

# Curriculum Vitæ

## Dionysios C. Aliprantis

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### EDUCATION

**Ph.D. in Electrical and Computer Engineering**, Dec. 2003

Purdue University, West Lafayette, IN

Dissertation title: “*Advances in electric machine modeling and evolutionary parameter identification*”

Advisor: Scott D. Sudhoff

**Diploma in Electrical and Computer Engineering** (5-year studies), July 1999

National Technical University of Athens, Greece

Diploma thesis title: “*Modeling and control of a variable-speed wind turbine equipped with a permanent-magnet synchronous generator*”

### EMPLOYMENT

**Professor**, Aug. 2019–present

Purdue University, West Lafayette, IN, Electrical & Computer Engineering

**Associate Professor**, Aug. 2013–July 2019

Purdue University, West Lafayette, IN, Electrical & Computer Engineering

**Assistant Professor**, Aug. 2007–July 2013

Iowa State University, Ames, IA, Electrical & Computer Engineering

**Research Scientist**, Jan. 2006–June 2007

Purdue University, West Lafayette, IN, Electrical & Computer Engineering

**Computer Programmer**, Sep. 2004–Sep. 2005

Hellenic Army, Research and Informatics Corps (1 yr. compulsory service)

**Design Consultant Electrical Engineer**, Jan.–Aug. 2004

LDK Consultants, Athens, Greece

**Graduate Research Assistant**, Aug. 1999–Dec. 2003

Energy Sources and Systems laboratory, Purdue University

**Graduate Teaching Assistant**, 2000 fall semester

Purdue University

**Assistant Engineer**, Summer 1996

Themeliodomi S.A., U.S. naval facilities, Souda Bay, Crete, Greece

### HONORS & AWARDS

Best paper award, Power and Energy Conference at Illinois (PECI), Feb. 28, 2020

Outstanding professor award, HKN beta chapter, 2019

Prize paper award, IEEE Power and Energy Society, 2015

Best paper award, IEEE Transactions on Energy Conversion, 2013-2014

Best paper award, Power and Energy Conference at Illinois (PECI), Mar. 1, 2014

Litton Industries Assistant Professor, Iowa State University, Aug. 2009–July 2011

NSF CAREER award, 2009

IEEE senior member (SM'09)

Best paper award, SAE 2002 Power Systems Conference

Gerondelis Foundation graduate study scholarship (\$5,000 awarded to exceptional students of Greek nationality), July 2002

Technical Chamber of Greece award for academic performance during the year 1997–98

National scholarship for obtaining the second highest entrance examination grade among all applicants to the National Technical University of Athens school of Electrical & Computer Engineering, Sep. 1994

## MEMBERSHIPS–SOCIETIES

Registered professional electrical & computer engineer with the Technical Chamber of Greece

IEEE senior member

IEEE Power & Energy Society member

## BOOK CHAPTERS

1. E. Ibáñez, K. Gkritza, J. McCalley, D. Aliprantis, R. Brown, A. Somani, and L. Wang, “Interdependencies between energy and transportation systems for national long term planning,” in *Sustainable and Resilient Critical Infrastructure Systems. Simulation, Modeling, and Intelligent Engineering*, K. Gopalakrishnan and S. Peeta (Eds.), Springer, 2010, ISBN: 978-3-642-11404-5

## REPORTS

1. Committee on Enhancing the Resilience of the Nation’s Electric Power Transmission and Distribution System; Board on Energy and Environmental Systems; Division on Engineering and Physical Sciences; National Academies of Sciences, Engineering, and Medicine, “Enhancing the Resilience of the Nation’s Electricity System”, National Academies Press, Aug. 2017, 320 pages, ISBN 978-0-309-46307-2 | DOI: 10.17226/24836
2. T. Konstantinou, D. Haddad, A. Prasad, E. Wright, K. Gkritza, D. Aliprantis, S. Pekarek, and J. E. Haddock. “Feasibility Study and Design of In-road Electric Vehicle Charging Technologies” (Joint Transportation Research Program Publication No. FHWA/IN/JTRP-2021/25). Oct. 2021, West Lafayette, IN: Purdue University. <https://doi.org/10.5703/1288284317353>

