CURRICULUM VITAE - ANTONIO AFFANNI

Personal Information

- Name: Antonio Affanni
- Birth date and place: 8 march 1977, Mantova - Italy
- Citizenship: Italian
- Marital status: Married
- E-mail: antonio.affanni@uniud.it
- Position: Associate Professor at DPIA – University of Udine
- Italian Disciplinary Scientific Sector: ING-INF/07 – Measurement

Education and Professional Experience

- Attained Classical High School Diploma in 1996 at "G. Romani" High School in Casalmaggiore, June 1996.
- Obtained Master of Science Degree in Electronic Engineering from the University of Parma on 19/2/2003, with a grade of 103/110, defending the thesis titled "Integrated Control System for Electric Scooters with Optimized Energy Management."
- During the academic year 1999/2000, held a teaching position in Electrotechnics and Systems at the "G. don Bosco" Higher Professional Institute in Viadana (Mn).
- In the spring of 2003, won a public competition for a research collaboration grant at the University of Parma, Department of Information Engineering, in the scientific disciplinary sector ING-INF/07, Electrical and Electronic Measurements, with the title "Development of Position Measurement Sensors."
- In June 2003, obtained professional accreditation as an Engineer.
- In June 2005, won a public competition for an 18-month Scholarship within the TECAL Regional Laboratory (Technologies and Systems for the Food Industry) with the title "Guided Radar Sensor for Level Measurement in Process or Storage Tanks."
- In November 2006, won a public competition for a research collaboration grant at the University of Parma, Department of Information Engineering, in the scientific disciplinary sector ING-INF/07, Electrical and Electronic Measurements, with the title "Study, Design, and Implementation of Industrial Systems based on Sensors."
- In March 2007, obtained a Ph.D. in Information Technology - XIX cycle, defending the thesis titled "Development of Sensors for Industrial Applications and Microactuators for Biological Applications."
- In October 2008, won a public competition for a permanent researcher position in the scientific disciplinary sector ING-INF/07.
- Joined the Department of Electrical, Management, and Mechanical Engineering at the University of Udine as researcher in September 2009.
- Since September 2012, has been a confirmed researcher in the scientific disciplinary sector ING-INF/07 at the Department of Electrical, Management, and Mechanical Engineering at the University of Udine.
- In December 2019, obtained the National Scientific Qualification for University Associate Professors in the sector 9/E4, Measurements, in the third quadrimester, valid from 20/12/2019 to 20/12/2030.

- In November 2020, obtained the National Scientific Qualification for University Full Professors in the sector 9/E4, Measurements, in the fifth quadrimester, valid from 16/11/2020 to 16/11/2031.

