CURRICULUM VITAE

Sameer Al-Dahidi

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PERSONAL INFORMATION

Date and Place of Birth	: Nov 12th, 1986, Kuwait
Nationality	: Jordanian
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EDUCATION

January 2013 – March 2016
Ph.D. in Energy and Nuclear Science and Technology, *Politecnico di Milano, Italy*
- Politecnico di Milano QS Rankings 2020/2021: 1st (Italy) and 20th (world) in Engineering and Technology.
- Thesis "Development of Data-Driven Methods for Prognostics and Health Management under Variable Operational Conditions in Industrial Equipment".
- Marie Curie Ph.D. Fellowship within the European Project "Innovation through Human Factors in risk analysis and management" (InnHF, www.innhf.eu).
- Ph.D. with **Honors** (the highest possible grade).

September 2010 – September 2012
M.Sc. in Nuclear Energy, **Operations**, *École Centrale Paris* and *Université Paris-Sud XI, France*
- GPA of 16/20 (Very Good – Rank 1 out of 12).
- Master Scholarship from French Government, 2010-2012.

September 2004 – June 2008
B.Sc. in Electrical and Computer Engineering, *The Hashemite University, Jordan*
- GPA of 3.92/4.0 (Excellent – Rank 1 out of 121).
- Rank 2 out of 535 graduates from all Jordanian universities in the University Efficiency Examination held by the Ministry of Higher Education and Scientific Research in the (Electrical Engineering) specialization, Jordan.

September 2003 – August 2004
General Secondary Education Certificate (Scientific Stream), *Alshamila Secondary School, Jordan*
- GPA of 92.6/100 (Excellent).

ACADEMIC EXPERIENCE

February 2021 – Present
Associate Professor and **Exchange Coordinator**, *Mechanical and Maintenance Engineering Department, School of Applied Technical Sciences, German Jordanian University, Amman, Jordan*.

February 2018 – January 2021 (3 years)
Assistant Professor and **Exchange Coordinator**, *Mechanical and Maintenance Engineering Department, School of Applied Technical Sciences, German Jordanian University, Amman, Jordan*.

October 2017 – January 2018 (4 months)
Part-Time Lecturer, *Mechanical Engineering Department, Faculty of Engineering, The Hashemite University, Zarqa, Jordan*.
June 2016 – May 2017 (1 year)

Research Associate, Postdoctoral Research Fellow, *Energy Department, Politecnico di Milano, Milan, Italy*.
<u>Research topic 1</u>: Development of Data-Driven Methods for the Prediction of Electricity Production by Renewable Energy Sources (<u>Co-operation contract between Edison R&D and Politecnico di Milano</u>).
<u>Research topic 2</u>: Development of Methods for the Analysis of Long Term, High Dimensional Data Streams and their Use for Detection of Abnormal Patterns in Industrial Equipment of Electricity Production Plants (<u>Co-operation contract between Électricité de France (EDF) R&D and Politecnico di Milano</u>).

January 2013 – March 2016 (3 years and 3 months)
Ph.D. Candidate and Early Stage Researcher at InnHF EU Project (Project ID 289837), *Energy Department, Politecnico di Milano, Milan, Italy*
<u>Research topic</u>: Development of Data-Driven Methods for Prognostics and Health Management under Variable Operational Conditions in Industrial Equipment

January 2014/2015 – April 2014/2015 (6 months)
Visiting Ph.D. Candidate (Secondment Period – Research Collaboration), *Chair System Science and the Energy Challenge, Fondation Electricité de France (EDF), CentraleSupélec, Laboratory of Industrial Engineering, Paris, France*
<u>Research topic</u>: Processing Condition Monitoring Data for Diagnosis and Prognosis of Components in a Fleet of Electricity Production Plants (<u>Co-operation between Électricité de France (EDF) R&D and Politecnico di Milano</u>)

January 2014 – April 2014 (4 months)
Researcher at HEMIS EU Project (Project reference FP7-ICT-314609, www.hemis-eu.org), *Energy Department, Politecnico di Milano, Milan, Italy*
<u>Research topic</u>: The Development of a Data-Driven Model for the Diagnosis of Insulated Gate Bipolar Transistor (IGBT) Failures.