## PEER-REVIEWED JOURNAL PUBLICATIONS

1. S. D. Sudhoff, D. C. Aliprantis, B. T. Kuhn, and P. L. Chapman, “An induction machine model for predicting inverter–machine interaction,” *IEEE Trans. Energy Conv.*, Vol. 17, No. 2, pp. 203–210, June 2002
2. S. D. Sudhoff, D. C. Aliprantis, B. T. Kuhn, and P. L. Chapman, “Experimental characterization procedure for use with an advanced induction machine model,” *IEEE Trans. Energy Conv.*, Vol. 18, No. 1, pp. 48–56, Mar. 2003
3. D. C. Aliprantis, B. T. Kuhn, S. D. Sudhoff, and T. J. McCoy, “A detailed synchronous machine model,” *SAE 2002 Trans.—J. Aerosp.*, pp. 778–788, Sep. 2003. First published in the *SAE Power Syst. Conf.*, Coral Springs, FL, Oct. 29–31, 2002; selected as the **Best Paper of the 2002 SAE Power Syst. Conf.**
4. S. Pekarek, J. Tichenor, N. Benavides, A. Koenig, H. Wang, S. Sudhoff, B. Kuhn, S. Glover, D. Aliprantis, J. Byoun, and J. Sauer, “Development of a testbed for design and evaluation of power electronic-based systems,” *SAE 2002 Trans.—J. Aerosp.*, pp. 850–858, Sep. 2003

5. D. C. Aliprantis, S. D. Sudhoff, and B. T. Kuhn, "A synchronous machine model with saturation and arbitrary rotor network representation," *IEEE Trans. Energy Conv.*, Vol. 20, No. 3, pp. 584–594, Sep. 2005
6. D. C. Aliprantis, S. D. Sudhoff, and B. T. Kuhn, "Experimental characterization procedure for a synchronous machine model with saturation and arbitrary rotor network representation," *IEEE Trans. Energy Conv.*, Vol. 20, No. 3, pp. 595–603, Sep. 2005
7. D. C. Aliprantis, S. D. Sudhoff, and B. T. Kuhn, "A brushless exciter model incorporating multiple rectifier modes and Preisach's hysteresis theory," *IEEE Trans. Energy Conv.*, Vol. 21, No. 1, pp. 136–147, Mar. 2006
8. D. C. Aliprantis, S. D. Sudhoff, and B. T. Kuhn, "Genetic algorithm-based parameter identification of a hysteretic brushless exciter model," *IEEE Trans. Energy Conv.*, Vol. 21, No. 1, pp. 148–154, Mar. 2006
9. D. C. Aliprantis, O. Wasynczuk, and C. D. Rodríguez Valdez, "A voltage-behind-reactance synchronous machine model with saturation and arbitrary rotor network representation," *IEEE Trans. Energy Conv.*, Vol. 23, No. 2, pp. 499–508, June 2008
10. D. Wu, D. C. Aliprantis, and K. Gkritza, "Electric energy and power consumption by light-duty plug-in electric vehicles," *IEEE Trans. Power Syst.*, Vol. 26, No. 2, pp. 738–746, May 2011
