UNIVERSITÀ DEGLI STUDI DELL'AQUILA
Prof. ANDREA FIORAVANTI
Curriculum scientifico

(Aggiornato il 2022/07/28)

Nato a Ascoli Piceno nel 1989. Laureato in Ingegneria elettrica magistrale nel 2016 con voto 110/110 e lode dopo aver fatto attività di tirocinio presso l?università francese ESIEE-Amiens. Abilitato alla professione di ingegnere nello stesso anno.

Assegnista di ricerca nel 2017. Dottore di ricerca nel 2021 con tesi sulla Resilienza dei Sistemi Elettrici. Borsista negli anni 2021/2022 e Ricercatore dal 2022 in Sistemi Elettrici per l?Energia presso l?Università degli studi dell?Aquila.

Presso il DIIIE dell?Universita degli studi dell?Aquila cura le esercitazioni per i seguenti corsi:

- Sistemi elettrici per l?energia,

- Distribuzione ed utilizzazione dell?energia elettrica,

- Smart grids e applicazioni elettriche

   Nello stesso dipartimento tiene il seguente insegnamento:

- Impianti Elettrici II

   E? membro da diversi anni del Working Group IEEE P3001.3 (Voltage Considerations) di IEEE Standards Associations.

   E? afferente al Consorzio Ensiel, organizzazione di Università Italiane pubbliche che operano nel settore dell?energia, dei sistemi elettrici e degli impianti elettrici per conto dell?Università degli studi dell?Aquila.

   E? stato revisore, oltre che per conferenze internazionali anche per le seguenti riviste:

- IEEE Transactions on Instrumentation & Measurement

- Electric Power Systems Research, Elsevier

   Dal 2022 è assistente editoriale della rivista ?International Journal of Emerging Electric Power Systems? e della rivista ?Jo?rn?l of Electrical and Electronic Engineering?.

   E? co-autore di oltre 30 articoli scientifici pubblicati su atti di congresso e riviste internazionali sui seguenti temi:

- La qualità dell'alimentazione elettrica nei sistemi elettrici per l?energia (Power Quality)

- Analisi dei sistemi elettrici con tecniche innovative di soft computing e di intelligenza artificiale

- Qualità del servizio e resilienza dei sistemi elettrici utilizzatori

- Applicazioni IoT per i sistemi elettrici

Articoli su rivista:

1. A Prudenzi, A Fioravanti, M Regoli, ?
   A low-cost IoT solution for power availability improvement in hospitals
   ?, Renewable Energy & Power Quality Journal, Vol.1, No.16, April 2018 pages 566-571, International Conference on Renewable Energies and Power Quality (ICREPQ?18) Salamanca (Spain),2018. DOI: 10.24048/repqj16.38

2. Bucci, G., Ciancetta, F., Fioravanti, A., Fiorucci, E., Prudenzi, A., ?
   Application of SFRA for diagnostics on medical isolation transformers
   ?, International Journal of Electrical Power and Energy Systems, 117, art. no. 105602, DOI: 10.1016/j.ijepes.2019.105602

3. G. Bucci, F. Ciancetta, A. Fioravanti, E. Fiorucci, A. Prudenzi, ?
   Improving the Power System safety in Hospitals by means of periodical SFRA tests on Medical Isolation Transformers?, Renewable Energy & Power Quality Journal, Volume No.18, pages 287-291, June 2020. ISSN 2172-038X, International Conference on Renewable Energies and Power Quality (ICREPQ?20), Granada (Spain), 2020, DOI: 10.24084/repqj18.300

4. Bucci G., Ciancetta F., Fioravanti A., Fiorucci E., Mari S., Prudenzi A., ?
   Testing system for the on-site checking of magneto-thermal switches with arc fault detection
   ?, Energies, 2020, 13(18), 13184652,DOI: 10.3390/en13184652

5. F. Ciancetta, G. Bucci, E. Fiorucci, S. Mari and A. Fioravanti, "
   A New Convolutional Neural Network-Based System for NILM Applications," in
   IEEE Transactions on Instrumentation and Measurement
   , vol. 70, pp. 1-12, 2021, Art no. 1501112, doi: 10.1109/TIM.2020.3035193.

