

Curriculum Vitae
BASSEL SOUDAN
Associate Professor

WORK ADDRESS

Dept. Of Computer Engineering
College of Computing and Informatics
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SPECIALIZED EXPERIENCE

Accreditation

Supervised the SREE Department's preparations for ABET accreditation in 2017 and CAA accreditation in 2018. Supervised the ECE department's preparation for accreditation eligibility in 2000, accreditation in 2004 and reaccreditation in 2009. Developed and prepared the two departments' self-study documents, the statistical analysis for student data and program continuous evaluation and improvement efforts, and the full documentation needed for the accreditation committee visits. Set the standards and monitored the preparation of course files in preparation for the committee visits.

Curriculum Development

Revised the SREE program and courses and initiated the development of the MSc in Energy Engineering to be offered soon by the SREE Department. During tenure as ECE department chairman, re-created the department's two programs (BSc in Computer Engineering and BSc in Electrical and Electronics Eng.) and maintained these programs until accreditation. Heavily involved in the continuous evaluation and improvement of the BSc and MSc programs in both departments.

Management

Experienced in management in industry as well as academia.
4 years as the Chairman of the SREE Department
4 years as the Director of the UOS Center for Continuing Education
1 year as the first Chairman of the ECE Department
3 years of management experience in Intel in the United States

Wide Teaching Portfolio

During the tenure at the University of Sharjah taught 18 different courses spanning the areas of Circuits and Electronics, Computer Architecture, Microprocessor Design, Digital Systems Design, Embedded Systems, Digital Electronics, VLSI Systems, Integrated Circuit Design, Engineering Ethics, as well as Engineering Management. Taught courses spanning from 1st year all the way through graduate level.

Inter-Disciplinary Research

Have conducted research in the areas of Renewable Energy, Embedded Systems, Design Automation, and Information Security. Currently working on the utilization of IOT technology in the monitoring and control of renewable energy systems.

Administration	Served as a chairman or member of about 30 different committees at the levels of the University, College and Department.
Conference Organization	Significantly involved in the organization of 7 international conferences at the University of Sharjah during the period from 2002 – 2020.
Student Training	Supervised the preparation, solicitation and assignment of student practical training opportunities since 2004. Supervised students during practical training assignments (including international assignments through IAESTE).
Student Recruitment	Served as a member of the College's and Department's Student Welfare Committees. Responsible for developing, organizing and implementation of school visits to increase high school student awareness about the importance and attractiveness of careers in Engineering.
International Certification	Realizing the importance of keeping at the leading edge of industry standardization, have sought and acquired certifications in IT Management and Information Security.
Continuing Education	Developed and delivered training courses on Artificial Intelligence, IT Service Management under the ITIL v3 Foundation standard as well as IT Project Management. Attendees were staff from several professional organizations and the University's own Information and Telecommunications Center.

EDUCATION

Doctor of Philosophy in Electrical Engineering	December 1994 Illinois Institute of Technology Department of Electrical and Computer Engineering. Thesis Title: "MIES - A Visual Register-Transfer Description Language for the Microarchitecture of VLSI Systems"
Master of Science in Electrical Engineering	May 1988 Illinois Institute of Technology Department of Electrical and Computer Engineering.
Bachelor of Science In Electrical Engineering	December 1986 University of Illinois at Chicago Department of Electrical Engineering and Computer Science.

CERTIFICATIONS

January 2008	ISO 27001 Information Security Management System Implementation and Auditing.
March 2008	Foundation Certificate in IT Service Management - Information Technology Infrastructure Library (ITIL).

INDUSTRY EXPERIENCE

Oct. 1996 –
Sep 1999

Senior Design Engineer.
Intel Corporation.
Microprocessor Group
Santa Clara Processor Division
Merced Microprocessor Design Project



This position has afforded me excellent experiences in complex integrated circuit design, microprocessor architecture, electronic design automation, software development, software customization, user support, engineering management, and engineering supervision.

The responsibilities include directing, training and supporting more than forty-five design engineers in the design tasks required.