11. H. Chen and D. C. Aliprantis, "Analysis of squirrel-cage induction generator with Vienna rectifier for wind energy conversion system," *IEEE Trans. Energy Conv.*, Vol. 26, No. 3, pp. 967–975, Sep. 2011 **(invited)**
12. D. Wu, D. C. Aliprantis, and L. Ying, "On the choice between uncontrolled and controlled charging by owners of PHEVs," *IEEE Trans. Power Deliv.*, Vol. 26, No. 4, pp. 2882–2884, Oct. 2011
13. D. Wu, D. C. Aliprantis, and L. Ying, "Load scheduling and dispatch for aggregators of plug-in electric vehicles," *IEEE Trans. Smart Grid (Special Issue on Transportation Electrification and Vehicle-to-Grid Applications)*, Vol. 3, No. 1, pp. 368–376, Feb. 2012
14. A. M. Cramer, B. P. Loop, and D. C. Aliprantis, "Synchronous machine model with voltage-behind-reactance formulation of stator and field windings," *IEEE Trans. Energy Conv.*, Vol. 27, No. 2, pp. 391–402, June 2012
15. A. G. Thomas, P. Jahangiri, D. Wu, C. Cai, H. Zhao, D. C. Aliprantis, and L. Tesfatsion, "Intelligent residential air-conditioning system with smart-grid functionality," *IEEE Trans. Smart Grid (Special Issue on Intelligent Buildings and Home Energy Management in a Smart Grid Environment)*, Vol. 3, No. 4, pp. 2240–2251, Dec. 2012
16. H. Chen, N. David, and D. C. Aliprantis, "Analysis of permanent-magnet synchronous generator with Vienna rectifier for wind energy conversion system," *IEEE Trans. Sust. Energy*, Vol. 4, No. 1, pp. 154–163, Jan. 2013
17. S. Chiniforoosh, H. Atighechi, A. Davoudi, J. Jatskevich, J. A. Martinez, M. Saeedifard, D. C. Aliprantis, and V. K. Sood, "Steady-state and dynamic performance of front-end diode rectifier loads as predicted by dynamic average-value models," *IEEE Trans. Power Deliv.*, Vol. 28, No. 3, pp. 1533–1541, July 2013
18. P. Jahangiri and D. C. Aliprantis, "Distributed Volt/VAr control by PV inverters," *IEEE Trans. Power Syst.*, Vol. 28, No. 3, pp. 3429–3439, Aug. 2013
19. H. Chen, M. H. Johnson, and D. C. Aliprantis, "Low-frequency AC transmission for offshore wind power," *IEEE Trans. Power Deliv.*, Vol. 28, No. 4, pp. 2236–2244, Oct. 2013
20. C. Cai and D. C. Aliprantis, "Cumulus cloud shadow model for analysis of power systems with photovoltaics," *IEEE Trans. Power Syst.*, Vol. 28, No. 4, pp. 4496–4506, Nov. 2013

