Curriculum Vitae

INFORMAZIONI PERSONALI

Nome ANTONINO
Cognome SFERLAZZA
Recapiti Dipartimento di Ingegneria, Viale delle scienze, Edificio 10

E-mail antonino.sferlazza@unipa.it

FORMAZIONE TITOLI

PhD in electrical, electronics and telecommunication engineering, mathematics and automatics, as well as the qualification of **Doctor Europaeus**. University of Palermo, Italy.
Advisors: Prof. F. Alonge, Prof. M. Cirrincione (UTBM, France) and Ing. Marcello Pucci (ISSIA CNR).
Thesis title: "*Advanced Motion Control in Induction Motor Systems: Modelling, Analysis and Control*", Panel: Prof. Stéphane Caux, Prof. Saverio Mascolo, and Prof. Adriano Fagiolini.
External Reviewers: Prof. Pericle Zanchetta (University of Nottingam), Prof. Franck Plestan (Ecole Centrale de Nantes).

Visiting PhD student at LAAS CNRS, Toulouse, FRANCE. Period: May 2014 - August 2014. Topic: Design of observers for linear time-varying systems.

Visiting PhD student at UCSB University of California at Santa Barbara, Santa Barbara, CA, USA. Period: January 2013 - July 2013. Topic: Modeling and analysis of stochastic hybrid systems.

Master degree in Automation Engineering, Final score: 110/110 cum laude. University of Palermo, Italy.

International postgraduate schools:

(July 2012) PhD Summer School.
Topic: **Estimation and identification of stochastic systems and flight control**.
Bertinoro, Italy.

(April 2013) Course for post-graduate students.
Topic: **Dynamics over networks**.
UCSB University of California at Santa Barbara, Santa Barbara, CA, USA.

(July 2014) PhD Summer School.
Topic: **Analysis and control of nonlinear systems and unmanned aerial vehicles**.
Bertinoro, Italy.

(September 2014) International School of Automatic Control.
Topic: **Modern tools for nonlinear control**.
GIPSA-lab, Departement d'Automatique, Grenoble, France.

ATTIVITA' DIDATTICA

Docente responsabile dei seguenti insegnamenti:

1) *Denominazione insegnamento:* **Estimation, filtering and system identification**

Anno accademico: **2021/2022 – 2022/2023 – 2023/2024 – 2024/2025**

n° ore (per anno): **81**

CFU: **9**

Settore Scientifico Disciplinare: **ING-INF/04 – Automatica**

Settore Concorsuale: **09/G1 – Automatica**

Lingua: **Inglese**

Ateneo: **Università degli studi di Palermo**

Corso in cui l'insegnamento è stato svolto: **LM in Ingegneria dei Sistemi Ciberfisici per l'Industria ed LT in Ingegneria Elettronica**

2) *Denominazione insegnamento:* **Automotive control systems**

Anno accademico: **2018/2019 – 2019/2020 – 2020/2021 – 2021/2022 – 2022/2023 – 2023/2024 – 2024/2025**

n° ore (per anno): **54**

CFU: **6**

Settore Scientifico Disciplinare: **ING-INF/04 – Automatica**

Settore Concorsuale: **09/G1 – Automatica**

Lingua: **Inglese**

Ateneo: **Università degli studi di Palermo**

Corso in cui l'insegnamento è stato svolto: **LM Electronics Engineering**

3) *Denominazione insegnamento:* **Controlli Automatici**

Anno accademico: **2018/2019 – 2019/2020 – 2020/2021 – 2021/2022– 2024/2025**

n° ore (per anno): **81**

CFU: **9**

Settore Scientifico Disciplinare: **ING-INF/04 – Automatica**

Settore Concorsuale: **09/G1 – Automatica**

Lingua: **Italiano**

Ateneo: **Università degli studi di Palermo**

Corso in cui l'insegnamento è stato svolto: **LT in Ingegneria Elettronica, LM in Ingegneria Aerospaziale, LM in Ingegneria Elettrica**