Also responsible for developing the necessary tool functionality for the automation of the testing and verification tasks. Developed several macros (tool extensions) that were used by the floorplan engineers of the different units to complete their required tasks according to the requirements set by the chip floorplan team. In addition, developed a breakthrough tool for verifying the unit designs against many different types of errors. The tool also ensured that the designs submitted by the units met the requirements of the full-chip floorplan team. Was responsible for declaring the achievement of “silver” and “gold” status for several units as their designs were completed and met the verification requirements.

As a member of the full-chip floorplan team, was involved in the final assembly and tape-out process. The process included integrating and assembling the designs from all the units and verifying the working relationships between the different units. Was also involved in the tedious task of connecting all of the unit designs with routing at the full-chip level. Was responsible for routing about 30% of the 100,000 nets required to connect the different units and complete the design of the chip.

Finally, was involved in the verification of the complete layout of the chip including design rule verification and interaction with the group that took over the chip manufacturing and samples testing process after tape-out.

Oct. 1994 –
Oct. 1996

Senior CAD Engineer.
Intel Corporation.
Microprocessor Group
Design Technology



This position has afforded me excellent experiences in VLSI design, software architecture development and planning, software development, software, testing, verification and validation.

Member of the Full Chip Layout Advanced Methodology Engineering team representing functionality validation.

The team’s responsibilities included setting the direction and methodology for future full chip layout tool development as well as validating that the current features do support the existing methodologies.

Technical Leader of the Tool Validation Team.

Personally developed and executed two of six flows that were used to validate the full chip layout tool suite. Headed a team of four engineers and was responsible for the planning, scheduling, leadership, technical contribution, and successful completion and delivery of the functional Athena 2.1 full chip layout tool suite.

Validation Team.

Worked on validating the behavior, and interaction of the Full Chip Layout tools. The work involved simulating a real chip design environment, including floor-planning, signal planning, routing, and performance verification to prove the functionality of the tools. Was a key player in the successful delivery and installation of the Athena 2.0 system.

Verification Team.

Worked on establishing software engineering principles and practices for the Athena tool suite.

Participated in defining the appropriate set of software engineering principles for the Athena tool suite that took into account the complexity of the system as well as the amount of legacy code being maintained. The work involved the definition and establishment of coding standards, documentation standards, and testing standards, as well as implementing measurable and trackable maturity criteria.

Tool Development Group.

Worked on the maintenance as well as development of new features on Intel's main floorplanning and chip assembly tool. The tool consists of 2 million lines of code written over a 14-year period. The work involved the analysis of existing code for optimization, bug fixes, and incorporation of latest software engineering practices. It also involved the improvement of the tool's software architecture to better suit the new developments.

Worked on the migration of the tool suite from 0.25 microns to 0.18 microns manufacturing technology. This involved understanding all the issues involved in the two technologies and their differences and updating the tool suite to meet the requirements of the new technology.

Planning of the Athena Tool Suite.

Worked on the evaluation and testing of Intel's previous suite of CAD tools (Zeus) as well as evaluating current market leader technologies in preparation for the development of the new Athena suite. The work involved planning, testing and execution of a test and evaluation plan. The plan called for evaluation of three market leader placement and routing solutions as well as experimenting with Intel's automated routing solution and evaluating the interaction with the TimberWolf placement program.

May 1991 –
Aug. 1991

Design Engineer. (Summer Intern). Rich/A Reuters Company.

Worked on the development and translation of a new real-time quote server. The work involved the porting of software that was designed for Heuricon Computers so that it would work on Sun/SPARC stations. This involved modification of existing code, software design, and implementation using the C language and the UNIX operating system.

April 1990 – **Design Engineer.** (Summer Intern). **Rich/A Reuters Company.**
Aug. 1990 Worked on the testing and development of two real-time quote servers.
The work involved testing of a real-time quotes server, installation manual design and the development of a universal installation script.