21. D. Wu and D. C. Aliprantis, "Modeling light-duty plug-in electric vehicles for national energy and transportation planning," *Energy Policy*, Vol. 63, pp. 419–432, Dec. 2013
22. H. N. Villegas Pico and D. C. Aliprantis, "Voltage ride-through capability verification of wind turbines with fully-rated converters using reachability analysis," *IEEE Trans. Energy Conv.*, Vol. 29, No. 2, pp. 392–405, June 2014. **Best Paper of the IEEE Transactions on Energy Conversion for 2013-2014. IEEE Power & Energy Society 2015 Prize Paper Award.**
23. M. Daryabak, S. Filizadeh, J. Jatskevich, A. Davoudi, M. Saeedifard, V. K. Sood, J. A. Martinez, D. Aliprantis, J. Cano, and A. Mehrizi-Sani, "Modeling of LCC-HVDC systems using dynamic phasors," *IEEE Trans. Power Deliv.*, Vol. 29, No. 4, pp. 1989–1998, Aug. 2014
24. H. Atighechi, S. Chiniforoosh, J. Jatskevich, A. Davoudi, J. A. Martinez, M. O. Faruque, V. Sood, M. Saeedifard, J. M. Cano, J. Mahseredjian, D. C. Aliprantis, and K. Strunz, "Dynamic average-value modeling of CIGRE HVDC benchmark system," *IEEE Trans. Power Deliv.*, Vol. 29, No. 5, pp. 2046–2054, Oct. 2014
25. J. M. Cano, J. Jatskevich, J. G. Norriella, A. Davoudi, X. Wang, J. A. Martinez, A. Mehrizi-Sani, M. Saeedifard, and D. C. Aliprantis, "Dynamic average-value modeling of direct power controlled active front-end rectifiers," *IEEE Trans. Power Deliv.*, Vol. 29, No. 6, pp. 2458–2466, Dec. 2014
26. H. N. Villegas Pico, D. C. Aliprantis, J. D. McCalley, N. Elia, and N. J. Castrillon, "Analysis of hydro-coupled power plants and design of robust control to damp oscillatory modes," *IEEE Trans. Power Systems*, Vol. 30, No. 2, pp. 632–643, Mar. 2015
27. H. N. Villegas Pico and D. C. Aliprantis, "Voltage ride-through capability verification of DFIG-based wind turbines using reachability analysis," *IEEE Trans. Energy Conv.*, Vol. 31, No. 4, pp. 1387–1398, Dec. 2016
28. M. H. Johnson and D. C. Aliprantis, "Analysis of series-dc offshore wind plants with aerodynamic wake effects," *IEEE Trans. Sust. Energy*, Vol. 8, No. 4, pp. 1706–1714, Oct. 2017
29. H. N. Villegas Pico and D. C. Aliprantis, "Reachability analysis of linear dynamic systems with constant, arbitrary, and Lipschitz continuous inputs," *Automatica*, Vol. 95, pp. 293–305, Sep. 2018
30. S. Zhao, Y. Zou, X. Lin, D. Aliprantis, H. Villegas, M. Chen, and A. Castillo, "Leveraging generators with complementary capabilities for robust multi-stage power grid operations," *IEEE Trans. Control of Network Systems*, Vol. 7, No. 3, pp. 1441–1452, Sep. 2020
31. A. Sahu, D. Aliprantis, and I. Bilonis, "Quantification and propagation of uncertainty in the magnetic characteristic of steel and permanent magnets of a synchronous machine drive," *IEEE Trans. Energy Conv.*, Vol. 35, No. 4, pp. 1926–1934, Dec. 2020
32. A. Beltrán-Pulido, D. Aliprantis, I. Bilonis, A. R. Munoz, F. Leonardi, and S. M. Avery, "Uncertainty quantification and sensitivity analysis in a nonlinear finite-element model of a permanent magnet synchronous machine," *IEEE Trans. Energy Conv. (Special Section on Robust Design and Analysis of Electric Machines and Drives)*, Vol. 35, No. 4, pp. 2152–2161, Dec. 2020
33. A. Sayed, D. Aliprantis, H. Ge, and K. Laskaris, "Coupled finite element and extended- $qd$  circuit induction machine model, Part I: Formulation," *IEEE Trans. Energy Conv.*, Vol. 36, No. 3, pp. 2556–2564, Sep. 2021
34. A. Sayed, D. Aliprantis, H. Ge, and K. Laskaris, "Coupled finite element and extended- $qd$  circuit induction machine model, Part II: Implementation," *IEEE Trans. Energy Conv.*, Vol. 36, No. 3, pp. 2565–2573, Sep. 2021