4) *Denominazione insegnamento:* **Fondamenti di Automatica**

Anno accademico: **2018/2019 – 2019/2020 – 2020/2021 – 2021/2022**

n° ore (per anno): **54**

*CFU:***6**

Settore Scientifico Disciplinare: **ING-INF/04 – Automatica**

Settore Concorsuale: **09/G1 – Automatica**

Lingua: **Italiano**

Ateneo: **Università degli studi di Palermo**

Corso in cui l'insegnamento è stato svolto: **LM in Ingegneria Meccanica**

5) *Denominazione insegnamento:* **Data Analysis**

Anno accademico: **2021/2022 – 2022/2023 – 2023/2024 – 2024/2025**

n° ore (per anno): **54**

CFU: **6**

Settore Scientifico Disciplinare: **ING-INF/04 – Automatica**

Settore Concorsuale: **09/G1 – Automatica**

Lingua: **Inglese**

Ateneo: **Università degli studi di Palermo**

Corso in cui l'insegnamento è stato svolto: **LM Electronics and Telecommunications Engineering**

6) *Denominazione insegnamento:* **Analisi dei dati**

Anno accademico: **2017/2018 – 2018/2019**

n° ore (per anno): **54**

CFU: **6**

Settore Scientifico Disciplinare: **ING-INF/04 – Automatica**

Settore Concorsuale: **09/G1 – Automatica**

Lingua: **Italiano**

Ateneo: **Università degli studi di Palermo**

Corso in cui l'insegnamento è stato svolto: **LT in Ingegneria Cibernetica**

7) *Denominazione insegnamento:* **Controllo Robusto**

Anno accademico: **2017/2018**

n° ore (per anno): **54**

CFU: **6**

Settore Scientifico Disciplinare: **ING-INF/04 – Automatica**

Settore Concorsuale: **09/G1 – Automatica**

Lingua: **Italiano**

Ateneo: **Università degli studi di Palermo**

Corso in cui l'insegnamento è stato svolto: **LM in Ingegneria Elettronica**

8) *Denominazione insegnamento:* **Identificazione e analisi dei dati**

Anno accademico: **2014/2015 – 2017/2018**

n° ore (per anno): **81**

CFU: **9**

Settore Scientifico Disciplinare: **ING-INF/04 – Automatica**

Settore Concorsuale: **09/G1 – Automatica**

Lingua: **Italiano**

Ateneo: **Università degli studi di Palermo**

Corso in cui l'insegnamento è stato svolto: **LM in Ingegneria dell'Automazione e LM in Ingegneria delle Telecomunicazioni**

Docente responsabile dei seguenti insegnamenti nei **corsi di Dottorato**:

1) *Denominazione insegnamento:* **Control of Power converters and electrical drives**

Anno accademico: **2016/2017**

n° ore (per anno): **18**

CFU: **na**

Settore Scientifico Disciplinare: **ING-INF/04 – Automatica**

Settore Concorsuale: **09/G1 – Automatica**

Lingua: **Inglese**

Ateneo: **Università degli studi di Trento**

Corso in cui l'insegnamento è stato svolto: **Doctoral school in Materials, Mechatronics and Systems Engineering**

RICERCHE FINANZIATE

Partecipante alla Ricerca del progetto: MOST Sustainable Mobility Center (Centro Nazionale per la Mobilità Sostenibile - CNMS), finanziato dal Ministero dell'Università e della Ricerca, Grant CN00000023, CUP: B73C22000760001.

La partecipazione alle attività di ricerca e collaborazione sono comprovate dai seguenti lavori scientifici prodotti di cui si riporta il DOI:

https://doi.org/10.1109/ACCESS.2023.3267984

https://doi.org/10.1109/ECCE53617.2023.10362703

Partecipante alla Ricerca del progetto: The SiciliAn MicronanOTecH Research and Innovation CEnter "SAMOTHRACE", finanziato dal Ministero dell'Università e della Ricerca, Grant ECS 00000022, CUP: B73C22000810001. Inoltre, per tale progetto sono il referente delle attività all'interno dello SPOKE 3 - WP3 - SMART MOBILITY - A3.2: "exploitation of the new SiC and GaN active devices to increase the efficiency and power density of converters for automotive applications". Riguardante la progettazione e lo sviluppo di algoritmi di controllo la gestione dei flussi energetici all'interno di micro-reti elettriche in DC con applicazione ai veicoli ibridi ed elettrici.