June 2008 – October 2008 (4 months)
Lab Supervisor, *Electrical and Computer Engineering Department,* **The Hashemite University***, Zarqa, Jordan*.

TEACHING EXPERIENCE

- Teaching (Associate Professor) of several under-graduate and graduate level courses in School of Applied Technical Sciences at the Mechanical and Maintenance Engineering Department, Mechatronics Engineering Department, and Industrial Engineering Department, **German Jordanian University**, Jordan, February 2018 – Present:
    o *Statics*
    o *Workshop*
    o *Reliability and Quality Control* (Coordinator)
    o *Management of Maintenance Systems* (Coordinator)
    o *Reliability and Maintenance Management* (Coordinator)
    o *Spare Parts and Storage Management* (Coordinator)
    o *Special Topics in Maintenance Engineering* (Coordinator)
    o *Electrical Machines and Control LAB*
    o *Electrical Machines LAB*
    o *Automatic Control Systems LAB*
    o *Research Methods* (Coordinator)
- Teaching (Part-time Lecturer) of several under-graduate level courses in Faculty of Engineering at the Mechanical Engineering Department, **The Hashemite University**, Jordan, Fall 2017 (192 hours):
    o *Numerical Analysis*
    o *Thermal Science Lab I* (Coordinator).
- Teaching (Assistant) of several graduate-level courses at **Politecnico di Milano**, Italy, 2014-2017 (35 hours):
    o *Risk, Reliability and Safety Analysis*
    o *Availability and Maintenance*
    o *Computational Methods for Reliability*
    o *Advanced Methods for RAM, Diagnostics* and *Prognostics of Industrial Equipment*.

- Teaching (Assistant) of several industrial courses at **Eni Corporate University**, Italy, 2014-2016 (35 hours):
  - o *Quantitative Risk Assessment*
  - o *Maintenance Engineering*.
- Teaching (Assistant) of a graduate-level course in Master Nuclear Energy program at **École Centrale Paris**, France, February 2nd and 13rd, 2015 (7 hours)*:*
  - o *Maintenance of Nuclear Installations*.

GRADUATE STUDENT ADVISING

- Co-supervisor of **TWO** Master students in their theses at the Mechanical Engineering Department, The University of Jordan, *September 2018 – December 2021* (Supervisor: Dr. Osama AYADI):
  - o **Abdul-Aziz Al-Shubbak** [Thesis title: Performance Comparison of Ensembles-Based Machine Learning Algorithms for Solar Photovoltaic Output Prediction]
  - o **Jehad ADEEB** [Thesis title: Machine Learning for Optimum Solar Power System Integration]
- Co-supervisor of **THREE** Master students in their theses at the Energy Department, Politecnico di Milano, *February 2018 - March 2019* (Supervisors: Prof. Enrico ZIO and Prof. Piero BARALDI):
  - o **Maria Rosaria TERMITE** [Thesis title: A Never Ending Learning Method for Fault Diagnostics in Energy Systems Operating in Evolving Environments]
  - o **Miriam FRESC** [Thesis title: Forecasting by Artificial Intelligence in the Energy Industry: Feature Selection for Prediction by Artificial Neural Networks]
  - o **Eleonora NIGRO** [Thesis title: Ensemble of Echo State Networks for Predicting the Energy Production of Power Plants].
- Co-supervisor of **TWO** Ph.D. students in their theses at the Energy Department, Politecnico di Milano, *June 2016 – March 2021* (Supervisors: Prof. Enrico ZIO and Prof. Piero BARALDI):
  - o **Mingjing XU** [Thesis title: Advanced Artificial Intelligence Techniques of Deep Learning and Reservoir Computing for Data-Driven Prognostics and Health Management with Missing Data and Information]
  - o **Zhe YANG** [Thesis title: Data, Text and Image Processing by Deep Learning and Extreme Learning Machine for Prognostics and Health Management]

RESEARCH INTERESTS

- Development of Artificial Intelligence (AI)-Based Methods for Renewable Energy Production Prediction and Thermal Systems;
- Development of Analytics for Prognostics and Health Management (PHM) in Energy Production Plants (Maintenance-Related Decision Support Systems).