Teaching Activity

1. In the academic years 2003/2004, 2004/2005, and 2005/2006, provided teaching support for Electronic Measurements A for the Bachelor's Degree in Electronic Engineering at the Faculty of Engineering, University of Parma, including laboratory exercises.
2. In the academic years 2003/2004, 2004/2005, 2005/2006, 2006/2007, and 2007/2008, provided teaching support for Sensors for the Master's Degree in Electronic Engineering at the Faculty of Engineering, University of Parma, including laboratory exercises.
3. In the academic years 2006/2007 and 2007/2008, provided teaching support for Microwave Measurements for the Master's Degree in Electronic Engineering at the Faculty of Engineering, University of Parma, including laboratory exercises.
4. In the academic years 2007/2008, 2008/2009, and 2009/2010, held the course "Sensing and Control Technologies," SSD ING-INF/07, for the Master's Degree in Industrial Innovation Engineering at the Faculty of Engineering, University of Udine.
5. In the academic year 2009/2010, held the course "Electrical and Electronic Measurements" (6 CFU), SSD ING-INF/07, for the Bachelor's Degree in Electronic Engineering at the Faculty of Engineering, University of Udine.
6. In the academic year 2010/2011, held the course "Fundamentals of Electronics" (6 CFU), SSD ING-INF/01, for the Bachelor's Degree in Management Engineering at the Faculty of Engineering, University of Udine.
7. In the academic years 2011/2012, 2012/2013, and 2013/2014, held the course "Electrical and Electronic Measurements" (6 CFU), SSD ING-INF/07, for the Master's Degree in Electronic Engineering at the Faculty of Engineering, University of Udine.
8. In the academic years 2011/2012, 2012/2013, and 2013/2014, held the course "Electronic Instrumentation and Sensors" (6 CFU), SSD ING-INF/01, for the Master's Degree (LM) in Electronic Engineering at the Faculty of Engineering, University of Udine.
9. In the academic years 2014/2015, 2015/2016, 2016/2017, 2017/2018, 2018/2019, 2019/2020, and 2021/2022, held the course "Electrical and Electronic Measurements" (6 CFU), SSD ING-INF/07, for the Master's Degree (LM) in Electronic Engineering at the Faculty of Engineering, University of Udine.
10. In the academic years 2014/2015, 2015/2016, 2016/2017, 2017/2018, 2018/2019, 2019/2020, 2020/2021, and 2021/2022, held the course "Electronic Instrumentation and Sensors" (6 CFU), SSD ING-INF/07, for the Master's Degree (LM) in Electronic Engineering at the Faculty of Engineering, University of Udine.
11. In the academic years 2019/2020, 2020/2021, and 2021/2022, held the course "Electrical Measurements" (3 CFU), SSD ING-INF/07, for the Bachelor's Degree (LT) in Electronic Engineering at the Faculty of Engineering, University of Udine.

From 01/09/2009 until today, he has been the supervisor of 14 Bachelor's/Master's theses and two PhD theses.

Organization or participation as a speaker at scientific conferences in Italy or abroad

- Participation as an oral presenter at the 2004 IEEE Instrumentation and Measurement Conference (IMTC) from 18-05-2004 to 20-05-2004. Title of the work: "Design and

characterization of magnetostrictive linear displacement sensors." Authors: Affanni, A., Guerra, A., Dallagiovanna, L., Chiorboli, G.