La partecipazione alle attività di ricerca e collaborazione sono comprovate dai seguenti lavori scientifici prodotti di cui si riporta il DOI:

https://doi.org/10.1109/ACCESS.2023.3267984

https://doi.org/10.1109/IECON51785.2023.10312047

https://doi.org/10.1109/ECCE53617.2023.10362703

https://doi.org/10.1109/EEE-AM58328.2023.10395325

https://doi.org/10.1109/EEE-AM58328.2023.10395402

https://doi.org/10.1109/ACCESS.2024.3427671

Partecipazione all'attività di ricerca del progetto: GaN4AP (Gallium Nitride for Advanced Power Applications), funded from the Electronic Component Systems for European Leadership Joint Undertaking (ECSEL JU), under grant agreement No. 101007310. L'attività svolta all'interno di questo progetto riguarda la progettazione e lo sviluppo di algoritmi di controllo per convertitori di potenza mediante dispositivi GaN.

La partecipazione alle attività di ricerca e collaborazione sono comprovate dai seguenti lavori scientifici prodotti di cui si riporta il DOI:

https://doi.org/10.1109/ACCESS.2023.3267984

https://doi.org/10.1007/978-3-031-48711-8

https://doi.org/10.1109/EEE-AM58328.2023.10395325

https://doi.org/10.1109/EEE-AM58328.2023.10395402

Partecipazione all'attività di ricerca del progetto: REACTION "first and euRopEAn siC eighT 386 Inches pilOt liNe", co-funded by the Electronic Component Systems for European Leadership Joint Undertaking (ECSEL JU) under grant agreement No 783158. L'attività svolta all'interno di questo progetto riguarda la progettazione e lo sviluppo di algoritmi di controllo per convertitori di potenza mediante dispositivi SiC.

La partecipazione alle attività di ricerca e collaborazione sono comprovate dai seguenti lavori scientifici prodotti di cui si riporta il DOI:

https://doi.org/10.1109/TCSI.2021.3083900

https://doi.org/10.1109/ACCESS.2021.3126433

https://doi.org/10.3390/electronics11152336

https://doi.org/10.1007/978-3-031-48711-8

https://doi.org/10.1109/EEE-AM58328.2023.10395658

Partecipazione all'attività di ricerca del progetto: HISPALIS: Hybrid self-adaptive multi-agent systems for microgrids, funding by Research National Agency (ANR) of France 2018, nb. ANR-18-CE40-0022-01. L'attività svolta all'interno di questo progetto riguarda lo sviluppo di algoritmi di controllo per convertitori elettronici di potenza all'interno di microreti in DC.

La partecipazione alle attività di ricerca e collaborazione è comprovata dal seguente lavoro scientifico di cui si riporta il DOI:

https://doi.org/10.1109/TIE.2019.2908597

https://doi.org/10.1016/j.conengprac.2020.104602

Partecipazione all'attività di ricerca del progetto: Seaview, finanziato da PO FESR Sicilia 2014-2020, CUP: G69J18001340007.

L’attività svolta all’interno di questo progetto riguarda la progettazione e lo sviluppo di stimatori di posizione a partire da misure sporadiche di distanza da punti fissi.

La partecipazione alle attività di ricerca e collaborazione sono comprovate dai seguenti lavori scientifici prodotti di cui si riporta il DOI:

https://doi.org/10.3390/s22166308

https://doi.org/10.1016/j.nahs.2023.101360

Partecipazione all’attività di ricerca del progetto: ACANTO - A CyberphysicAl social NeTwOrk using robot friends, funded by SOCIETAL CHALLENGES - Health, demographic change and well-being under grant agreement No 643644. L’attività svolta all’interno di questo progetto riguarda lo studio e la realizzazione di una legge di controllo a cedevolezza variabile per sistemi di guida meccanica per robotica assistenziale.

La partecipazione alle attività di ricerca e collaborazione è comprovata dal seguente lavoro scientifico di cui si riporta il DOI:

https://doi.org/10.1109/RTSI.2017.8065944

Partecipazione all’attività di ricerca del progetto: Robotic Assisted Diving (RoAD) - PRIN 2012, finanziato dal Ministero dell'Università e della Ricerca, Grant CUP: B78C130007500010. L’attività svolta all’interno di questo progetto riguarda lo sviluppo di algoritmi di navigazione, guida e controllo di veicoli sottomarini.