INDUSTRIAL WORK EXPERIENCE

April 2011/2012 – August 2011/2012 (9 months)
Master Student Intern (M1 and M2 Years), *AREVA NP, Paris La Defense, France*
Project 1 (M1 year): Development of a New 3D Core Monitoring System "MAGELAN".
Project 2 (M2 year): Design Performance Improvement Management of Engineering and Projects Organization Design Center.

January 2009 – May 2010 (1 year and 4 months)
Junior Electrical & Instruments (E&I) Engineer, *Consolidated Contractors International Company (CCIC), Abu Dhabi, UAE*
Project: Expansion of Abu Dhabi Polymers Company (Borouge) (Project Value: 1.4 Billion USD).

September 2008 – December 2008 (4 months)
Graduate Electrical & Instruments (E&I) Engineer, *Kharafi National Limited Company, Kuwait, Kuwait*
Project: Expansion of Mina Al-Ahmadi Refinery (MAA).

REFEREEING

International Publishers

- **IEEE** Publisher: IEEE ACCESS, IEEE Transactions on Reliability, IEEE Transactions on Instrumentation & Measurement, IEEE Transactions on Power Systems, Canadian Journal of Electrical and Computer Engineering **(Active Reviewer)**
- **ELSEVIER** Publisher: Renewable & Sustainable Energy Reviews, Applied Soft Computing, Computers in Industry, Engineering Applications of Artificial Intelligence (**Active Reviewer**)
- **SAGE** Publisher: Risk and Reliability (Part O): Proceedings of the Institution of Mechanical Engineers (**Active Reviewer**), Advances in Mechanical Engineering (**Reviewer** and **Guest Editor** of a Special Collection entitled "*Advances in Soft Computing Techniques for Computational Engineering*", January 2019-Present (Editor: Dr. Mohammed Mellal))
- **FRONTIERS** Publisher: Frontiers in Energy Research **(Active Reviewer** and **Reviewer Director/Editor)**
- **MDPI** Publisher: Energies, Applied Sciences, Sensors, Data, Algorithms, Symmetry, Journal of Marine Science and Engineering (**Active Reviewer**) and Sustainability (**Active Reviewer** and **Guest Editor** of a Special Issue entitled "*Renewable Energy Sources for Electrical Power: Reliability Assessment, Condition Monitoring, Prognostics and Health Management, Production Prediction*")
- **SPRINGER** Publisher: Reviewer for a Book entitled "*Advanced Control and Optimization Paradigms for Wind Energy Systems*" (**Reviewer**)
- **IGI GLOBAL** Publisher: Reviewer for a Book entitled "*Soft Computing Methods for System Dependability*" (**Reviewer**)
- **Emerald** Publisher: International Journal of Quality & Reliability Management (**Active Reviewer**)
- **PHM Society**: International Journal of Prognostics and Health Management (IJPHM) (**Active Reviewer**)

International Conferences

- The International Conference on System Reliability and Safety (ICSRS) (**Active Reviewer, Session Chair,** and **Technical Committee)**.
- Annual European Safety and Reliability (ESREL) Conferences (**Active Reviewer** and **Technical Committee**) .
- Annual and European Conferences of the Prognostics and Health Management (PHM) Society (**Active Reviewer**).
- The IEEE Power Tech MADRID 2021 Conference (PowerTech2021) (**Reviewer**).
- The 3rd International Conference on System Reliability and Safety Engineering (SRSE 2021) (**Reviewer**).
- The 12th International Renewable Engineering Conference (IREC2021) (**Reviewer**).
- The Probabilistic Safety Assessment & Management (PSAM16) conference (**Active Reviewer** and **Technical Committee**).
- The 3rd International Conference on Industrial Systems and Processes (SPIn 2022) (**Active Reviewer** and **Scientific Committee**).
- The 2nd International Conference on Mechanics, Materials and Energy (MME 2022) (**Active Reviewer** and **Scientific Committee**).