- Participation as a poster presenter at the 16th IMEKO TC4 Int. Symp. 2008 from 22-09-2008 to 24-09-2008. Title of the work: "Design of an efficient AC magnetohydrodynamic stirrer." Authors: Affanni, A., Chiorboli, G.
- Participation as an oral presenter at the 2011 IEEE International Symposium on Medical Measurements and Applications (MeMeA) from 30-05-2011 to 31-05-2011. Title of the work: "Measurement bench for impedance tomography during the hemostasis process in whole blood." Authors: Affanni, A., Specogna, R., Trevisan, F.
- Participation as an oral presenter at the 2012 IEEE Sensors Applications Symposium (SAS) from 07-02-2012 to 09-02-2012. Title of the work: "Gyroscopic system for yaw channel control in aerobatic UAV helicopters." Authors: Affanni, A.
- Participation as an oral presenter at the 2012 IEEE International Instrumentation and Measurement Technology Conference (I2MTC) from 13-05-2012 to 16-05-2012. Title of the work: "Electrical impedance spectroscopy on flowing blood to predict white thrombus formation in artificial microchannels." Authors: Affanni, A., Specogna, R., Trevisan, F.
- Participation as a session chair (poster session) at the 2012 IEEE International Instrumentation and Measurement Technology Conference (I2MTC) from 13-05-2012 to 16-05-2012.
- Participation as an oral presenter at the 2013 Joint IMEKO TC1-TC7-TC13 Symposium from 4-09-2013 to 6-09-2013. Title of the work: "Ex vivo time evolution of thrombus growth through optical and electrical impedance data fusion." Authors: Affanni, A., Specogna, R., Trevisan, F.
- Participation as an oral presenter at the 2013 Joint IMEKO TC1-TC7-TC13 Symposium from 4-09-2013 to 6-09-2013. Title of the work: "Protein aggregation measurement through electrical impedance spectroscopy." Authors: Affanni, A., Corazza, A., Esposito, G., Fogolari, F., Polano, M.
- Participation as a poster presenter at the 2014 International Conference on Microelectronic Test Structures (ICMTS) from 24-03-2014 to 27-03-2014. Title of the work: "A novel apparatus for the volume estimation of in vitro thrombus growth." Authors: Affanni, A., Specogna, R., Trevisan, F.
- Participation as an oral presenter at the 20th IMEKO TC4 Symposium on Measurements of Electrical Quantities, 2014, from 15-09-2014 to 17-09-2014. Title of the work: “Wearable instrument for skin potential response analysis in AAL applications". Authors: Affanni, A., Chiorboli, G.
- • Participation as an oral presenter at the 2016 IEEE International Symposium on Medical Measurements and Applications (MeMeA) from 15-05-2016 to 18-05-2016. Title of the work: "Wearable instrument to measure simultaneously cardiac and electrodermal activities." Authors: Affanni, A.
- Participation as a session chair (GT3a Biosignal Processing Part a) at the 2016 IEEE International Symposium on Medical Measurements and Applications (MeMeA) from 15-05-2016 to 18-05-2016.
- Participation as a poster presenter at the 2016 IEEE International Symposium on Medical Measurements and Applications (MeMeA) from 15-05-2016 to 18-05-2016. Title of the work: "Motion artifact removal in stress sensors used in driver in motion simulators." Authors: Affanni, A., Chiorboli, G., Minen, D.
- Participation as a poster presenter at the 2019 IEEE Sensors Applications Symposium (SAS) from 11-03-2019 to 13-03-2019. Title of the work: "Dual channel Electrodermal activity sensor for motion artifact removal in car drivers' stress detection." Authors: Affanni, A., Piras, A., Rinaldo, R., Zontone, P.
- Participation as a session chair (TA1 Biomedical Sensors and Systems) at the 2019 IEEE Sensors Applications Symposium (SAS) from 11-03-2019 to 13-03-2019.
- Participation as an oral presenter at the 2019 IEEE Sensors Applications Symposium (SAS) from 11-03-2019 to 13-03-2019. Title of the work: "Novel sensor to measure the volume of growth for in vitro bioassays." Authors: Affanni, A., Specogna, R., Trevisan, F.

- Participation as a session chair (Sensors and Systems for the Measurement of Stress, Attention, and Drowsiness on Drivers) at the 2021 IEEE Metrology for Automotive (Metroautomotive) from 01-07-2021 to 02-07-2021.
- Participation as an oral presenter at the 2021 IEEE Metrology for Automotive (Metroautomotive) from 01-07-2021 to 02-07-2021. Title of the work: "Design of a low-cost EEG sensor for the measurement of stress-related brain activity during driving." Authors: Affanni, A., Najafi, T. A., Guerci, S.

Participation in the activities of a research group characterized by collaborations at national and international levels