6. Bucci G. , Ciancetta F., Fiorucci E. , Fioravanti A., Prudenzi A., ?
   An IoT system based on Powerline Technology for Pulse Oximetry measurement
   ?, ACTA IMEKO ISSN: 2221-870X December 2020, Volume 9, Number 4, 114 ? 120, DOI: http://dx.doi.org/10.21014/acta_imeko.v9i4.724

7. Ciancetta, F.; Fiorucci, E.; Ometto, A.; Fioravanti, A.; Mari, S.; Segreto, M.-A., ?
   A Low-Cost IoT Sensors Network for Monitoring Three-Phase Induction Motor Mechanical Power Adopting an Indirect Measuring Method?, *Sensors* 2021, *21*, 754. https://doi.org/10.3390/s21030754

8. G. Bucci, F. Ciancetta, A. Fioravanti, E. Fiorucci, S. Mari, A. Prudenzi, ?**Fast testing platform for the isolation transformer**? Renewable Energy & Power Quality Journal, Volume No.19, ISSN 2172-038X, September 2021, 19th International Conference on Renewable Energies and Power Quality - ICREPQ'20,

Almeria (Spain), DOI: https://doi.org/10.24084/repqj19.236

9. Bucci G., Ciancetta F., Fioravanti A., Fiorucci E., Mari S., Silvestri A., ?**Online sweep frequency analysis testing on UPS for resilience**?, Measurement: Sensors, Volume 18, 2021, 100079, ISSN 2665-9174, https://doi.org/10.1016/j.measen.2021.100079.

10. Bucci G., Ciancetta F., Fiorucci E., Mari S., Fioravanti A., ?
State of art overview of Non-Intrusive Load Monitoring applications in smart grids
?, Measurement: Sensors, Volume 18, 2021, 100145, ISSN 2665-9174, https://doi.org/10.1016/j.measen.2021.100145.

11. Bucci G., Ciancetta F., Fiorucci E., Mari S., Fioravanti A. , ?
Measurements for non-intrusive load monitoring through machine learning approaches?
, ACTA IMEKO, ISSN: 2221-870X, December 2021, Volume 10, Number 4, 90-96, doi: http://dx.doi.org/10.21014/acta_imeko.v10i4.1184

Articoli a conferenza:

1. Tursini, M., Villani, M., Fabri, G., Paolini, S., Credo, A., Fioravanti, A., ?
Sensorless control of a synchronous reluctance motor by finite elements model results
?, 2017 8th International Symposium on Sensorless Control for Electrical Drives, SLED 2017, art. no. 8078424, pp. 19-24. DOI: 10.1109/SLED.2017.8078424.

2. Prudenzi, F. Muzi, A. Fioravanti, "**On resilience of hospital's power system**", 2017 IFHE-EU, 7th European Congress for the International Federation of Hospital Engineering, Bologna (Italy), May 29-31, 2017.

3. Prudenzi, A., Fioravanti, A., Regoli, M., ?
A Low-Cost Internet of Things Integration Platform for a Centralized Supervising System of Building Technology Systems in Hospitals
?, 2018 IEEE International Conference on Environment and Electrical Engineering and 2018 IEEE Industrial and Commercial Power Systems Europe, EEEIC/I and CPS Europe 2018, art. no. 8494473, DOI: 10.1109/EEEIC.2018.8494473.

4. Prudenzi, A., Fioravanti, A., Regoli, M., ?
Making electric distribution of industrial customers smarter with IoT
?, International Symposium on Power Electronics, Electrical Drives, Automation and Motion, art. no. 8445253, pp. 556-561. DOI: 10.1109/SPEEDAM.2018.8445253.

5. Prudenzi, A., Fioravanti, A., Caracciolo, V., ?
Resilient power in hospitals: The S. Giovanni addolorata general hospital case study
?, 2017 AEIT International Annual Conference: Infrastructures for Energy and ICT: Opportunities for Fostering Innovation, AEIT 2017, 2017-January, pp. 1-6. DOI: 10.23919/AEIT.2017.8240572.

6. Prudenzi, A., Fioravanti, A., Regoli, M., ?
Smartening hospital electrical distribution for enhancing resilience
?, 2018 110th AEIT International Annual Conference, AEIT 2018, art. no. 8577293, DOI: 10.23919/AEIT.2018.8577293.

7. Fioravanti, A. Prudenzi, M. Gastaldi, ?

A cost effective solution based on IoT for smartening maintenance and energy management at large electric customers

'?, I-cities 2018, 4th Italian Conference on ICT for Smart Cities and Communities, 19-21 September 2018, L' Aquila (Italy).

8. Prudenzi, A., Fioravanti, A., Pierannunzi, F., Ciancetta, F., ?

Distributed Power Quality monitoring in customer's electrical distribution system

?, 2019 IEEE International Conference on Environment and Electrical Engineering and 2019 IEEE Industrial and Commercial Power Systems Europe, EEEIC/I and CPS Europe 2019, art. no. 8783784. DOI: 10.1109/EEEIC.2019.8783784.

9. Bucci, G., Ciancetta, F., Fiorucci, E., Fioravanti, A., Prudenzi, A., Mari, S., ?

Challenge and future trends of distributed measurement systems based on blockchain technology in the european context

?, 2019 10th IEEE International Workshop on Applied Measurements for Power Systems, art. no. 8897782, DOI: 10.1109/AMPS.2019.8897782.