HONORS AND AWARDS

- Winner of **Best Poster Award** in the *29th European Safety and Reliability Conference (ESREL 2019)*, Hannover, Germany of the Paper entitled "*Fault Prognostics in Presence of Event-Based Measurements*", September 22-26 2019.
- Winner of **Excellent Oral Presentation Certificate** in the *2018 3rd International Conference on System Reliability and Safety (ICSRS 2018)*, Barcelona, Spain of the Paper entitled "*Quantification of Uncertainty of Wind Energy Predictions*", November 24-26 2018.
- Winner of **Excellent Oral Presentation Certificate** in the *2017 2nd International Conference on System Reliability and Safety (ICSRS 2017)*, Milan, Italy of the Paper entitled "*A Dynamic Weighting Ensemble Approach for Wind Energy Production Prediction*", December 20-22 2017.
- Winner of a **Scientific Research Fellowship** for a one-year post-doctorate in "Development and Application of Methods for Reliability, Availability, Maintainability, Safety (RAMS) of Industrial Components and Systems" at the Energy Department of Politecnico di Milano, 1st June, 2016.

- Winner of the **IEEE Reliability Society Scholarship** (Italian Chapter) for the tutorials track in the area of "Diagnostics, Prognostics and Health Management (PHM), and Condition-Based Maintenance (CBM)" within PHM 2013 Conference Politecnico di Milano, 8th September, 2013.
- Winner of the **Marie Curie Ph.D. Fellowship** within the European Project InnHF financed by the 7th framework program FP7-PEOPLE-2011- Initial Training Network: Marie-Curie Action at the Energy Department of the Politecnico di Milano – Early Stage Researcher, 2013.
- Winner of a **Master Scholarship** for two years from the French Government in Nuclear Energy (Operations) at Université Paris-Sud XI and École Centrale Paris, 2010-2012.
- I got the **Second rank among all graduates (535)** from all Jordanian universities in the University Efficiency Examination held by the Ministry of Higher Education and Scientific Research in the (Electrical Engineering) specialization, Jordan.
- **Dean's list** - Faculty of Engineering, The Hashemite University, Jordan, 2004-2008.