ACADEMIC EXPERIENCE AS FACULTY

Sep. 2019 – **Associate Professor**
Present **Department of Computer Engineering,**
College of Computing and Informatics
University of Sharjah

Jan. 2011– **Associate Professor**
Sep. 2019 **Department of Electrical and Computer Engineering,**
College of Engineering
University of Sharjah

Sep. 1999 – **Assistant Professor**
Dec. 2010 **Department of Electrical and Computer Engineering,**
College of Engineering
University of Sharjah
Heavily involved in service at the university, college and department levels. Currently serving as the Training coordinator and the Continuous Program Improvement coordinator for the college and the department.

Supervision of Graduate Students

Hussain Abdalla – PhD – Ongoing – Co-Supervisor

Thesis Topic Managing Renewable Energy Resources (RER) Integrated to Smart Grid System: A Comprehensive Conceptual Model

Areej Mustafa – MSc – Ongoing

Thesis Topic Authentication of IOT devices in a Smart City setup

Aya Alchikh Omar – MSc – Ongoing

Thesis Topic Using Machine Learning to detect Man-in-the-Middle attacks in IOT networks.

Fetna Dandachi – MSC – Graduated December 2020

Thesis Title Attempting Cardiac Arrest Prediction using Artificial Intelligence on Vital Signs from E-Health Records

Huda Tabbaa – MSc – Graduated December 2015

Thesis Title Computer-Aided Quranic Recitation Error Detection

Mohammad Nihlawi – Project based MSc – Project completed 2013

Project Title Universal Self-Learning Adaptive Stop and Go Cruise Control System

Salama Banawan – Project based MSc – Project completed 2011

Project Title E-DNA: A Mechanism based on TRNGs and PUFs for Securing FPGA-based Designs

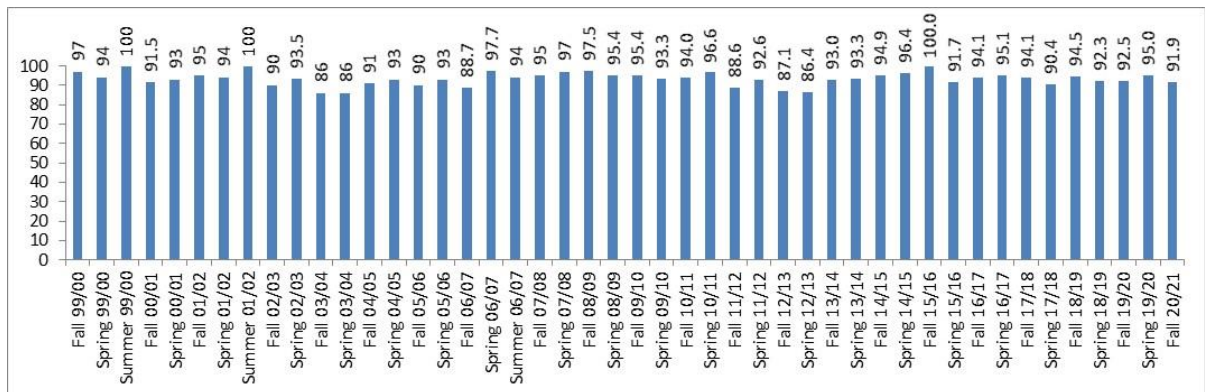
Teaching Portfolio

Developed and taught the following courses:

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|---|---------------------------------------|
| 1. Integrated Circuit Fundamentals | (Graduate) |
| 2. Design of IOT Systems | (4 th year Tech. Elective) |
| 3. VLSI Design | (4 th year Tech. Elective) |
| 4. Advanced Digital Design (VHDL) | (4 th year Tech. Elective) |
| 5. Engineering Management | (4 th year Tech. Elective) |
| 6. Embedded Systems Design | (3 rd year) |
| 7. Computer Systems Architecture | (3 rd year) |
| 8. Computer Systems Laboratory | (3 rd year) |
| 9. Professional, Social and Ethical Issues in Engineering | (3 rd year) |
| 10. Fundamentals of Electronics | (3 rd year) |
| 11. Microcontroller Based Design | (2 nd year) |
| 12. Microprocessors and Assembly Language | (2 nd year) |
| 13. Digital Logic Design | (2 nd year) |
| 14. Digital Logic Design Laboratory | (2 nd year) |
| 15. Circuit Analysis 1 | (2 nd year) |
| 16. Introduction to Engineering | (1 st year) |
| 17. Advising and Guidance | (1 st year) |

Semester-by-semester teaching evaluations

The following graph shows average student evaluations on a semester by semester basis.



