

Vivian Sultan, PhD

California State University, Los Angeles
College of Business and Economics
5151 State University Dr., ST F603
Los Angeles, CA 90032-8126
Email: vsultan3@calstatela.edu



Professor of Information Systems and Business Management at California State University (CSULA). Dr. Sultan holds a PhD in Information Systems and Technology from Claremont Graduate University. She is a certified professional in supply management with experience in account product management, operations, and automated system projects development.

In addition to her current role at CSULA, Dr. Sultan serves as an Information Governance Senior Advisor at Southern California Edison, as well as a Research Fellow at the Claremont Graduate University (CGU) Center for Information Systems & Technology. She has over than twenty years of industry experience with publications focusing on energy informatics and the digital transformation within supply chains.

Dr. Sultan research primarily focuses on energy informatics and sustainability. Her areas of interest are the applications of GIS, big data analytics, as well as machine learning within the energy domain, particularly the spatial distribution of Distributed Energy Resources (DERs) and resolving grid integration challenges.

Since 2019, Dr. Sultan has been participating in IARIA conferences in various roles. She has served as a Steering Committee Member as well as offered keynotes at multiple IARIA conferences, including Energy and the Annual IARIA Congress. She has also served as an Associate Editor of Proceedings for the International Conference on Smart Grids, Green Communications and IT Energy-aware Technologies.

Currently, Sultan is working on developing Asset Data Solutions for Southern California Edison, research projects that aim for renewable energy supply and smart grid development. As an IARA Fellow, she supports IARIA's International efforts and remains in a supportive role to promote scientific and industrial interchanges.

Selected Publications

- **Sultan, V.**, A. Aryal, H. Chang & J. Kral (2022). "[Integration of EVs into the Smart Grid: A systematic Literature Review](#)," Energy informatics Journal. Computer Science, 5(65).
- **Sultan, V.**, T. Sarkisyan & S. Yadav (2022). "[Wildfires Damage Assessment Via LiDAR](#)," International Journal of Advanced and Applied Sciences 9(11): 34-43.
- **Sultan, V.**, J. Ramirez, J. Peabody & M. Bautista (2022). "[Managing Power Infrastructure Using LiDAR](#)," International Journal of Advanced and Applied Sciences, 9(10): 106-115.
- **Sultan, V.**, H. Bitar, & A. Alzahrani (2022). "[Research Framework for Grid Benefits from Energy](#)

[Storage](#),” International Journal of Advanced and Applied Sciences, 9(4): 53-61.

- **Sultan, V.,** & Hilton, B. (2020). “[A Spatial Analytics Framework to Investigate Electric Power-Failure Events and Their Causes](#).” ISPRS International Journal of Geo-Information, 9(1), 54.
- **Sultan, V.,** & Hilton, B. (2019). “[How May Location Analytics Be Used to Enhance the Reliability of the Smart Grid?](#)” Inventions, 4(3), 39.
- **Sultan, V.** & B. Hilton (2019). “[Electric Grid Reliability Research](#)” Energy informatics Journal. Computer Science, 2(3).
- **Sultan, V.** (2018). “[Solving Electric Grid Network Congestion Problem with Batteries – An Exploratory Study using GIS Techniques](#),” International Journal of Smart Grid and Clean Energy, 7(2).
- **Sultan, V.,** H. Bitar, A. Alzahrani & B. Hilton (2017). “[A Conceptual Framework To Integrate Electric Vehicles Charging Infrastructure Into The Electric Grid](#),” International Journal of Smart Grid and Clean Energy, 6(3).
- **Sultan, V.,** A. Alzahrani, H. Bitar & N. Alharbi (2016). “[Is California's aging infrastructure the principal contributor to the recent trend of power outage?](#)” Journal of Communication and Computer, USA, 13 (5).
- **Sultan, V.,** H. Bitar & B. Hilton (2016). “[Geographic decision support systems to optimize the placement of distributed energy resources](#),” International Journal of Smart Grid and Clean Energy, 5(3).
- **Sultan, V.,** Aryal, A., Wu, C., & Lopez, H. (2023). “[Smart Grid Security: A Systematic Literature Review](#).” Proceedings of the International Conference on Advances in Computing Research (pp. 345-358). Springer, Cham.
- **Sultan, V.,** B. Pezzillo, R. Cuevas, S. Ruiz, J. Tang & A. Acosta (2023). “[Spatial Analysis to Identify the Need for Additional EV Charging](#),” Proceedings of the 13th International Conference on Smart Grids, Green Communications and IT Energy-aware Technologies, Venice, Italy, March 13 – 17.
- **Sultan, V.,** & G. Tice (2022). “[Bitcoin as a New Payment Platform](#),” Proceedings of the International Conference on Innovations in Computing Research, Athens, Greece, August 29-31.
- **Sultan, V.,** J. Ramirez, J. Peabody & M. Bautista (2022). “[GIS Deep Learning for Power Assets' Detection and Identification](#),” Proceedings of the 12th International Conference on Smart Grids, Green Communications and IT Energy-aware Technologies, Venice, Italy, May 22 – 26.
- **Sultan, V.** (2021). “[A Taxonomy for Smart Grid Benefits from Energy Storage](#),” Proceedings of the 11th International Conference on Smart Grids, Green Communications and IT Energy-aware Technologies, Valencia, Spain, May 30 – June 03.
- **Sultan, V.** (2020). “[A Predictive Model to Forecast Power Outages](#),” Proceedings of the 10th International Conference on Smart Grids, Green Communications and IT Energy-aware Technologies, Lisbon, Portugal, September 27 – October 01.
- **Sultan, V.,** & B. Hilton (2019). “[Analysis Framework to Investigate Power-Failure Events and Their Causes?](#)” Proceedings of the International Conference on Data Science, Las Vegas, USA, July 29 – Aug 01, 2019.
- **Sultan, V.** (2019). “[Which Grid Infrastructure Needs Utilities' Immediate Attention to Reduce the Risk of Power Outages?](#)” Proceedings of the International Conference on Data Science, Las Vegas, USA, July 29 – Aug 01.
- **Sultan, V.,** & B. Hilton (2019). “[How May Location Analytics Be Used to Enhance the Reliability of the Smart Grid?](#)” Proceedings of the International Conference on Scientific Computing, Las Vegas, USA, July 29 – Aug 01.