PROFESSIONAL TRAININGS

- Attend **Erasmus+ Workshop: How to Prepare Capacity Building in the Field of Youth and Vocational and Education and Training** organized by National Erasmus+ Office in InterContinental Hotel, Amman, Jordan, December 29th, 2021 (7 hours) (Certificate is available).
- Attend **Erasmus+ Information Day: Launching Erasmus+ Phase II (2021-2027)** organized by National Erasmus+ Office in Movenpick Hotel, Amman, Jordan, November 22nd, 2021 (7 hours) (Certificate is available).
- Attend **E-learning Dialogue Session** organized by Online Training Center, German Jordanian University, Amman, Jordan, April 23rd, 2020 (2 hours) (ONLINE – Certificate is not available).
- Attend **GJU Deep Knowledge Gateway Training** (GJU electronic library, GJU e-library outside campus, different available databases, etc.) organized by TechKnowledge (Leading specialized electronic information solutions provider in the middle east – a provider of Al-Manhal, Sage, and other important databases), Amman, Jordan, April 9th, 2020 (1 hour) (ONLINE – Certificate is not available).
- Attend **How to Publish your research Globally?** Webinar (selecting the right Journal, structuring your paper, publication process, the peer review process, publication ethics, getting discovered, dissemination, and promotion) organized by Emerald Publishing, Amman, Jordan, April 9th, 2020 (2 hours) (ONLINE – Certificate is available).
- Attend **AI Bootcamp** (Python basics, Data Science, Machine Learning, Artificial Intelligence, Computer Vision) organized by Phi Science Institute, Amman, Jordan, March 27th-30th, 2020 (ONLINE – Certificate is available).
- Attend **Arab Artificial Intelligence Summit** organized by Phi Science Institute & Beyond Limits, Amman, Jordan, October 29th-30th, 2019 (Certificate is available).
- Attend **Advanced Teaching and training on Smart grid and Grid Integration of Renewable Energy Systems** (AT-SGIRES project funded by the European Union through the ERASMUS+ Programme) Training Course (Challenges for Grids integration from RES and teaching and learning methods knowledge transfer) organized by the Hamburg University for Technology in the framework of EU-funded project AT-SGIRES in Hamburg, Germany, September 16-20, 2019 (Certificate is available).
- Attend **Advanced Teaching and training on Smart grid and Grid Integration of Renewable Energy Systems** (AT-SGIRES project funded by the European Union through the ERASMUS+ Programme) Capacity Building Course (Smart Grids and laboratory sessions using PVSYST and Openmuc) organized by the University of Cyprus in the framework of EU-funded project AT-SGIRES in Nicosia, Cyprus, February 4-8, 2019 (Certificate is available).
- Attend **Intensive Wind Energy Workshop** (topics covered are global wind status, wind Atlas – Maps, Types, Parts, Projects, Developers) organized by AMC Training and Consulting in Amman, Jordan, February 4-8, 2019 (Certificate is available).
- Attend **Adapt2Job – 2win-Training 4th edition** entitled "Digitalization 2018 and beyond" organized by a2J and SMS group in German Jordanian University, Madaba, Jordan, September 23-27, 2018.

PROFESSIONAL MEMBERSHIP

- Advanced Teaching and training on Smart grid and Grid Integration of Renewable Energy Systems (AT-SGIRES) network (Feb 2019 - Present).
- IEEE Power & Energy Society (IEEE-PES) (October 2016 – October 2017).
- Prognostics and Health Management Society (PHM) (June 2014 – Present).
- European Safety and Reliability Association (ESRA) (March 2013 – Present).
- Jordanian Engineers Association, Electrical Engineering, Member (June 2008 - Present).

PUBLICATIONS

SYNTHETIC NUMERICAL INDICATORS:

- H-index by September 2020 on Google Scholar (10), Scopus (7), and ISI Web of Science (6).
- Citations by September 2020 on Google Scholar (231), Scopus (151), and ISI Web of Science (104).
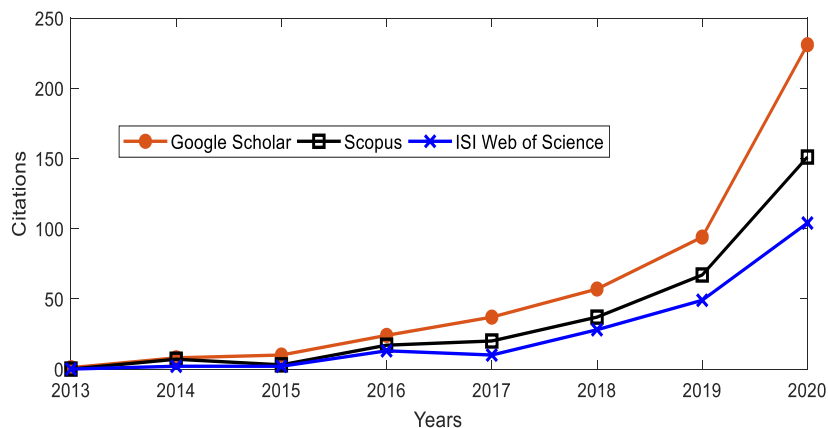
JOURNAL PAPERS