La partecipazione alle attività di ricerca e collaborazione è comprovata dal seguente lavoro scientifico di cui si riporta il DOI:

https://doi.org/10.1109/ISIE.2016.7744916

https://doi.org/10.1109/ISIE.2016.7744920

https://doi.org/10.1109/TIA.2017.2697845

https://doi.org/10.1109/TIA.2018.2869112

INCARICHI / CONSULENZE

(May 2017 - February 2018) **Research Fellow**.
LAAS CNRS, Toulouse, France.
Topics: *Design of hybrid control techniques for quadratic boost converters and boost inverters. Experimental development of converter prototypes for validation of variable frequency control methodologies*.

(February 2017 - May 2017) **Research Fellow**.
University of Trento, Department of Industrial Engineering, Trento, Italy.

Topic: *Variable stiffness control law for mechanical guidance systems for assistive robotics*.

(November 2016 - December 2016) **Visiting Researcher**.
LAAS CNRS, Toulouse, France.
Topic: *Design of hybrid observer for linear systems with asynchronous discrete-time measurements*.

(August 2015 - November 2016) **Research Fellow**.
University of Palermo, Department DEIM, Palermo, Italy.
Topics: *Position and attitude estimation and control of marine vehicles based on vision and inertial sensors, and physiological parameters monitoring in marine environment*.

(January 2012- Currently) **Research Collaborator**.
ISSIA CRN (Institute for the Study of intelligent Systems and Automation - National Council of Research), Palermo, Italy.
Topics: *Analysis, design and experimental evaluation of high performance control techniques for electrical motor drives and power converters. Sensorless control for electrical drives. Model identification applied to electrical motors and power converters*
.

ASSOCIAZIONI SCIENTIFICHE

Associate Editor of the "European Journal of Control," published by Elsevier, with Professor T. Parisini as Editor-in-Chief.

https://www.sciencedirect.com/journal/europeanjournal-of-control/about/editorial-board

Associate Editor of the Technology Conference Editorial Board (TCEB) - IEEE Control System Society.

https://ieeecss.org/conferences/technologyconference-editorial-board-tceb

Member of the **Technical Program Committee** of the 2024 Conference on Decision and Control (CDC), sponsored by the IEEE Control System Society.

https://cdc2024.ieeecss.org/about/committees

Associate Editor for the following conferences:

- 18th International Conference on Informatics in Control, Automation and Robotics (ICINCO), 2021.
- 4th Conference on Control Technology and Applications (CCTA), 2020.
- 5th Conference on Control Technology and Applications (CCTA), 2021.
- 6th Conference on Control Technology and Applications (CCTA), 2022.
- 7th Conference on Control Technology and Applications (CCTA), 2023.
- 8th Conference on Control Technology and Applications (CCTA), 2024.

. 2024 Conference on Decision and Control (CDC), 2024.

Senior Member of IEEE - Institute of Electrical and Electronics Engineers (https://www.ieee.org)

Member of SIDRA - Società Italiana Docendi e Ricercatori in Automatica (http://www.automatica.it)

PUBBLICAZIONE

Journal Papers:

