Short Curriculum Vitae of Emilio Sardini

Since 1984 Emilio Sardini has been carrying out full-time research, teaching and management activities at the University of Brescia.

He has been Head of Department of Information Engineering, member of the Senate and Board of Directors of the University of Brescia, Coordinator of the PhD Technology for Health, Deputy Dean of The Faculty of Engineering. During his management activities, the Department of Information Engineering has been evaluated as “Department of excellence 2018 2022” based on a national ranking of all Italian Department carried out by Italian government agency ANVUR and received a grant of 7 M€. Moreover, Emilio Sardini, during the Deputy Dean activity, contributes to the drafting and management of two projects financed by Fondazione Cariplo, whose grant was about of 300.000€.

His research activity is focused on sensors and their interdisciplinary intersections with different disciplines such as life science and industry. Some of the main topics are: ultrasonic sensors, capacitance transducers, telemetry transmission of measurement information between sensor and electronics; autonomous sensors, health sensors, wearable sensors, biosensors. The activity of management for the proposal and the development of research projects is also reflected in the activity carried by Emilio Sardini as Coordinator of the PhD "Technology for Health", in which he promoted the development of international links such as the agreement for joint supervision with the University Pierre et Marie Curie in Paris. He has published more than 100 papers in international journals and / or international conferences. He has been also a member of the ASN (Abilitazione Scientifica Nazionale) Parallel Commission of his scientifical sector.

Emilio Sardini coordinates industrial research or technology transfer activities commissioned by external institutes (public or private). These activities regards topics strictly related to the innovation field of sensor development or measurement instrumentation. He also coordinates public industrial research fund such as the project "ADAPTIVE - Block Approach and adaptive to the Digital Factory " one of the four project approved in the "Smart Factory" Cluster. The University of Brescia participates together with SCM Group Spa, Spa AVIO, SIR Spa, CTC Srl, ITALY COPAN Spa, SCAGLIA INDEVA Spa, Spa Balluff, AEA-GROUP Srl LOCCIONI, COSBERG Spa, Spa MASMEC, EICAS AUTOMATION Spa, University of Modena and Reggio Emilia, University of Bergamo, University of Naples "Federico II". The whole budget of these projects is about € 12M€ while the grant for the University of Brescia has a value of € 0,6 M€. Emilio Sardini is active in the innovative topic of the Smart Factories of the future (or commonly called Industry 4.0). He has been or is a member of Scientific and Technical Committees such as MADE Competence Center and AFIL (Associazione Fabbrica Intelligente Lombardia).

Emilio Sardini's contribution in teaching activity was of a double nature: he held numerous university courses and he coordinated or promoted various new teaching activities. The courses treated the following main topics: sensors, electronic instrumentation and microprocessors. The initiatives are the activation of two degree courses "Industrial Automation Engineering" and "Technology Engineering for the digital enterprise", the coordination of the training of the School's teachers, the promotion of courses for post-graduate training on topics related to Industry 4.0. He is or has also been responsible for several theses (both Master's and Doctoral's).