1. **S. Al-Dahidi**, P. Baraldi, F. Di Maio, and E. Zio, "A Novel Fault Detection System Taking into Account Uncertainties in the Reconstructed Signals," *Annals of Nuclear Energy*, vol. 73, pp. 131–144, **2014**. https://doi.org/10.1016/j.anucene.2014.06.036
2. **S. Al-Dahidi**, F. Di Maio, P. Baraldi, E. Zio, and R. Seraoui, "A Novel Ensemble Clustering for Operational Transients Classification with Application to a Nuclear Power Plant Turbine," *International Journal of Prognostics and Health Management*, vol. 6, no. SP3, pp. 1–21, **2015**. ISSN 2153-2648
3. **S. Al-Dahidi**, F. Di Maio, P. Baraldi, and E. Zio, "Remaining Useful Life Estimation in Heterogeneous Fleets Working under Variable Operating Conditions," *Reliability Engineering & System Safety*, vol. 156, pp. 109-124, **2016**. https://doi.org/10.1016/j.ress.2016.07.019
4. **S. Al-Dahidi**, F. Di Maio, P. Baraldi, and E. Zio, "A Locally Adaptive Ensemble Approach for Data-Driven Prognostics of Heterogeneous Fleets," *Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability*, vol. 231, no. 4, pp. 350–363, **2017**. https://doi.org/10.1177/1748006X17693519
5. P. Baraldi, F. Di Maio, **S. Al-Dahidi**, E. Zio, and F. Mangili, "Prediction of Industrial Equipment Remaining Useful Life by Fuzzy Similarity and Belief Function Theory," *Expert Systems with Applications*, vol. 83, pp. 226–241, **2017**. https://doi.org/10.1016/j.eswa.2017.04.035
6. **S. Al-Dahidi**, F. Di Maio, P. Baraldi, E. Zio, and R. Seraoui, "A Framework for Reconciliating Data Clusters from a Fleet of Nuclear Power Plants Turbines for Fault Diagnosis," *Applied Soft Computing*, vol. 69, pp. 213-231, **2018**. https://doi.org/10.1016/j.asoc.2018.04.044
7. **S. Al-Dahidi**, O. Ayadi, J. Adeeb, M. Alrbai, and B. R. Qawasmeh, "Extreme Learning Machines for Solar Photovoltaic Power Predictions," *Energies*, vol. 11, no. 10. Article ID 2725, **2018**. https://doi.org/10.3390/en11102725
8. W. Al-Kouz, A. Al-Muhtady, W. Owhaib, **S. Al-Dahidi**, M. Hader, and R. Abu-Alghanam, "Entropy Generation Optimization for Rarified Nanofluid Flows in a Square Cavity with Two Fins at the Hot Wall," *Entropy*, vol. 21, no. 2, Article ID 103, **2019**. https://doi.org/10.3390/e21020103

9. B. R. Qawasmeh, M. Alrbai, and **S. Al-Dahidi**, "Forced Convection Heat Transfer of Casson Fluid in Non-Darcy Porous Media," *Advances in Mechanical Engineering*, vol. 11, no. 1, pp. 1-10, **2019**. https://doi.org/10.1177/1687814018819906

10. W. Al-Kouz, **S. Al-Dahidi**, B. Hammad, and M. Al-Abed, "Modeling and Analysis Framework for Investigating the Impact of Dust and Temperature on PV Systems' Performance and Optimum Cleaning Frequency," *Applied Sciences*, vol. 9, no. 7, Article ID 1397, **2019**. https://doi.org/10.3390/app9071397

11. O. Ayadi and **S. Al-Dahidi**, "Comparison of Solar Thermal and Solar Electric Space Heating and Cooling Systems for Buildings in Different Climatic Regions," *Solar Energy*, vol. 188, no. 1, pp. 545-560, **2019**. https://doi.org/10.1016/j.solener.2019.06.033

12. **S. Al-Dahidi**, O. Ayadi, M. Alrbai, and J. Adeeb, "Ensemble Approach of Optimized Artificial Neural Networks for Solar Photovoltaic Power Prediction," *IEEE Access*, vol. 7, pp. 81741–81758, **2019**. 10.1109/ACCESS.2019.2923905