DESIGN PROJECTS SUPERVISED

Supervised more than 20 groups of students through their successful completion of the Junior and Senior Design Project courses. The following is a non-comprehensive list:

- Using Machine Learning for Multi-Mode Biometric Authentication
- Using LiFi Communication in Police-to-Car Warning
- Using AI Techniques to Determine Heart Condition
- Adaptive Smart Remote Home Control
- IOT Controlled Drone for Victim Localization using Thermal Imaging
- Autonomous Drone Guided Ground Vehicle
- IOT Controlled Autonomous Delivery Vehicle.
- Car-to-car communication system
- Autonomous fire-fighting robot.
- Multi-Touch Computer Screen

- Implementation of Triple-DES encryption/decryption system using VHDL and FPGA
- Secure communication over GSM network
- Secure Embedded Data Communication System.
- Software Engineering of a Software System for the Registration Dept.
- Distributed Sorting Algorithm.
- Wireless LAN
- Rolling Message Display
- Infra-red Remote Control and Receiver (2 implementations).
- Implementation of the DLX Control Unit Using VHDL and a CPLD.
- Implementation of the DLX ALU Using VHDL and a CPLD.
- VLSI Design and Implementation of a simple 16-bit ALU.

June 2014 –
September 2018

**Chairman, Sustainable and Renewable Energy Engineering Dept.
University of Sharjah**

Lead my colleagues into building a very strong department that is competing with much older and more established departments within the university and at the national level.

Grew the student body from around 200 to over 650 students. Built the staff from 4 full-time faculty to 15. Within the 2017/2018 academic year, Lead the colleagues into preparing for and acquiring ABET accreditation for the SREE program as well as preparing the application for accreditation by the local ministry of higher education. Developed the skeleton of the planned MSc in Energy Engineering program.

Supported the colleagues in the department in establishing one of the strongest research programs in the university as measured by publication output from the point of view of quantity and more importantly the quality of the publications.

April 2010 -
Sept. 2013

Acting Director, Center for Continuing Education and Professional Development, University of Sharjah

Developed strategic plan for the expansion of the center as well as strengthening its presence as a major competitor in the market. Redirected the center towards better serving the goals and aims of the University. Performed a detailed SWOT analysis to pinpoint weaknesses and leverage the strengths to mitigate them. Developed a set of KPIs for measuring the success and identifying the failures. Supervised the delivery of more than 120 programs achieving 4 million AED of income for the university during the past two years.

Feb 2000 –
Nov. 2000

**Chairman, Department of Electrical and Computer Engineering
University of Sharjah**

The first chairman for the Department of Electrical and Computer Engineering.

Completed the organizational setup, planning and management, staffing, financing, budgetary planning and execution, procurement of large amounts of equipment from diversified international sources, facilities planning, managing customer satisfaction as well as supervision of a large team with diversified backgrounds and experience levels.

Drove the hiring process for 7 faculty members, 3 lecturers and 6 lab assistants tripling the size of the department from 8 staff members to 24 within one year. Drove the complete preparation of the departments' women's laboratories with everything from utilities, cabling, and furniture all the way to all the equipment necessary for conducting the laboratory sessions in all rooms.

Updated the two programs of study offered by the Department to meet accreditation team proposals. Set the standards and procedures for the department. Supervised the faculty members through the development of outcome and objective based description for the program and all courses. Supervised the establishment of the assessment based Continuous Program Improvement cycle which continues in the department and college until today.

Jan. 1991 -
Oct. 1994

Part-Time Instructor. Illinois Institute of Technology.