1. F. Alonge, F. D'Ippolito, and A. Sferlazza, "*Sensorless control of induction-motor drive based on robust Kalman filter and adaptive speed estimation*," IEEE Transactions on Industrial Electronics, vol. 61, no. 3, pp. 1444-1453, **2014**. https://doi.org/10.1109/TIE.2013.2257142
2. F. Alonge, M. Cirrincione, F. D'Ippolito, M. Pucci, and A. Sferlazza, *"Parameter identification of linear induction motor model in extended range of operation by means of input-output data,"* IEEE Transactions on Industry Applications, vol. 50, no. 2, pp. 959–972, **2014**. https://doi.org/10.1109/TIA.2013.2272051
3. F. Alonge, A. Fagiolini, A. Sferlazza, et al., "*Extended complex Kalman filter for sensorless control of an induction motor*," Control Engineering Practice, vol. 27, pp. 1–10, **2014**. https://doi.org/10.1016/j.conengprac.2014.02.007
4. F. Alonge, M. Cirrincione, F. D'Ippolito, M. Pucci, A. Sferlazza, and G. Vitale, "*Descriptor-type Kalman filter and TLS EXIN speed estimate for sensorless control of a linear induction motor*," IEEE Transactions on Industry Applications, vol. 50, no. 6, pp. 3754 – 3766, **2014**. https://doi.org/10.1109/TIA.2014.2316367
5. A.R. Teel, A. Subbaraman, and A. Sferlazza, "*Stability analysis for stochastic hybrid systems: A survey*," Automatica, vol. 50, no. 10, pp. 2435–2456, **2014**. https://doi.org/10.1016/j.automatica.2014.08.006
6. F. Alonge, M. Cirrincione, M. Pucci, and A. Sferlazza, "*Input-output feedback linearizing control of linear induction motor taking into consideration the end-effects. Part I: Theoretical analysis*," Control Engineering Practice, vol. 36, no. 0, pp. 133–141, **2015**. https://doi.org/10.1016/j.conengprac.2014.08.009
7. F. Alonge, M. Cirrincione, M. Pucci, and A. Sferlazza, "*Input–output feedback linearizing control of linear induction motor taking into consideration the end-effects. Part II: Simulation and experimental results*," Control Engineering Practice, vol. 36, no. 0, pp. 142–150, **2015**. https://doi.org/10.1016/j.conengprac.2014.08.009
8. F. Alonge, F. D'Ippolito, A. Fagiolini, and A. Sferlazza, "*Convergence analysis of extended Kalman filter for sensorless control of induction motor*," IEEE Transactions on Industrial Electronics, vol. 62, no. 4, pp. 2341-2352, **2015**. https://doi.org/10.1109/TIE.2014.2355133
9. S. Chiappone, O. Giuffre, A. Grana, R. Mauro, and A. Sferlazza, "*Traffic simulation models calibration using speed-density relationship: An automated procedure based on genetic algorithm*," Expert Systems with Applications, vol. 44, pp. 147-155, **2016**. https://doi.org/10.1016/j.eswa.2015.09.024
10. F. Alonge, M. Cirrincione, M. Pucci, and A. Sferlazza, "*Input-output feedback linearization control with on-line MRAS based inductor resistance estimation of linear induction motors including the dynamic end-effects*," IEEE Transactions on Industry Applications, vol. 52, no. 1, pp. 254–266, **2016**. https://doi.org/10.1109/TIA.2015.2465939
11. F. Alonge, M. Cirrincione, F. D'Ippolito, M. Pucci, and A. Sferlazza, "*Adaptive feedback linearizing control of linear induction motor considering the end-effects*," Control Engineering Practice, vol. 55, pp. 116–126, **2016**. https://doi.org/10.1016/j.conengprac.2016.06.018
12. F. Alonge, M. Cirrincione, F. D'Ippolito, M. Pucci, and A. Sferlazza, *"Feedback linearizing control of induction motor considering magnetic saturation effects*," IEEE Transactions on Industry Applications, vol. 52, no. 6, pp. 4843-4854, **2016**. https://doi.org/10.1109/TIA.2016.2596710
13. F. Alonge, M. Cirrincione, F. D'Ippolito, M. Pucci, and A. Sferlazza, "*Robust active disturbance rejection control of induction motor systems based on additional sliding mode component*," IEEE Transactions on Industrial Electronics, vol. 64, no. 7, pp. 5608-5621, **2017**. https://doi.org/10.1109/TIE.2017.2677298
14. F. Alonge, M. Cirrincione, F. D'Ippolito, M. Pucci, and A. Sferlazza, "*Active disturbance rejection control of linear induction motor,*" IEEE Transactions on Industry Applications, vol. 53, no. 5, pp. 4460-4471, **2017**. https://doi.org/10.1109/TIA.2017.2697845
15. F. Alonge, M. Cirrincione, F. D'Ippolito, M. Pucci, and A. Sferlazza, "*A nonlinear observer for rotor flux estimation of induction motor considering the estimated magnetization characteristic*," IEEE Transactions on Industry Applications, vol. 53, no. 6, pp. 5952-5965, **2017**. https://doi.org/10.1109/TIA.2017.2710940
16. O. Giuffrè, A. Granà, M.L. Tumminello, and A. Sferlazza, "*Estimation of passenger car equivalents for single-lane roundabouts using a microsimulation-based procedure*," Expert Systems with Applications, vol. 79, pp. 333-347, **2017**. https://doi.org/10.1016/j.eswa.2017.03.003
17. O. Giuffrè, A. Granà, M.L. Tumminello, and A. Sferlazza, "*Capacity-based calculation of passenger car equivalents using traffic simulation at double-lane roundabouts,"* Simulation Modelling Practice and Theory, vol. 81, pp. 11–30, **2018**. https://doi.org/10.1016/j.simpat.2017.11.005
18. O. Giuffrè, A. Granà, M.L. Tumminello, and A. Sferlazza, "*Calibrating a microscopic traffic simulation model for roundabouts using genetic algorithms*," Journal of Intelligent & Fuzzy Systems, no. Preprint, pp. 1–16, **2018**. https://doi.org/10.3233/JIFS-169714