1. Research collaboration with “Dipartimento di Ingegneria Elettrica, Politecnico di Torino”. [R1, CI1]
2. Research collaboration with “Dipartimento di Ingegneria dell'Informazione, Università di Parma, Laboratorio di Automazione Industriale”. [R1, CI1]
3. Research collaboration with “Dipartimento di Ingegneria dell'Informazione, Università di Parma, Laboratorio di Misure e Sensori”. [R2, R6, R8, R9, CI2, CI3, CI4, CI5, CI12, CI13, CN1, CN2, CN3, CN4, CN5, CN6, CN13, CN14]
4. Research collaboration with “Dipartimento di Ricerca Traslazionale, Stem Cells Unit, Centro di Riferimento Oncologico CRO-IRCCS, Aviano”. [R6, R10, R12, R14, CI15, CI16, CN15, CN16, CN19, CN20]
5. Member of the research group "Biosensori, compatibilità elettromagnetica ed elettromagnetismo computazionale" at the Polytechincal Department of Engineering and Architecture at University of Udine. [R3, R5, R6, R9, R10, R12, R14, CI6, CI7, CI9, CI11, CI15, CI16, CI18, CN7, CN8, CN10, CN11, CN13, CN19, CN20]
6. Research collaboration with “Dipartimento di Ingegneria dell'Energia Elettrica e dell'Informazione, Università di Bologna”. [R6]
7. Research collaboration with “Dipartimento di Elettronica, Informazione e Bioingegneria, Politecnico di Milano”. [R6]
8. Research collaboration with “Dipartimento di Scienze Mediche e Biologiche, Università di Udine”. [CI10]
9. Research collaboration with “Dipartimento Biomagnetism and Clinical Physiology International Center (BACPIC), Università Cattolica del Sacro Cuore, Policlinico Gemelli, Roma”. [CI20]
10. Member of the research group "Telecomunicazioni ed elaborazione dei segnali e immagini" at the Polytechincal Department of Engineering and Architecture at University of Udine. [R11, R16, R17, R19, R20, CI17, CI19]

Research projects funded by private companies

1. Research agreement responsibility entitled "Development of a Gyroscope for UAV Helicopters" funded by Elyq S.p.A. in Remanzacco (Ud) from 30-04-2010 to 30-09-2010.
2. Research agreement responsibility entitled "Development of a System for Calculating Psychophysiological Reactions in Virtual Environments" funded by VI-Grade S.r.l. in Tavagnacco (Ud) from 01-08-2013 to 30-05-2015.
3. Research agreement responsibility entitled "Feasibility Study of a Moisture Sensor through Microwave Measurements" funded by Logica H&S in Pavia di Udine (Ud) from 29-09-2015 to 28-11-2015.

4. Research agreement responsibility entitled "Development of a Wireless Inertial Sensor on a Balance Board for Proprioceptive Gymnastics" funded by Chinesport S.p.A. in Udine (Ud) from 27-04-2016 to 01-07-2016.
5. Research agreement responsibility entitled "Preliminary Feasibility Study for the Development of a Sensorized Armchair" funded by Piaval S.r.l. in San Giovanni al Natisone (Ud) from 27-06-2016 to 30-09-2016.
6. Research agreement responsibility entitled "Study and Analysis of the Application of Sensor Systems in the Seating Industry, Pilot Case Piaval S.r.l." funded by Cluster Arredo S.r.l. in Buttrio (Ud) from 28-05-2017 to 30-09-2017.
7. Research agreement responsibility entitled "Analysis of Biosignals for the Assessment of Neurophysiological Impact in Simulated Reality Environments" funded by VI-Grade S.r.l. in Tavagnacco (Ud) from 18-01-2018 to 31-12-2018.
8. Research agreement responsibility entitled "Development and Improvement of Magnetostrictive Sensors" funded by Sensilo S.r.l. in Chiari (Bs) from 31-01-2018 to 20-02-2018.
9. Research agreement responsibility entitled "Analysis of Biosignals for the Assessment of the Physiological Impact of Immersive Virtual Reality" funded by VI-Grade S.r.l. in Tavagnacco (Ud) from 28-05-2018 to 31-12-2019.
10. Research agreement responsibility entitled "Development of a Graphic User Interface (GUI) for Data Acquisition from a Force Sensor (Algometer)" funded by Evergym S.r.l. in Udine from 21-10-2021 to 18-12-2021.
11. Research agreement responsibility entitled "Feasibility Study for the Development of an Apparatus for the Motorization of an Ultrasound Probe" funded by Evergym S.r.l. in Udine from 19-12-2022 to 05-05-2023.