10. Prudenzi, A., Fioravanti, A., Petriconi, L., Caracciolo, V., ?

Power quality problems in hospital: A case study

?, 2019 IEEE Milan PowerTech, PowerTech 2019, art. no. 8810682, DOI: 10.1109/PTC.2019.8810682.

11. Prudenzi, A., Fioravanti, A., Ciancetta, F., ?

Smart distributed energy monitoring for industrial applications

?, 2019 IEEE International Workshop on Metrology for Industry 4.0 and IoT, MetroInd 4.0 and IoT 2019, art. no. 8792861, pp. 274-278. DOI: 10.1109/METROI4.2019.8792861.

12. Bucci, G., Ciancetta, F., Fiorucci, E., Fioravanti, A., Prudenzi, A., ?

A Pulse Oximetry IoT System Based on Powerline Technology

?, 2019 IEEE International Workshop on Metrology for Industry 4.0 and IoT, MetroInd 4.0 and IoT 2019, art. no. 8792848, pp. 268-273. DOI: 10.1109/METROI4.2019.8792848.

13. Muzi, F., Calcara, L., Pompili, M., Fioravanti, A., ?

A microgrid control strategy to save energy and curb global carbon emissions

?, 2019 IEEE International Conference on Environment and Electrical Engineering and 2019 IEEE Industrial and Commercial Power Systems Europe, EEEIC/I and CPS Europe 2019, art. no. 8783535, DOI: 10.1109/EEEIC.2019.8783535.

14. Fioravanti, A. Prudenzi, G. Bucci, E. Fiorucci, F. Ciancetta, S. Mari, ?

Non intrusive electrical load identification through an online SFRA based approach

? , International Symposium on Power Electronics, Electrical Drives, Automation and Motion, SPEEDAM 2020, Sorrento (Italy),2020

15. A. Fioravanti, A. Prudenzi, F. Muzi, L. Calcara, M. Pompili, ?

Automation and remote control to improve LV grid management

?, 20TH International Conference on Environment and Electrical Engineering 04TH Industrial and Co

mmercial Power Systems Europe 2020(EEEIC and I&CPS)

16. G. Bucci, F.Ciancetta, E.Fiorucci, A.Fioravanti, A.Prudenzi, S.Mari, ?
    An IoT condition monitoring system for resilience based on spectral analysis of vibration
    ?, MetroInd4.0&IoT 2020, Roma (Italy)

17. Ciancetta, F., Bucci, G., Fiorucci, E. , Mari, S., Fioravanti, A., Prudenzi, A., ?
    Measurement of powerline performance in residential context
    ?, 24th IMEKO TC4 International Symposium and 22nd International Workshop on ADC and DAC Modelling and Testing, IWADC 2020; Palermo, Virtual; Italy; 14 September 2020 through 16 September 2020;

18. Bucci G., Ciancetta F., Fiorucci E., Mari S., and Fioravanti A., ?
    Deep Learning Applied to SFRA Results: A Preliminary Study
    ?, In 2021 7th International Conference on Computing and Artificial Intelligence (ICCAI 2021). Association for Computing Machinery, New York, NY, USA, 302?307. DOI:https://doi.org/10.1145/3467707.3467753

19. G. Bucci, F. Ciancetta, E. Fiorucci, S. Mari and A. Fioravanti, "
    Multi-State Appliances Identification through a NILM System Based on Convolutional Neural Network
    ," *2021 IEEE International Instrumentation and Measurement Technology Conference (I2MTC)*, 2021, pp. 1-6, doi: 10.1109/I2MTC50364.2021.9460038.

20. G. Bucci, F. Ciancetta, E. Fiorucci, S. Mari and A. Fioravanti, "
    A Non-Intrusive Load Identification System Based on Frequency Response Analysis,"
    2021 IEEE International Workshop on Metrology for Industry 4.0 & IoT (MetroInd4.0&IoT), 2021, pp. 254-258, doi: 10.1109/MetroInd4.0IoT51437.2021.9488472.

21. A. Fioravanti, A. Prudenzi, A. Silvestri, S. Mari, E. Fiorucci and F. Ciancetta, "
    Resilient solutions for construction site electrical systems in oil well tests",
    2021 IEEE International Conference on Environment and Electrical Engineering and 2021 IEEE Industrial and Commercial Power Systems Europe (EEEIC / I&CPS Europe), 2021, pp. 1-6, doi: 10.1109/EEEIC/ICPSEurope51590.2021.9584825.

22. F. Ciancetta, A. Fioravanti, E. Fiorucci, S. Mari, A. Prudenzi and A. Silvestri, "
    Some practical solutions to improving power quality at LV distribution customers?: a case study",
    2021 AEIT International Annual Conference (AEIT), 2021, pp. 1-6, doi: 10.23919/AEIT53387.2021.9626891.