- **Sultan, V.** & B. Hilton (2019). "[Where Should a Utility Improve Tree Cutting to Reduce the Risk of Vegetation Coming into Contact with Power Lines?](#)" Proceedings of the 9th International Conference on Smart Grids, Green Communications and IT Energy-aware Technologies, Athens, Greece, June 2-6.
 - **Sultan, V.** & B. Hilton (2019). "[Is Power Outage Associated With Population Density?](#)" Proceedings of the 9th International Conference on Smart Grids, Green Communications and IT Energy-aware Technologies, Athens, Greece, June 2-6.
 - **Sultan, V.,** A. Vo & B. Hilton (2018). "[Electric Substation Emergency Disaster Response Planning through the use of Geographic Information Systems,](#)" Proceedings of the 8th International Conference on Smart Grids, Green Communications and IT Energy-aware Technologies, Nice, France, May 20-24.
 - **Sultan, V.,** A. Alzahrani, H. Bitar & B. Hilton (2018). "[Battery Storage Integration into the Electric Grid,](#)" Proceedings of the 8th International Conference on Smart Grids, Green Communications and IT Energy-aware Technologies, Nice, France, May 20-24.
 - **Sultan, V.,** A. Vo & B. Hilton (2018). "[An Inclusion of Electric Grid Reliability Research through the Enhanced Energy Informatics Research Framework,](#)" Proceedings of the 8th International Conference on Smart Grids, Green Communications and IT Energy-aware Technologies, Nice, France, May 20-24.
 - **Sultan, V.,** A. Alzahrani, H. Bitar & B. Hilton (2017). "[A Conceptual Framework for Battery Storage Integration into the Electric Grid,](#)" Proceedings of the 2017 International Conference on Computational Science and Computational Intelligence, Las Vegas, USA, December 14-16, 2017.
 - **Sultan, V.,** H. Bitar, A. Alzahrani & B. Hilton (2017). "[Electric Vehicles charging infrastructure integration into the electric grid considering the net benefits to consumers,](#)" Proceedings of the 7th International Conference on Smart Grids, Green Communications and IT Energy-aware Technologies, Barcelona, Spain, May 21-25.
 - **Sultan, V.,** B. Alsamani, N. Alharbi, Y. Alsuhaybany & M. Alzahrani (2016). "[A Predictive Model to Forecast Customer Adoption of Rooftop Solar,](#)" Proceedings of the 4th International Symposium on Computational and Business Intelligence, Switzerland, September 5-7.
 - **Sultan, V.** (2016). "[Exploring Geographic Information Systems To Mitigate America's Electric Grid Traffic Congestion Problem,](#)" Proceedings of the 4th International Symposium on Computational and Business Intelligence, Switzerland, September 5-7.
 - **Sultan, V.** & H. Bitar (2016). "[Geographic Decision Support Systems To Optimize The Placement Of Distributed Energy Resources,](#)" Proceedings of the 22nd Americas Conference on Information Systems, San Diego, August 11-13.
 - **Sultan, V.,** A. Alzahrani, H. Bitar & N. Alharbi (2016). "[Is California's aging infrastructure the principal contributor to the recent trend of power outage?](#)" Proceedings of the 22nd Annual California GIS Conference, Anaheim, May 10-12.
-