Participation to International and national research projects, admitted to funding based on competitive calls that involve peer review:

1. Participation in the PRIN2005 project, protocol 2005091051_002, titled "Microsensors, techniques, and electronic circuits for transduction systems in unconventional 'Si-based' technologies," with research activities in "Integrated conditioning electronics for resonant transduction systems in unconventional technologies" carried out at the research unit in Parma, from 30-01-2006 to 11-03-2008.
2. Participation in the PRIN 2009 project, code LTRYRE_001, titled "An innovative system based on electrical impedance tomography (EIT) for in vitro imaging of hemostasis," with scientific activities in "Experimental measurements on the device at the National Cancer Institute - Oncological Reference Center (CRO) in Aviano and three-dimensional reconstruction of the hemostasis process." Specifically, responsible for the activity related to the characterization of the electrical properties of blood during thrombotic formation under flow conditions, from 17-10-2011 to 17-10-2013.
3. Research activity within the project "Reversible Electric Propulsion for Nautical Applications (PERNA)," funded by the POR-FESR 2014-2020 program, activity 1.3.b, from 02-05-2017 to 31-07-2018.
4. Participation in the PRIN 2022 project, code EKEFX8, titled "Investigating the 5G-IoT paradigm shift in wireless sensing-based measurement applications for workplace safety," from 25-05-2023 to the present.

Participation to Editorial Boards of Internationa Journals

1. Reviewer for the following journals:
    a. IEEE Transactions Instrumentation and Measurement
    b. Elsevier Measurement
    c. MDPI Sensors

   from 01-01-2009 to present
2. Guest Editor for the journal MDPI Sensors, special Issue "Electromagnetic Sensors for Biomedical Applications", http://www.mdpi.com/journal/sensors/special_issues/ESBA, from 17-02-2019 to 31-07-2022
3. Guest Editor for the journal MDPI Sensors, special Issue " Advanced Sensors and Sensing Technologies in Biomedical Signal Acquisition and Processing", https://www.mdpi.com/journal/sensors/special_issues/D5FS5A0DJ2, from 20-12-2022 to present.

Participation in the doctoral teaching board, or assignment of teaching positions within accredited research doctorate programs

1. Member of the teaching faculty of the PhD program in Industrial and Information Engineering - University of Udine, cycles 30, 31, 32, 33, 34, 35, 36, 37, 38 DOT13Y25QP, from 06-05-2014 to present.
2. Teaching assignment within the Specialized Courses of the PhD program in Industrial and Information Engineering - University of Udine DOT13Y25QP, from 06-05-2014 to present.
3. Member of the Evaluation Committee for the admission competition to the PhD program in Industrial and Information Engineering DOT13Y25QP, cycle XXXI, year 2015.
4. Responsible supervisor of a PhD student in Industrial and Information Engineering - University of Udine DOT13Y25QP, fully funded by the I.R.C.C.S. CRO of Aviano, in the research field of thrombotic formation, from 01-11-2015 to 07-02-2019.
5. Reviewer of a PhD thesis, XXXI cycle, of the Technology for Health course at the University of Brescia, from 11-12-2018 to 19-01-2019.
6. Reviewer of a PhD thesis, XXXI cycle, of the Doctorate in Information and Communication Technologies course at the University of Modena and Reggio Emilia, from 13-01-2019 to 11-02-2019.
7. Member of the Evaluation Committee for the admission competition to the PhD program in Industrial and Information Engineering DOT13Y25QP, cycle XXXVII, year 2021.
8. Responsible supervisor of a PhD student in Industrial and Information Engineering - University of Udine DOT13Y25QP, funded by PON funds, from 01-01-2022 to present.

Achievement of awards and recognition for scientific activity and affiliation with prestigious associations in the field

1. Member of the Italian Association for Electrical and Electronic Measurements (GMEE) since 08-09-2008 to date.
2. "Felice Cennamo" Award for the article [CN24], 5th National Measurement Forum, 2021, Giardini Naxos, September 16-18, 2021.