Served as an instructor for the following Electrical and Computer Engineering courses:

1. Digital Integrated Circuits.
2. Logic Design and Implementation.
3. Mini/Micro Computer Programming.
4. Analog and Digital Electronic circuits.
5. Digital Systems.
6. Electrical Engineering for non-Electrical Engineers

1987 - 1991

Teaching Assistant. Illinois Institute Of Technology.

Served as a lab instructor for several Computer Engineering courses.

ACADEMIC ADMINISTRATIVE EXPERIENCE

1. **Department Chairman**, Sustainable and Renewable Energy Engineering Program, University of Sharjah, College of Engineering, June 2014 – September 2018.
2. **Department Chairman**, Department of Electrical and Computer Engineering. University of Sharjah, College of Engineering, September 1999 – November 2000.
3. **Director**, Center for Continuing Education and Professional Development. University of Sharjah, April 2010 – Sept. 2013.

4. Member, University Faculty Affairs Committee (Faculty Senate), Sept. 2017 – Sept. 2018
5. Member, University Student Training Council, Sept. 2006 – Sept. 2014.
6. Member, University Computing and Networking Committee. Sept. 2005 – Sept. 2009.
7. Member, University Committee on Lab Supervisor Assessment. Sept. 05 – Sept. 06.
8. Member, University Academic Computing Committee. April 2000 – Sept. 2005
9. Member, University Student Academic Affairs Committee. Sept. 2003 – Sept. 2005

10. **Chairman**, College Assessment and CPI Committee. Sept. 2005 – Feb. 2008.
11. Member, College Council. Sep 2005 – Sep. 2006 and June 2014 – September 2018.
12. Member, College Promotions Committee. June 2014 – September 2018.
13. Member, College Teaching and Learning Committee. Sep 2006 – Sept. 2016.
14. Member, College Program Advisory Committee. Jan. 2000 – Sept. 2003
15. Member, College Undergraduate Education Committee. Sept. 2001 – Sept. 2005
16. Member, College Accreditation Committee. Sept. 2001 – Sept. 2005
17. Member, College Board. Jan. 2000 – Sep. 2001
18. Member, College Teaching Committee. Sept. 1999 – Sept. 2001

19. Teaching and Learning **Coordinator**, ECE Department. Sept. 2009 – Sept. 2011.
20. Student Training **Coordinator**, ECE Department. Sept. 2004 – Sept. 2011.
21. Accreditation **Coordinator**, ECE Department. Sept. 2004 – Present.
22. **Chairman**, Department Undergraduate Education Committee. Sept. 2006 – Feb. 2008.
23. **Chairman**, Department Assessment and Continuous Program Improvement Committee. Sept. 2003 – Sept. 2007.
24. **Chairman**, Department Accreditation Committee. Sept. 2001 – Sept. 2004.
25. Member, Department Computer Engineering Search Committee. Sept. 2009 – Present.
26. Member, Department Staffing Committee. Sept. 2001 – Sept. 2002.
27. Member, Department Undergraduate Education Committee. Sept. 2001 – Sept. 2002.
28. **Chairman**, Department Staffing Committee. Feb. 2000 – Sept. 2001.
29. Member, Department Curriculum Committee. Feb. 2000 – Sept. 2001.
30. Member, Department Laboratory Development Committee. Feb. 2000 – Sept. 2001.

 - Lead the preparation of the Sustainable and Renewable Energy Engineering Program's for the successful ABET accreditation in 2017 and the MOE accreditation in 2018.
 - Lead the preparation of the Computer Engineering Program's accreditation applications in 2000, 2004 and 2009. The program received full accreditation status in July 2004 and was re-accredited in 2009 and 2014. Was also heavily involved in the program's ABET accreditation in July 2011 and re-accreditation in July 2017.
 - Lead the preparation of the SREE Program's ABET and ministry accreditation applications in 2016, 2017. The program received ABET accreditation status in July 2016 and will be soon undergoing a ministry accreditation visit. Conducted numerous training sessions for faculty in the SREE department related to planning and preparing for accreditation.