19. O. Giuffrè, A. Granà, M.L. Tumminello, T. Giuffrè, S. Trubia, A. Sferlazza, and M. Rencelj, "*Evaluation of roundabout safety performance through surrogate safety measures from microsimulation*," Journal of Advanced Transportation, vol. 2018, **2018**. https://doi.org/10.1155/2018/4915970
20. A. Sferlazza, S. Tarbouriech, and L. Zaccarian, "*Time-varying sampled-data observer with asynchronous measurements,*" IEEE Transactions on Automatic Control, vol. 64, no. 2, pp. 869–876, **2019**. https://doi.org/10.1109/TAC.2018.2839974
21. A. Accetta, F. Alonge, M. Cirrincione, F. D'Ippolito, M. Pucci, R. Rabbeni, and A. Sferlazza, "*Robust control for high performance induction motor drives based on partial state-feedback linearization,*" IEEE Transactions on Industry Applications, vol. 55, no. 1, pp. 490–503, **2019**. https://doi.org/10.1109/TIA.2018.2869112
22. F. Alonge, F. D'Ippolito, G. Garraffa, and A. Sferlazza, "*A hybrid observer for localization of mobile vehicles with asynchronous measurements*," Asian Journal of Control, vol. 21, no. 4, pp. 1506–1521, **2019**. https://doi.org/10.1002/asjc.2071
23. A. Accetta, M. Cirrincione, M. Pucci, and A. Sferlazza, "*State space-vector model of linear induction motors including end-effects and iron losses part I: Theoretical analysis*," IEEE Transactions on Industry Applications, vol. 56, no. 1, pp. 235–244, **2019**. https://doi.org/10.1109/TIA.2019.2952031
24. A. Accetta, M. Cirrincione, M. Pucci, and A. Sferlazza, "*State-space vector model of linear induction motors including end-effects and iron losses - part II: Model identification and results,*" IEEE Transactions on Industry Applications, vol. 56, no. 1, pp. 245–255, **2019**. https://doi.org/10.1109/TIA.2019.2952034
25. A. Sferlazza, C. Albea-Sanchez, L. Martínez-Salamero, G. Garcia, and C. Alonso, "*Min-type control strategy of a DC-DC synchronous boost converter,*" IEEE Transactions on Industrial Electronics, vol. 67, no. 4, pp. 3167–3179, **2019**. https://doi.org/10.1109/TIE.2019.2908597
26. A. Sferlazza, C. Albea-Sanchez, and G. Garcia, "*A hybrid control strategy for quadratic boost converters with inductor currents estimation,*" Control Engineering Practice, vol. 103, p. 104602, **2020**. https://doi.org/10.1016/j.conengprac.2020.104602
27. A. Accetta, F. Alonge, M. Cirrincione, F. D'Ippolito, M. Pucci, and A. Sferlazza, "*GA based off-line parameter estimation of the induction motor model including magnetic saturation and iron losses*," IEEE Open Journal of Industry Applications, vol. 1, pp. 135–147, **2020**. https://doi.org/10.1109/OJIA.2020.3024567
28. G. Garraffa, A. Sferlazza, F. D'Ippolito, and F. Alonge, "*Localization based on parallel robots kinematics as an alternative to trilateration*," IEEE Transactions on Industrial Electronics, vol. 69, no. 1, pp. 999-1010, **2021**. https://doi.org/10.1109/TIE.2021.3050354
29. F. Alonge, F. D'Ippolito, A. Fagiolini, G. Garraffa, and A. Sferlazza, "*Trajectory robust control of autonomous quadcopters based on model decoupling and disturbance estimation*", International Journal of Advanced Robotic Systems, vol. 18, no. 2, pp. 1-12, **2021**. https://doi.org/10.1177/1729881421996974
30. A. Accetta, M. Cirrincione, M. Pucci, and A. Sferlazza, "*Space-vector state dynamic model of SynRM considering self- and cross-saturation and related parameter identification*". IET Electric Power Applications, vol. 14, no. 14, pp. 2798-2808, **2021**. https://doi.org/10.1049/iet-epa.2020.0504
31. A. Sferlazza, S. Tarbouriech, and L. Zaccarian, "*State observer with Round-Robin aperiodic sampled measurements with jitter*". Automatica, vol. 129, **2021**. https://doi.org/10.1016/j.automatica.2021.109573
32. C. Albea, A. Sferlazza, F. Gordillo, and F. Gómez-Estern, "*Control of Power Converters with Hybrid Affine Models and Pulse-Width Modulated Inputs*". IEEE Transactions on Circuits and Systems I: Regular Papers, vol. 68, no. 8, pp. 3485-3494, **2021**. https://doi.org/10.1109/TCSI.2021.3083900
33. M. Luna, A. Sferlazza, A. Accetta, MC. Di Piazza, G. La Tona, and M. Pucci, "*Modeling and Performance Assessment of the Split-Pi Used as a Storage Converter in All the Possible DC Microgrid Scenarios. Part I: Theoretical Analysis*". Energies, vol. 14, no. 16, pp. 4902, **2021**. https://doi.org/10.3390/en14164902
34. M. Luna, A. Sferlazza, A. Accetta, MC. Di Piazza, G. La Tona and M. Pucci, "*Modeling and Performance Assessment of the Split-Pi Used as a Storage Converter in All the Possible DC Microgrid Scenarios. Part II: Simulation and Experimental Results*". Energies, vol. 14, no. 18, pp. 5616, **2021**. https://doi.org/10.3390/en14185616
35. C. Albea, A. Sferlazza, F. Gómez-Estern, and F. Gordillo, "*Hybrid modelling and control of a class of power converters with triangular-carrier PWM inputs*". IEEE Access, Vol. 9, pp. 151607-151620, **2021**. https://doi.org/10.1109/ACCESS.2021.3126433
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ATTIVITA' SCIENTIFICHE