3. In October 2021, entered the top 2% of world scientists according to the study "J. Baas, K. Boyack, J.P.A. Ioannidis, August 2021 data-update for Updated science-wide author databases of standardized citation indicators, DOI: 10.17632/btchxktzyw.3".
4. In October 2022, entered the top 2% of world scientists according to the study "J. Baas, K. Boyack, J.P.A. Ioannidis, September 2022 data-update for Updated science-wide author databases of standardized citation indicators, DOI: 10.17632/btchxktzyw.4".

Management of Public Funding

1. Winner of the Fund for Basic Research Activities (FFABR) 2017, awarded individually based solely on scientific qualifications. Funding amount: 3000 euros.
2. Coordinator of the PSD Fund - Strategic Plan of the Polytechnic Department of Engineering and Architecture at the University of Udine; project: ICT laboratory hub, funding amount: 113000 euros.

Results achieved in technology transfer

1. Author of the patent "Method to analyze the cluster formation process in a biological fluid and corresponding analysis apparatus"; ITUD20120079 granted on 04/05/2012, with number 1,411,777 granted on 05/11/2014; PCT WO2013164676 filed on 07/11/2013; EP2845002 granted on 13/07/2016. Authors: Affanni Antonio, Cozzi Maria Rita, De Marco Luigino, Mazzucato Mario, Specogna Ruben, Trevisan Francesco, from 04-05-2012 to 13-07-2016.
2. Author of the patent "Apparatus for analyzing the process of formation of aggregates in a biological fluid and corresponding method of analysis": ITUD20130047 granted on 03/04/2013, with number 1,417,286 granted on 31/07/2015; PCT WO20174162285 filed on 09/10/2014; EP EP2981818 granted on 10/2/2016; USA US20160047827 granted on 18/2/2016. Authors: Trevisan Francesco, Affanni Antonio, Specogna Ruben, De Marco Luigino, Mazzucato Mario, Battiston Monica, from 03-04-2013 to 18-02-2016.
3. Author of the patent "Method and device for measuring the temperature in electric power resistors": IT 102017000091796 filed on 08/08/2017; PCT WO2019030690 filed on 14/2/2019. Authors: Zoppas Federico, Moret Nicola, De Moliner Antonio, Peterle Michele, Midrio Michele, Affanni Antonio, from 08-08-2017 to 14-02-2019.
4. Commercialization of the patent "Method and device for measuring the temperature in electric power resistors": IT 102017000091796 filed on 08/08/2017; PCT WO2019030690. Authors: Zoppas Federico, Moret Nicola, De Moliner Antonio, Peterle Michele, Midrio Michele, Affanni Antonio. Assigned to IRCA SpA on 14/9/2017, from 08-08-2017 to 14-09-2017.

Publications complete list (legend: [R – Journal], [CI – international conference], [CN – national conference])

[R1].Affanni, A.; Bellini, A.; Franceschini, G.; Guglielmi, P.; Tassoni, C.; "Battery Chioce and Management for new-generation Electric Vehicles " Industrial Electronics, IEEE Transactions on Volume 52, Issue 5, 2005 Pages 1343-1349.

[R2].Affanni, A.; Chiorboli, G.; “Development of an enhanced MHD micromixer based on axial flow modulation” , Sensors and Actuators, B: Chemical, vol. 147, Issue 2, Pages 748-754, June 2010

[R3].A. Affanni, R. Specogna, F. Trevisan “A Discrete Geometric Approach to Cell Membrane and Electrode Contact Impedance Modeling”, IEEE Transactions on Biomedical Engineering, vol. 59, No 9, 2012, pp. 2619-2627

[R4].Affanni A. “Design and dynamic characterization of a gyroscopic system for aerobatic UAV helicopters”. MEASUREMENT, vol. 46(1), 2013, pp. 775-783

[R5].A. Affanni, R. Specogna, F. Trevisan “Combined Electro-Optical Imaging for the Time Evolution of White Thrombus Growth in Artificial Capillaries”, IEEE Transactions on Instrumentation and Measurements, vol. 62, No 11, 2013, pp. 2954-2959.