13. M. Louzazni, A. Khouya, **S. Al-Dahidi**, M. Mussetta, and K. Amechnoue, "Analytical Optimization of Photovoltaic Output with Lagrange Multiplier Method," *Optik*, vol. 199, Article ID 163379, **2019**. https://doi.org/10.1016/j.ijleo.2019.163379

14. **S. Al-Dahidi**, O. Ayadi, J. Adeeb, and M. Louzazni, "Assessment of Artificial Neural Networks Learning Algorithms and Training Datasets for Solar Photovoltaic Power Production Prediction," *Frontiers in Energy Research*, vol. 7, pp. 1–18, Article ID 130, **2019**. https://doi.org/10.3389/fenrg.2019.00130

15. M. R. Termite, P. Baraldi, **S. Al-Dahidi**, L. Bellani, M. Compare, and E. Zio, "A Never-Ending Learning Method for Fault Diagnostics in Energy Systems Operating in Evolving Environments," *Energies*, vol. 12, no. 24, Article ID 4802, **2019**. https://doi.org/10.3390/en12244802

16. M. Alrbai, B. Qawasmeh, **S. Al-Dahidi**, and O. Ayadi, "Influence of Hydrogen as a Fuel Additive on Combustion and Emissions Characteristics of a Free Piston Engine," *Thermal Science*, vol. 24, no. 1, pp. 87-99, **2020**. https://doi.org/10.2298/TSCI181211071A

17. N. Nader, W. Al-Kouz, and **S. Al-Dahidi**, "Assessment of Existing Photovoltaic System with Cooling and Cleaning System: Case Study at Al-Khobar City," *Processes*, vol. 8, no. 1, Article ID 9, **2020**. https://doi.org/10.3390/pr8010009

18. M. Xu, P. Baraldi, **S. Al-Dahidi**, and E. Zio, "Fault Prognostics by an Ensemble of Echo State Networks in Presence of Event Based Measurements," *Engineering Applications of Artificial Intelligence*, vol. 87, Article ID103346, **2020**. https://doi.org/10.1016/j.engappai.2019.103346

19. Z. Yang, **S. Al-Dahidi**, P. Baraldi, E. Zio, and L. Montelatici, "A Novel Concept Drift Detection Method for Incremental Learning in Nonstationary Environments," *IEEE Trans. Neural Networks Learn. Syst.*, vol. 31, no. 1, pp. 309-320, **2020**. 10.1109/TNNLS.2019.2900956

20. M. Ibrahim, A. Alsheikh, Q. Al-Hindawi, **S. Al-Dahidi**, and H. ElMoaqet, "Short-Time Wind Speed Forecast Using Artificial Learning-Based Algorithms," *Computational Intelligence and Neuroscience*, vol. 2020, Article ID 8439719, **2020**. https://doi.org/10.1155/2020/8439719

21. **S. Al-Dahidi**, S. Al-Nazer, O. Ayadi, S. Shawish, and N. Omran, "Analysis of the Effects of Cell Temperature on the Predictability of the Solar Photovoltaic Power Production," *International Journal of Energy Economics and Policy*, vol. 10, no. 5, pp. 208–219, **2020**. https://doi.org/10.32479/ijeep.9533

22. M. A. Mellal, **S. Al-Dahidi**, and E. J. Williams, "System Reliability Optimization with Heterogeneous Components using Hosted Cuckoo Optimization Algorithm," *Reliability Engineering and System Safety*, vol. 203, Article ID 107110, **2020**. https://doi.org/10.1016/j.ress.2020.107110

23. **S. Al-Dahidi**, M. Louzazni, and N. Omran, "A Local Training Strategy-based Artificial Neural Network for Predicting the Power Production of Solar Photovoltaic Systems," *IEEE Access*, vol. 8, pp. 150262–150281, **2020**. 10.1109/ACCESS.2020.3016165 8