Work Experience

01/01/2020–Present	Member of the scientific technical committee of the Competence Center MADE – Politecnico di Milano
01/09/2019–Present	General Secretary of the National Scientific Group “Misure Elettriche ed Elettroniche”
01/07/2018–Present	Member of the ASN (Abilitazione Scientifica Nazionale) Parallel Commission ING-INF/07.
01/01/2012–Present	Head of the Department of Information Engineering The Department has been evaluated as “Department of excellence 2018 2022” based on a national ranking of all Italian Department carried out by Italian government agency ANVUR (Agenzia Nazionale di Valutazione del Sistema Universitario e della Ricerca).
01/01/2012–Present	Member of the Academic Senate of the University of Brescia
01/07/2009–Present	Coordinator of the PhD "Technology for Health"
01/11/2006–Present	Full professor at the Department of Information Engineering (formerly previously Department of Electronics for Automation), Faculty of Engineering, University of Brescia
01/07/2016–30/06/2018	Member of the Directive Commission of the’Associazione Fabbrica Intelligente Lombarda (AFIL)
01/11/2009–31/10/2012	Deputy Dean of the Faculty of Engineering, University of Brescia
01/11/2007–31/10/2010	Member of Mechatronics PhD Faculty at the University of Bergamo
01/11/2001–31/10/2009	Chancellor’s delegate by the University of Brescia of the Board of School SILSIS section of Bergamo Brescia (Lombard Interuniversity School for the higher education)
01/11/2001–31/10/2004	Member of the Board of Governors of the University of Brescia
01/11/1998–31/10/2006	Associate Professor at the Department of Electronics for Automation, Faculty of Engineering, University of Brescia
01/11/1989–31/10/1997	Member of the Integrated Academic Senate of the University of Brescia
01/03/1986–31/10/1998	Researcher at the Department of Electronics for Automation of the Faculty of Engineering, University of Brescia

RECENT PUBLICATIONS ON INTERNATIONAL JOURNALS

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[3.] Tonello, S., Bianchetti, A., Braga, S., Almici, C., Marini, M., Piovani, G., Guindani, M., Dey, K., Sartore, L., Re, F., Russo, D., Cantù, E., Lopomo, N.F., Serpelloni, M., Sardini, E., Impedance-based monitoring of mesenchymal stromal cell three-dimensional proliferation using aerosol jet printed sensors: A tissue engineering application, (2020) Materials, 13 (10), art. no. 2231, DOI: 10.3390/ma13102231

[4.] Serpelloni, M., Cantù, E., Borghetti, M., Sardini, E. Printed smart devices on cellulose-based materials by means of aerosol-jet printing and photonic curing, (2020) Sensors (Switzerland), 20 (3), art. no. 841, DOI: 10.3390/s20030841

[5.] Tonello, S., Stradolini, F., Abate, G., Uberti, D., Serpelloni, M., Carrara, S., Sardini, E., Electrochemical detection of different p53 conformations by using nanostructured surfaces, (2019) Scientific Reports, 9 (1), art. no. 17347, DOI: 10.1038/s41598-019-53994-6

[6.] Borghetti, M., Serpelloni, M., Sardini, E., Printed strain gauge on 3D and low-melting point plastic surface by aerosol jet printing and photonic curing, (2019) Sensors (Switzerland), 19 (19), art. no. 4220, DOI: 10.3390/s19194220

[7.] Tonello, S., Borghetti, M., Lopomo, N.F., Serpelloni, M., Sardini, E., Marziano, M., Serzanti, M., Uberti, D., Dell'era, P., Inverardi, N., Gualandi, C., Focarete, M.L., Ink-jet printed stretchable sensors for cell monitoring under mechanical stimuli: A feasibility study, (2019) Journal of Mechanics in Medicine and Biology, 19 (6), art. no. 1950049, DOI: 10.1142/S0219519419500490

[8.] Marziano, M., Tonello, S., Cantù, E., Abate, G., Vezzoli, M., Rungratanawanich, W., Serpelloni, M., Lopomo, N.F., Memo, M., Sardini, E., Uberti, D., Monitoring Caco-2 to enterocyte-like cells differentiation by means of electric impedance analysis on printed sensors, (2019) Biochimica et Biophysica Acta - General Subjects, 1863 (5), pp. 893-902, DOI: 10.1016/j.bbagen.2019.02.008

[9.] Di Novo, N.G., Cantù, E., Tonello, S., Sardini, E., Serpelloni, M., Support-material-free microfluidics on an electrochemical sensors platform by aerosol jet printing, (2019) Sensors (Switzerland), 19 (8), art. no. 1842, DOI: 10.3390/s19081842