[R6].A. Affanni, G. Chiorboli, L. Codecasa, M.R. Cozzi, L. De Marco, M. Mazzucato, C. Morandi, R. Specogna, M. Tartagni, F. Trevisan “A Novel Inversion Technique for Imaging Thrombus Volume in Microchannels Fusing Optical and Impedance Data”, IEEE Transactions on Magnetics, vol. 50, No 2, 2014, 7025304.

[R7].S. Saggini, F. Ongaro, L. Corradini, A. Affanni “Low-Power Energy Harvesting Solutions for Wiegand Transducers”, IEEE Journal of Emerging and Selected Topics in Power Electronics, 2015, vol. 3, issue 3, pp. 766-779

[R8].A. Affanni, G. Chiorboli, “Design and characterization of a real-time, wearable, endosomatic electrodermal system”, Measurement, 2015, vol. 75, pp 111-121.

[R9].A. Affanni, G. Chiorboli, R. Specogna, F. Trevisan, “Uncertainty model of electro-optical thrombus growth estimation for early risk detection”, Measurement, 2016, vol. 79 pp. 260-266

[R10].De Zanet, D, Battiston, M, Lombardi, E, Specogna, R, Trevisan, F, De Marco, L, Affanni, A, Mazzucato, M, “Impedance biosensor for real-time monitoring and prediction of thrombotic individual profile in flowing blood”, PLOS ONE, vol. 12, 2017, e0184980, ISSN: 1932-6203, doi: 10.1371/journal.pone.0184941

[R11].Affanni, A, Bernardini, R, Piras, A, Rinaldo, R, Zontone, P, “Driver’s stress detection using Skin Potential Response signals” MEASUREMENT, vol. 122, 2018, p. 264-274, ISSN: 0263-2241, doi: 10.1016/j.measurement.2018.03.040

[R12].Denise De Zanet, Monica Battiston, Elisabetta Lombardi, Alessandro Da Ponte, Ruben Specogna, Francesco Trevisan, Antonio Affanni, Mario Mazzucato, “Fast blood impedance measurements as quality indicators in the pre-analytical phase to prevent laboratory errors”, ACTA IMEKO, vol. 7(4), 2018, p. 26-32, ISSN: 2221-870X, doi: 10.21014/acta_imeko.v7i4.574

[R13].A. Affanni (2019). “Dual channel electrodermal activity and ECG wearable sensor to measure mental stress from the hands”. ACTA IMEKO, vol. 8(1), 2019, p. 56-63, ISSN: 2221-870X, doi: 10.21014/acta_imeko.v8i1.562

[R14].De Zanet, Denise, Battiston, Monica, Lombardi, Elisabetta, Specogna, Ruben, Trevisan, Francesco, De Marco, Luigi, Affanni, Antonio, Mazzucato, Mario, “A new method for accurate platelet thrombi volume measurement using a confocal microscope”. ACTA IMEKO, vol. 8(1), 2019, p. 48-55, ISSN: 2221-870X, doi: 10.21014/acta_imeko.v8i1.547

[R15].A. Affanni, R. Specogna, F. Trevisan, “Estimating the Volume of Unknown Inclusions in an Electrically Conducting Body with Voltage Measurements”. SENSORS, vol. 19(3), 2019, 637, ISSN: 1424-8220, doi: 10.3390/s19030637