RESEARCH RELATED COMMUNITY SERVICE

1. **Associate Editor** for the IEEE Transactions on VLSI Journal, 2003 – 2005.
2. **Member of Editorial Board**, International Journal of Advanced Research in Computer and Communications Engineering, 2012 - Present
3. **Co-Guest Editor** of the Analog Integrated Circuits and Signal Processing International Journal Special Issue on ICECS 2003.
4. Member of the IEEE Circuits and Systems Society's VLSI Applications Technical Committee
5. Member of the IEEE ICECS Conference International Steering Committee
6. Organizer, Special Session on Information Security Systems, ICECS 2008.
7. **Track Chair**, Embedded Systems and SOC – ICECS 2006 through ICECS 2010 conferences.
8. **Track Chair**, VLSI Systems – ICECS 2003 conference.
9. Member, Review Supervision Committee, ISCAS conference series. 2009 and continuing
10. Member, International Program Committee – SE conference series 2005 and continuing.
11. Member, Technical Program Committee – VLSI – AICCSA 2006 conference.
12. Member, Technical Program Committee, ICECS 2003 conference.
13. Member, Program Committee – IFEE 2006 workshop.
14. Member, ICECS 2003 Organizing Committee. May 2001 – Sept. 2005
15. Secretariat, ICECS 2003. May 2001 – Sept. 2005
16. Web and IT Chair for ISSPA 2007. Sept. 2005 – Sept. 2007.
17. Member, ISSPA 2007 Venue Execution Committee. Feb. 2007
18. Reviewer for the journal Energy
19. Reviewer for the journal Energies
20. Reviewer for the journal Energy Reports
21. Reviewer for the journal Renewable Energy
22. Reviewer for the IEEE Transactions on VLSI Systems
23. Reviewer for the IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems
24. Reviewer for Microelectronics Journal
25. Reviewer for Journal of Circuits, Systems, and Computers
26. Reviewer for the DAC 2004 conference
27. Reviewer for the IIT 2006 conference
28. Reviewer for the AICCSA 2006 conference
29. Reviewer for the ISCAS 2003, 2004, 2005, 2006, 2007, 2008, and 2009 conferences
30. Reviewer for the SE 2005, SE 2006 and SE 2007 conferences
31. Reviewer for the ICECS 2002, 2003, 2004, 2005, 2006 and 2007 conferences
32. Reviewer for the IEEE GCC 2009 conference
33. Reviewer for the AICCSA 2009 conference
34. Reviewer for the ICM 2008 conference
35. Chaired a session at ICM 2008 and ICM 2002.
36. Chaired a session at ICTTA 2008 and ICTTA 2006.
37. Chaired a session at ICECS 2003.
38. Chaired a session at SEEP 2019.

AFFILIATIONS

Institute of Electrical and Electronics Engineering (IEEE) – **Senior Member**
Computer Society
Circuits and Systems Society (CAS)
Power Systems



Association of Computing Machinery (ACM)
Architecture Special Interest Group (SIGARCH)
Design Automation Special Interest Group (SIGDA)



AWARDS & HONORS

- **Outstanding Teacher Award.** The University of Sharjah, June 2007.
- Included in the **Who's Who in Science and Engineering, 2006-2007**
- **Outstanding Teacher Award.** The University of Sharjah, June 2004
- **D2000 Award** for Technology Sharing. Intel Corporation
- **Departmental Recognition Award** for a breakthrough design error checking and tracking system. Merced Horizontal Engineering Team. Intel Corporation.
- **Departmental Recognition Award** for user support. Merced Horizontal Engineering Team. Intel Corporation.
- **Intel University Recognition Award** (1997, 1998, and 1999). Intel University. Intel Corporation.
- **52 Recognition Awards** for work over and beyond the call of duty. Merced Microprocessor Design Team. Intel Corporation.

AREAS OF RESEARCH INTEREST

In the past couple of years, I have redirected my research interests towards the field of System Design Automation with application in renewable energy and how electronics and computing can be used for the improvement of efficiencies in renewable energy systems. Whether the systems are used for power generation, energy storage, or the use of renewable energy systems in daily life and industrial production.