[10.] Re, F., Sartore, L., Moulisova, V., Cantini, M., Almici, C., Bianchetti, A., Chinello, C., Dey, K., Agnelli, S., Manferdini, C., Bernardi, S., Lopomo, N.F., Sardini, E., Borsani, E., Rodella, L.F., Savoldi, F., Paganelli, C., Guizzi, P., Lisignoli, G., Magni, F., Salmeron-Sanchez, M., Russo, D. 3D gelatin-chitosan hybrid hydrogels combined with human platelet lysate highly support human mesenchymal stem cell proliferation and osteogenic differentiation (2019) Journal of Tissue Engineering, 10, DOI: 10.1177/2041731419845852

[11.] Khan, M.A., Borghetti, M., Serpelloni, M., Sardini, E.,Implantable autonomous device for wireless force measurement in total knee prosthesis, (2019) IEEE Instrumentation and Measurement Magazine, 22 (1), art. no. 8633351, pp. 39-47, DOI: 10.1109/MIM.2019.8633351

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[14.] Bellitti, P., Bona, M., Borghetti, M., Sardini, E., Serpelloni, M., Fontana, S., Reconfigurable measuring system for the automatic detection of bacterial growth in a specimen processing platform, (2019) Acta IMEKO, 8 (2), pp. 35-44, DOI: 10.21014/acta_imeko.v8i2.634

[15.] Khan, M.A., Cantù, E., Tonello, S., Serpelloni, M., Lopomo, N.F., Sardini, E., A review on biomaterials for 3D conductive scaffolds for stimulating and monitoring cellular activities, (2019) Applied Sciences (Switzerland), 9 (5), art. no. 961, DOI: 10.3390/app9050961

[16.] Filippini, M., Serpelloni, M., Quaranta, V., Bellitti, P., Sardini, E., Latronico, N., A New Method for in Vivo Analysis of the Performances of a Heat and Moisture Exchanger (HME) in Mechanically Ventilated Patients, (2019) Pulmonary Medicine, 2019, art. no. 9270615, DOI: 10.1155/2019/9270615

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[18.] Bona, M., Borghetti, M., Sardini, E., Serpelloni, M., Telemetric Technique for Passive Resistive Sensors Based on Impedance Real Part Measurement at Fixed Frequency, (2018) IEEE Transactions on Instrumentation and Measurement, 67 (9), art. no. 8316934, pp. 2160-2168, DOI: 10.1109/TIM.2018.2811279

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[2.] Bellitti, P., Bona, M., Borghetti, M., Sardini, E., Serpelloni, M.,Application of a Modular Wearable System to Track Workers' Fingers Movement in Industrial Environments,(2019) 2019 IEEE International Workshop on Metrology for Industry 4.0 and IoT, MetroInd 4.0 and IoT 2019 - Proceedings, art. no. 8792859, pp. 137-142. DOI: 10.1109/METROI4.2019.8792859

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[10.] Bona, M., Bellitti, P., Sardini, E., Serpelloni, M., Study for the Integration of a Measuring System to an Automated Platform for Monitoring the Growth of Bacterial Cultures,(2018) 2018 Workshop on Metrology for Industry 4.0 and IoT, MetroInd 4.0 and IoT 2018 - Proceedings, art. no. 8428321, pp. 264-268, DOI: 10.1109/METROI4.2018.8428321

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[12.] Bodini, A., Cantu, E., Serpelloni, M., Sardini, E., Tonello, S., Design and implementation of a microsensor platform for protein detection realized via 3-D printing,(2018) 2018 IEEE Sensors Applications Symposium, SAS 2018 - Proceedings, 2018-January, pp. 1-6,DOI: 10.1109/SAS.2018.8336743

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[14.] Bona, M., Sardini, E., Serpelloni, M., Andò, B., Lombardo, C.O., Study on impedance behavior of a telemetric system operating with an inkjet-printed resistive strain gauge,(2018) Lecture Notes in Electrical Engineering, 431, pp. 258-266,DOI: 10.1007/978-3-319-55077-0_34

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