnico di Torino (SIT Centre n. 139)

2011/10/17 – 2013/10/17: Participant in the National Research Program (PRIN 2009) titled "Sviluppo di sensori intrinseci in fibra ottica".

2004/11/30 – 2006/11/30: Participant in the National Research Program (PRIN 2004) titled "Sviluppo e verifica di un modello di riferimento per la gestione metrologica di sistemi di misurazione interconnessi".

2001/11/30 – 2002/11/30: Participant in the National Research Program (PRIN) titled "Definizione e caratterizzazione di sistemi di misura complessi ed a larga scala".

1998/11/30 – 1999/11/30: Participant in the National Research Program (PRIN) titled "Sistemi di misura con architetture complesse: caratterizzazione degli apparati e qualificazione dei processi di misura".

1994/11/30 – 1996/11/30: Participant in the National Research Program (PRIN) titled "Metodologie, procedure e tecniche strumentali per la qualificazione di prodotti e servizi".

## **EDUCATION AND TRAINING**

1997: Ph.D. in “Electronic Instrumentation” (Università di Brescia, Italy)

1993: pass the examination for “Abilitazione all’esercizio della professione di ingegnere” (Politecnico di Torino, Italy)

1992: Master Degree in “Electronic Engineering” (Politecnico di Torino, Italy)

1985: high school diploma in “Electrotechnics” (I.T.I.S. "G. Vallauri" di Reggio Calabria, Italy)

## **ACADEMY**

2017/03/28 – 2023/03/28: National Scientific Qualification as Full Professor in the sector 09/E4 – Measurement.

2017/10/20: Member of the final examination board of the student Andrea Carolina Cardenas Olaya, Ph.D. Course in Electronic Engineering, XXIX cycle, Politecnico di Torino, Italy.

2014: Member of the admission board of the doctorate in “Metrologia”, XXX cycle, Politecnico di Torino, Italy.

Since 2014 to today: Member of the council of the doctorate in “Metrologia”, Politecnico di Torino, Italy.

2013/11/01 – 2014/10/31: Member of the council of the doctorate in “Gestione, Produzione e Design”, Politecnico di Torino, Italy.

Since 2002 to today: reviewer of the international journals IEEE Transactions on Instrumentation and Measurement, Review of Scientific Instruments, Measurement, IEEE Transactions on Geoscience and Remote Sensing, IEEE Transactions on Smart Grid.

## **TEACHING**

Since 2010 to today: Responsible for the course "Testing and Certification", Master Degree in Electronic Engineering, Politecnico di Torino, Italy.

Since 2014 to today: Teaching assignment within the Ph.D. program in “Ingegneria Elettrica, Elettronica e delle Comunicazioni” – course title “Development and management of Data Acquisition Systems”.

2012-2017: Responsible for the course "Measurement", Bachelor Degree in Electronic Engineering, Politecnico di Torino, Italy.

Since 2017: collaboration in the course “Electronic systems, technologies and measurements”, Bachelor Degree in Computer Engineering, Politecnico di Torino, Italy.

Since 2014: collaboration in the course “Sensors and measurements for bioengineering”, Bachelor Degree in Biomedical Engineering, Politecnico di Torino, Italy.

2001-2010: Responsible for the course "Measurement and Instrumentation", Bachelor Degree in Electrical Engineering, Politecnico di Torino, Italy.

2003-2009: Responsible for the course "Electronic Measurement ", Bachelor Degree in Electronic Engineering, Politecnico di Torino, Ivrea, Italy.

2002-2010: Responsible and tutor for the course "Electronic Measurement II", remote Bachelor Degree in Electronic Engineering, Politecnico di Torino, Italy.

2006/11/01 – 2008/10/31: Teaching assignment within the Ph.D. program in “Metrologia: scienza e tecnica delle misure” – course title “Traceability and metrological management of measuring instrumentation”.

2017/04/25 - 2017/04/27: Teaching and research assignment within the Mobility Agreement program Erasmus+ at the Department of Speech, Music & Hearing, Kungliga Tekniska Hogskolan (KTH – Royal Institute of Technology), Stockholm, Sweden.