RESEARCH PROJECTS UNDERWAY

- 1) **Utilization of IOT in the Management and Control of Renewable Energy Systems**
Investigating the use of IOT technologies and systems for the management and control of RE Systems. Especially off-grid generation systems with human-access limitations.
- 2) **Application of Design Automation Techniques for the Optimization of Renewable Energy Systems**
Utilizing my background in Electrical Engineering, I am currently involved in a number of research initiatives related to optimization of Renewable Energy Systems.

PUBLICATIONS

Book Chapters

- [BC1] **Soudan, B.**, Adi, W., & Hanoun, A. (2016). IP protection of FPGA cores through a novel public/secret-key encryption mechanism. In *Secure System Design and Trustable Computing* (pp. 369-389). Springer, Cham. https://doi.org/10.1007/978-3-319-14971-4_11
- [BC2] Saad, M., and **Soudan, B.**, (2012) “Program Review: Computer Engineering At The University Of Sharjah Case Study,” Book Chapter, *Engineering Education in the 21st Century, Quality, Globalization and Local Relevance*, Published by: College of Graduate Studies and Research, University of Sharjah, pp. 329 – 337.

Journal Papers

- [JP1] **Soudan, B.**, Darya, A., An Intelligent, Dynamically Dispatched Hybrid System for Refugee Camp Electrification, **Under Review - Journal of Electrical and Computer Engineering**
- [JP2] **Soudan, B.**, Dandachi, F., and Bou Nassif, A., Attempting Cardiac Arrest Prediction using Artificial Intelligence on Vital Signs from E-Health Records, *Smart Health*, 25, 100294. <https://doi.org/10.1016/j.smhl.2022.100294>
- [JP3] Abdelkareem, M. A., **Soudan, B.**, Mahmoud, M. S., Sayed, E. T., AlMallahi, M. N., Inayat, A., ... & Olabi, A. G. (2022). Progress of artificial neural networks applications in hydrogen production. *Chemical Engineering Research and Design*, 182, 66-86. <https://doi.org/10.1016/j.cherd.2022.03.030>
- [JP4] Nassif, A.B., **Soudan, B.**, Azzeh, M., Attili, I., Almulla, O., (2022) Artificial Intelligence and Statistical Techniques in Short-Term Load Forecasting: A Review. *International Review on Modelling and Simulations*, 2021, 14(6), pp. 408–430 <https://doi.org/10.15866/iremos.v14i6.21328>