[R16].Zontone P., Affanni A., Bernardini R., Piras A., Rinaldo R., “Low-complexity classification algorithm to identify drivers’ stress using electrodermal activity (EDA) measurements”, Lecture Notes in Computational Vision and Biomechanics vol. 32, 2020, pp. 25-33
[R17].Zontone P., Affanni A., Bernardini R., Piras A., Rinaldo R., Formaggia F., Minen D., Minen M., Savorgnan C., “Car Driver's Sympathetic Reaction Detection through Electrodermal Activity and Electrocardiogram Measurements”, IEEE Transactions on Biomedical Engineering, 2020, 67(12), pp. 3413-3424
[R18].A. Affanni, “Wireless sensors system for stress detection by means of ECG and EDA acquisition”, 2020, Sensors, 20 (7), 2026
[R19].Zontone, P., Affanni, A., Bernardini, R, Linz, L.D., Piras, A, Rinaldo, R. “Stress evaluation in simulated autonomous and manual driving through the analysis of skin potential response and electrocardiogram signals”, 2020, Sensors, 20 (9), 2494
[R20].P. Zontone, A. Affanni, R. Bernardini, L. Del Linz, A. Piras, R. Rinaldo “Supervised Learning Techniques for Stress Detection in Car Drivers”, 2020, Adv. Sci. Technol. Eng. Syst. J. 5(6), pp. 22-29
[R21].P. Zontone, A. Affanni, A. Piras, R. Rinaldo “Skin potential response for stress recognition in simulated urban driving”, 2021, Acta Imeko. 10(4), pp. 117-123
[R22].P. Zontone, A. Affanni, A. Piras, R. Rinaldo “Exploring Physiological Signal Responses to Traffic-Related Stress in Simulated Driving”, 2022, Sensors, 22(3), 939
[R23].A. Affanni, T. A. Najafi, S. Guerci, “Development of an EEG Headband for Stress Measurement on Driving Simulators”, 2022, Sensors, 22(5), 1785
[R24].P. Zontone, A. Affanni, R. Bernardini, L. Del Linz, A. Piras, R. Rinaldo “Analysis of Physiological Signals for Stress Recognition with Different Car Handling Setups”, 2022, Electronics, 11(6), 888
[R25].M. Massarotto, F. Driussi, A. Affanni, S. Lancaster, S. SLesazeck, T. Mikolajick, D. Esseni, “Versatile experimental setup for FTJ characterization”, 2022, Solid-State Electronics, 194, 108364

[CI1].Affanni A.; Bellini A.; Concari C.; Franceschini G.; Lorenzani E.; Tassoni C.; "EV Battery State of Charge: Neural network based estimation" Electric Machines and Drives Conference, 2003. IEMDC'03. IEEE International Volume 2, 1-4 June 2003 Page(s):684 - 688 vol.2.
[CI2].Affanni, A.; Guerra, A.; Dallagiovanna, L.; Chiorboli, G.; "Design and characterization of magnetostrictive linear displacement sensors" Instrumentation and Measurement Technology Conference, 2004. IMTC 04. Proceedings of the 21st IEEE Volume 1, 18-20 May 2004 Page(s):206 - 209 Vol.1 Digital Object Identifier 10.1109/IMTC.2004.1351029
[CI3].Affanni, A.; Chiorboli, G; "Numerical Modelling and Experimental Study of an AC Magnetohydrodynamic Micropump" Instrumentation and Measurement Technology Conference, 2006. IMTC 06. Sorrento, Italy, 24 – 27 April 2006.
[CI4].Affanni, A.; Chiorboli, G; "Finite Elements Simulation of an AC Magnetohydrodynamic Micropump" X International Conference on new Actuators, Actuator 2006, Bremen , Germany, 14 – 16 June 2006.
[CI5].Affanni, A.; Chiorboli, G.; “Design of an efficient AC magnetohydrodynamic stirrer” , 16th IMEKO TC4 symposium, Florence, 22-24 September 2008
[CI6].Affanni, A.; Specogna, R.; Trevisan, F.; “Measurement Bench for Impedance Tomography during Hemostasis Process in whole Blood” , IEEE International Symposium on Medical Measurements and Applications, MEMEA 2011, Bari, Italy, 30-31 May 2011
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