24. M. S. Sari and **S. Al-Dahidi**, "Vibration Characteristics of Multiple Functionally Graded Nonuniform Beams," *Journal of Vibration and Control*, vol. 0, no. 0, pp. 1-14, **2020**. https://doi.org/10.1177/1077546320956768

25. M. Louzazni, **S. Al-Dahidi**, and M. Mussetta, "Fuel Cell Characteristics Curve Approximation Using Bézier Curve Technique," *Sustainability*, vol. 12, no. 19, Article ID 8127, **2020**. https://doi.org/10.3390/su12198127

26. A. Hijazi, **S. Al-Dahidi**, and S. Altarazi, "A Novel Assisted Artificial Neural Network Modeling Approach for Improved Accuracy Using Small Datasets: Application in Residual Strength Evaluation of Panels with Multiple Site Damage Cracks," *Applied Sciences*, vol. 10, no. 22, Article ID 8255, **2020**. https://doi.org/10.3390/app10228255

27. A. Hijazi, **S. Al-Dahidi**, and S. Altarazi, "Residual Strength Prediction of Aluminum Panels with Multiple Site Damage Using Artificial Neural Networks," *Materials*, vol. 13, no. 22, Article ID 5216, **2020**. https://doi.org/10.3390/ma13225216

28. R. B. Patil, M. A. Mellal, A. K. Bewoor, and **S. Al-Dahidi**, "Reliability, Maintainability, and Availability Analysis of a Computerized Numerical Control Machine Tool Using Markov Chains," *Acta Polytechnica Hungarica*, vol. 18, no. 6, pp. 45-70, **2021**. 10.12700/APH.18.6.2021.6.3

29. **S. Al-Dahidi**, P. Baraldi, E. Zio, and L. Montelatici, "Bootstrapped Ensemble of Artificial Neural Networks Technique for Quantifying Uncertainty in Prediction of Wind Energy Production," *Sustainability*, vol. 13, no. 11, Article ID 6417, **2021**. https://doi.org/10.3390/su13116417

30. M. Alrbai, **S. Al-Dahidi**, B. Qawasmeh, and J. Al Asfar, "Combustion Characteristics of Biogas Fuel Using Particularly Simplified Reaction Mechanism for HCCI Engines," *Case Studies in Thermal Engineering*, vol. 147, no. 3, **2021**. https://doi.org/10.1061/(ASCE)EY.1943-7897.0000766

31. M. Alrbai, **S. Al-Dahidi**, and M. Abusorra, "Investigation of the Main Exhaust Emissions of HCCI Engine using a Newly Proposed Chemical Reaction Mechanism for Biogas Fuel," *Case Studies in Thermal Engineering*, vol. 26, Article ID 100994, **2021**. https://doi.org/10.1016/j.csite.2021.100994

32. M. Louazni and **S. Al-Dahidi**, "Approximation of Photovoltaic Characteristics Curves using Bézier Curve," *Renewable Energy*, vol. 174, pp. 715-732, **2021**. https://doi.org/10.1016/j.renene.2021.04.103

33. M. Alrbai, J. Enizat, H. Hayajneh, B. Qawasmeh, and **S. Al-Dahidi**, "Energy and Exergy Analysis of a Novel Humidification-Dehumidification Desalination System with Fogging Technique," *Desalination*, vol. 522, Article ID 115421, **2022**. https://doi.org/10.1016/j.desal.2021.115421

CONFERENCE PAPERS

34. P. Baraldi, **S. Al-Dahidi**, F. Di Maio, and E. Zio, "Condition-Based Maintenance Modelling and Decision Making taking into account Uncertainties," in *Third Symposium on Games and Decisions in Reliability and Risk 2013 (GDRR 2013)*, Kinsale, Ireland, **2013** (Abstract).

35. D. McDonnell, N. Balfe, **S. Al-Dahidi**, and G.E. O'Donnell, "Designing for Human-Centred Decision Support Systems in PHM," in *The Second European Conference of the Prognostics and Health Management Society 2014 (PHME 2014)*, Nantes, France, **2014**, pp. 585-600.

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