2013/04/29 – 2013/04/30: Teaching and research assignment within the Teaching Staff Mobility program Erasmus at the Department of Urban Engineering, London South Bank University (LSBU), London, United Kingdom.

## PRINCIPAL SCIENTIFIC PUBLICATIONS

1. Astolfi A., Castellana A., Carullo A., Puglisi G.E. (2018). Uncertainty of speech level parameters measured with a contact-sensor-based device and a headworn microphone. *Journal of the Acoustical Society of America*, Volume 143, Issue 6, 1 June 2018, Pages EL496-EL502.
2. Bottalico P., Ipsaro Passione I., Astolfi A., Carullo A., Hunter E.J. (2018). Accuracy of the quantities measured by four vocal dosimeters and its uncertainty. *Journal of the Acoustical Society of America*, Volume 143, Issue 3, 1 March 2018, Pages 1591-1602.
3. Antonella Castellana, Alessio Carullo, Simone Corbellini, Arianna Astolfi (2018). Discriminating Pathological Voice From Healthy Voice Using Cepstral Peak Prominence Smoothed Distribution in Sustained Vowel. *IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT*, vol. 67, p. 646-654, ISSN: 0018-9456, doi: 10.1109/TIM.2017.2781958
4. Giulia Calosso, Giuseppina Emma Puglisi, Arianna Astolfi, Antonella Castellana, Alessio Carullo, Franco Pellerey (2017). A one-school year longitudinal study of secondary school teachers' voice parameters and the influence of classroom acoustics. *THE JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA*, vol. 142, p. 1055-1066, ISSN: 0001-4966, doi: 10.1121/1.4998707
5. CARULLO, Alessio, CASTELLANA, ANTONELLA, VALLAN, Alberto, CIOCIA, ALESSANDRO, SPERTINO, Filippo (2017). Uncertainty issues in the experimental assessment of degradation rate of power ratings in photovoltaic modules. *MEASUREMENT*, vol. 111, p. 432-440, ISSN: 0263-2241, doi: 10.1016/j.measurement.2017.04.038
6. CASTELLANA, ANTONELLA, CARULLO, Alessio, ASTOLFI, Arianna, PUGLISI, GIUSEPPINA EMMA, Fugiglando, Umberto (2017). Intra-speaker and inter-speaker variability in speech sound pressure level across repeated readings. *THE JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA*, vol. 141, p. 2353-2363, ISSN: 1520-8524, doi: 10.1121/1.4979115
7. PUGLISI, GIUSEPPINA EMMA, ASTOLFI, Arianna, Cantor Cutiva, Lady Catherine, CARULLO, Alessio (2017). Four-day-follow-up study on the voice monitoring of primary school teachers: Relationships with conversational task and classroom acoustics. *THE JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA*, vol. 141, p. 441-452, ISSN: 0001-4966, doi: 10.1121/1.4973805
8. Cantor Cutiva L.C., Puglisi G.E., Astolfi A., Carullo A. (2016). Four-day follow-up study on the self-reported voice condition and noise condition of teachers: relationship between vocal parameters and classroom acoustics. *JOURNAL OF VOICE*, vol. 31, p. E1-E8, ISSN: 0892-1997, doi: 10.1016/j.jvoice.2016.02.017
9. Carullo Alessio, Vallan Alberto, Afify Ahmed S., Tulliani J.-M. (2016). Development of a fast humidity sensor based on quartz tuning fork. In: *Conference Record - IEEE Instrumentation and Measurement Technology Conference*. vol. 2016-, p. 1-6,

Piscataway, NJ, USA:Institute of Electrical and Electronics Engineers Inc., ISBN: 9781467392204, Taipei International Convention Center, twN, 2016, doi: 10.1109/I2MTC.2016.7520375