Reviewer for the following journals:

IEEE transaction on Automatic control
IEEE transaction on industrial electronics
IEEE transaction on Industry applications
Automatica
Control Engineering practice
Journal on nonlinear analysis: Hybrid systems.

Reviewer for Several international conferences: CDC, ECCE, ISIE, ECC, ACC, NOLCOS, MED, ROCOND, IECON, ICEM, ELECTRIMACS, …

AMBITI DI RICERCA

His research interests include the development of feedback control algorithms for nonlinear dynamical systems, optimization techniques, estimation of stochastic dynamical systems, design of hybrid observers with asynchronous discrete-time measurements, outdoor and indoor localization systems, control of autonomous vehicles, and applications of control systems for electrical drives, power converters, and mechanical systems.

ALTRE ATTIVITA

Awarded with the "**Best Young Scientist Award**" at the 4th International Conference on Power Systems and Electrical Technology (PAST), held in Tokyo on 4-8 2025.

Winner of the **Best Paper Award** in memory of Prof. Salvatore (Enzo) Piazza, with the paper:

Sferlazza A., Tarbouriech S., Zaccarian L. (2019). *Time-Varying Sampled-Data Observer with Asynchronous Measurements*. IEEE TRANSACTIONS ON AUTOMATIC CONTROL, vol. 64, p. 869-876, ISSN: 0018-9286, doi: 10.1109/TAC.2018.2839974.

Elected to the grade of **IEEE Senior Member** from the IEEE board Officers and Board of Directors in recognition of professional standing.