- [JP5] Cherif, H., Benakcha, A., Laib, I., Chehaidia, S. E., Menacer, A., **Soudan, B.**, & Olabi, A. G. (2020). Early detection and localization of stator inter-turn faults based on discrete wavelet energy ratio and neural networks in induction motor. *Energy*, 212, 118684. <https://doi.org/10.1016/j.energy.2020.118684>
- [JP6] **Soudan, B.**, & Darya, A. (2020). Autonomous smart switching control for off-grid hybrid PV/battery/diesel power system. *Energy*, 211, 118567. <https://doi.org/10.1016/j.energy.2020.118567>
- [JP7] Dawdi, T.M., Abdalla, N., Elkalyoubi, Y.M., and **Soudan, B.**, (2020). Locating Victims in Hot Environments using Combined Thermal and Optical Imaging, *Computers and Electrical Engineering*, July 2020. 85 (2020) 106697. <https://doi.org/10.1016/j.compeleceng.2020.106697>
- [JP8] Abidoeye, L. K., Bani-Hani, E., El Haj Assad, M., AlShabi, M., **Soudan, B.**, Oriaje, A.T., (2020) "Effects of Environmental and Turbine Parameters on Energy Gains from Wind Farm System: Artificial Neural Network Simulations," *Wind Engineering*, Volume 44, Issue 2, 1 April 2020, Pages 181-195. <https://doi.org/10.1177/0309524X19849834>.
- [JP9] Olabi, A.G., Mahmoud, M., **Soudan, B.**, Wilberforce, T., and Ramadan, M., (2020). Geothermal Based Hybrid Energy Systems, Toward Eco-Friendly Energy Approaches. *Renewable Energy*, March 2020. Volume 147, 2003-2012. <https://doi.org/10.1016/j.renene.2019.09.140>
- [JP10] **Soudan, B.**, (2019) Community-Scale Baseload Generation from Marine Energy. *Energy*. December 2019. Vol. 189. <https://doi.org/10.1016/j.energy.2019.116134>
- [JP11] Al Shaabi, M., Hatamleh, K. S., Godsden, S. A., **Soudan, B.**, and El-Nady, A., (2019) "Robust nonlinear control and estimation of an PRRR Robot System," *International Journal of Robotics and Automation*. December 2019. <https://doi.org/10.2316/J.2019.206-0160>
- [JP12] Alami, A. H., Aokal, K., Zhang, D., Taieb, A., Faraj, M., Alhammadi, A., **Soudan, B.**, Elhajjar, J., Irimia-Vladu, M., (2019) "Low-Cost Dye-Sensitized Solar Cells Using Ball-Milled Tellurium-Doped Graphene for Counter Electrode and a Natural Sensitizer Dye," *International Journal of Energy Research*. <https://doi.org/10.1002/er.4684>
- [JP13] Wilberforce, T., El Hassan, Z., Durrant, A., Thompson, J., **Soudan, B.**, & Olabi, A. G. (2019). Overview of ocean power technology. *Energy* (175). 15 May 2019. pp. 165 – 181. <https://doi.org/10.1016/j.energy.2019.03.068>.
- [JP14] Willberforce, T., Barghouti, A., El Hassan Z., Thompson, J., **Soudan, B.**, and Olabi A.G., (2019). Prospects and challenges of concentrated solar photovoltaics and enhanced geothermal energy technologies. *Science of the Total Environment* (659). 1 April 2019, 99. 851 – 861. <https://doi.org/10.1016/j.scitotenv.2018.12.257>
- [JP15] Wilberforce, T., Baroutaji, A., **Soudan, B.**, Al-Alami, A.H., Olabi, A.G., (2019) "Outlook of Carbon Capture Technology and Challenges," *Science of the Total Environment* (657), 20 March 2019, pp. 56 - 72. <https://doi.org/10.1016/j.scitotenv.2018.11.424>

- [JP16] Al-Alami, A.H., Okal, K., Zhang, D., and **Soudan, B.**, (2018) “Bulk Turbostatic Graphene Deposition on Aluminum Substrates via High-pressure Graphite Blasting,” *Applied Nanoscience* (8:8), 1 November 2018. pp. 1943-1950, <https://doi.org/10.1007/s13204-018-0862-1>
- [JP17] Abdelkareem, M.A., Assad, M. E. H., Sayed, E.T., and **Soudan, B.**, (2018) “Recent progress in the use of renewable energy sources to power water desalination plants,” *Desalination*, (435), 1 June 2018. pp. 97 – 113. <https://doi.org/10.1016/j.desal.2017.11.018>.
- [JP18] Bonny, T., and **Soudan, B.**, (2105) “High Speed Database Sequence Comparison,” *Procedia – Computer Science*. Vol. 62, pp. 73 – 80.
- [JP19] Tabbaa, H., and **Soudan, B.**, (2015) “Computer-Aided Training for Quranic Recitation,” *Procedia – Social and Behavioral Sciences*. Vol. 192, pp. 778 – 787. <https://doi.org/10.1016/j.sbspro.2015.06.092>
- [JP20] **Soudan, B.**, (2011) “Semi-Random Net Reordering for Reducing Timing Variations and Improving Signal Integrity,” *Microelectronics Journal*, Vol. 42, No. 2, February 2011, pp. 483 – 500.
- [JP21] **Soudan, B.**, (2010) “Reducing Signal Timing Variations in Inter-Core busses,” *Integration, the VLSI Journal*, Vol. 43, No. 2, April 2010, pp. 237 – 249.
- [JP22] **Soudan, B.**, (2009) “Reducing Inductive Coupling Variance in Wide Global Signal Busses,” *International Journal of Electronics*, September 2009, Vol. 96, No. 9, pp. 925 – 933.
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