10. ASTOLFI, Arianna, CARULLO, Alessio, PAVESE, LORENZO, PUGLISI, GIUSEPPINA EMMA (2015). Duration of voicing and silence periods of continuous speech in different acoustic environments. *THE JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA*, vol. 137, p. 565-579, ISSN: 0001-4966, doi: 10.1121/1.4906259
11. Alessio Carullo, Alberto Vallan, Arianna Astolfi, Giuseppina Puglisi, Lorenzo Pavese (2015). Validation of calibration procedures and uncertainty estimation of contact-microphone based vocal analyzers. *MEASUREMENT*, vol. 74, p. 130-142, ISSN: 0263-2241, doi: 10.1016/j.measurement.2015.07.011
12. Alberto Vallan, Alessio Carullo, Maria Luisa Casalicchio, Guido Perrone (2014). Static Characterization of Curvature Sensors Based on Plastic Optical Fibers. *IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT*, vol. 63, p. 1293-1300, ISSN: 0018-9456, doi: 10.1109/TIM.2013.2296405
13. Alberto Vallan, Alessio Carullo, Maria Luisa Casalicchio, Massimo Olivero, Guido Perrone (2014). Crack Monitoring Network Using POF Sensors. In: *Lecture Notes in Electrical Engineering, Sensors*. vol. 162, p. 397-402, New York:Springer New York Heidelberg Dordrecht London, ISBN: 9781461438595, Roma, Italia, doi: 10.1007/978-1-4614-3860-1
14. CARULLO, Alessio, FERRARIS, Franco, VALLAN, Alberto, SPERTINO, Filippo, Attivissimo F. (2014). Uncertainty analysis of degradation parameters estimated in long-term monitoring of photovoltaic plants. *MEASUREMENT*, vol. 55, p. 641-649, ISSN: 0263-2241, doi: 10.1016/j.measurement.2014.06.003
15. A. Carullo, A. Vallan, A. Astolfi (2013). Design Issues for a Portable Vocal Analyzer. *IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT*, vol. 62, p. 1084-1093, ISSN: 0018-9456, doi: 10.1109/TIM.2012.2236724
16. Filippo Attivissimo, Francesco Adamo, Alessio Carullo, Anna Maria Lucia Lanzolla, Filippo Spertino, Alberto Vallan (2013). On the Performance of the Double-Diode Model in Estimating the Maximum PowerPoint for Different Photovoltaic Technologies. *MEASUREMENT*, vol. 46, p. 3549-3559, ISSN: 0263-2241, doi: 10.1016/j.measurement.2013.06.032
17. Carullo A., Vallan A. (2012). Measurement uncertainty issues in freeze-drying Processes. *MEASUREMENT*, vol. 45, p. 1706-1712, ISSN: 0263-2241, doi: 10.1016/j.measurement.2012.04.017
18. Carullo A., Vallan A. (2012). Outdoor Experimental Laboratory for Long-Term Estimation of Photovoltaic-Plant Performance. *IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT*, vol. 61, p. 1307-1314, ISSN: 0018-9456, doi: 10.1109/TIM.2011.2180972
19. CARULLO A., CORBELLINI S., LUONI A., NERI A. (2010). In Situ Calibration of Heterogeneous Acquisition Systems: The Monitoring System of a Photovoltaic Plant. *IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT*, vol. 59, p. 1098-1103, ISSN: 0018-9456, doi: 10.1109/TIM.2010.2045145
20. CARULLO A, CORBELLINI S, PARVIS M, VALLAN A. (2009). A Wireless Sensor Network for Cold-Chain Monitoring. *IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT*, vol. 58, p. 1405-1411, ISSN: 0018-9456, doi: 10.1109/TIM.2008.2009186

21. CARULLO A., GRASSINI S., PARVIS M. (2009). Measurement Procedures for the Electrical Characterization of Oxide Thin Films. IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, vol. 58, p. 1398-1404, ISSN: 0018-9456, doi: 10.1109/TIM.2008.2009035
22. NERI A, OLIVERO M., PERRONE G, VALLAN A, CARULLO A (2009). Low-cost intensity-based plastic optical fibre sensing system for permanent structural health monitoring. In: DGao, German Branch of the European Optical Society meeting. DGAO PROCEEDINGS, vol. 110, DGaO-PROCEEDINGS, ISSN: 1614-8436, Brescia, June 5, 2009