## CONFERENCE PUBLICATIONS

1. D. C. Aliprantis, S. A. Papathanassiou, M. P. Papadopoulos, and A. G. Kladas, "Modeling and control of a variable-speed wind turbine equipped with permanent magnet synchronous generator," in *Proc. Intern. Conf. Electr. Mach. (ICEM)*, Espoo, Finland, Aug. 28–30, 2000
2. S. D. Sudhoff, P. L. Chapman, B. T. Kuhn, and D. C. Aliprantis, "An advanced induction machine model for high-frequency drive analysis," in *Proc. Third Naval Symp. Electr. Mach.*, Philadelphia, PA, Dec. 4–7, 2000
3. S. D. Sudhoff, P. L. Chapman, B. T. Kuhn, and D. C. Aliprantis, "Experimental characterization of an advanced induction machine model," in *Proc. Third Naval Symp. Electr. Mach.*, Philadelphia, PA, Dec. 4–7, 2000
4. S. D. Sudhoff, B. T. Kuhn, D. C. Aliprantis, and P. L. Chapman, "An advanced induction machine model for predicting inverter–machine interaction," in *Proc. IEEE Power Electr. Spec. Conf. (PESC)*, Vancouver, Canada, June 17–21, 2001
5. S. Pekarek, D. Aliprantis *et al.*, "A hardware power electronic-based distribution and propulsion testbed," in *Proc. Sixth IASTED Intern. Multi-Conf. Power Energy Syst.*, Marina del Rey, CA, May 12–15, 2002
6. B. Cassimere, S. Sudhoff, B. Cassimere, D. Aliprantis, and M. Swinney, "IGBT and PN junction diode loss modeling for system simulations," in *Proc. IEEE Intern. Electr. Mach. & Drives Conf. (IEMDC)*, San Antonio, TX, May 15–18, 2005
7. B. Cassimere, S. Sudhoff, B. Cassimere, D. Aliprantis, and M. Swinney, "Time-domain design of motor drive current regulators using genetic algorithms," in *Proc. IEEE Intern. Electr. Mach. & Drives Conf. (IEMDC)*, San Antonio, TX, May 15–18, 2005
8. N. Wu, C. Rands, C. E. Lucas, E. A. Walters, M. A. Hasan, D. Aliprantis, and M. A. Masrur, "Distributed heterogeneous simulation of a hybrid-electric vehicle," in *Proc. Fourth Intern. Energy Conv. Eng. Conf. Exhibit (IECEC)*, San Diego, CA, June 26–29, 2006
9. D. C. Aliprantis, O. Wasynczuk, N. Wu, C. E. Lucas, and A. Masrur, "Automated evolutionary design of a hybrid-electric vehicle power system using distributed heterogeneous optimization," in *Proc. SAE Power Syst. Conf.*, New Orleans, LA, Nov. 7–9, 2006
10. N. Wu, C. E. Lucas, C. Rands, I. E. Simpson, D. C. Aliprantis, and A. Masrur, "Distributed heterogeneous simulation of a hybrid-electric vehicle drive system using the Simplorer software product," in *Proc. SAE Power Syst. Conf.*, New Orleans, LA, Nov. 7–9, 2006
11. C. Hoffmann, E. Swain, Y. Xu, T. Downar, L. Tsoukalas, P. Top, M. Senel, M. Bell, E. Coyle, B. Loop, D. Aliprantis, O. Wasynczuk, and S. Meliopoulos, "DDDAS for autonomic interconnected systems: the national energy infrastructure," in *Proc. Intern. Conf. Comp. Sc. (ICCS)*, Beijing, China, May 27–30, 2007
12. S. Sarkar, P. Vijayan, D. C. Aliprantis, and V. Ajarapu, "Effect of grid voltage unbalance on operation of a bi-directional converter," in *Proc. North Amer. Power Symp. (NAPS)*, Calgary, Canada, Sep. 28–30, 2008
13. T. Das and D. C. Aliprantis, "Small-signal stability analysis of power system integrated with PHEVs," in *Proc. IEEE Energy 2030 Conf.*, Atlanta, GA, Nov. 17–18, 2008
14. E. Ibáñez, J. McCalley, D. Aliprantis, R. Brown, K. Gkritza, A. Somani, and L. Wang, "National energy and transportation systems: interdependencies within a long term planning model," in *Proc. IEEE Energy 2030 Conf.*, Atlanta, GA, Nov. 17–18, 2008
15. D. Wu, H. Chen, T. Das, and D. C. Aliprantis, "Bidirectional power transfer between HEVs and grid without external power converters," in *Proc. IEEE Energy 2030 Conf.*, Atlanta, GA, Nov. 17–18, 2008

16. H. Chen, S. Sun, D. C. Aliprantis, and J. Zambreno, "Dynamic simulation of electric machines on FPGA boards," in *Proc. IEEE Intern. Electr. Mach. & Drives Conf. (IEMDC)*, Miami, FL, May 3–6, 2009
17. R. Dai, J. D. McCalley, D. C. Aliprantis, V. Ajjarapu, T. Das, D. Wu, M. A. Riaz, and R. U. Imtiaz, "Hierarchical control for hybrid wind systems," in *Proc. North Amer. Power Symp. (NAPS)*, Starkville, MS, Oct. 4–6, 2009
18. H. Chen, S. Sun, D. C. Aliprantis, and J. Zambreno, "Dynamic simulation of DFIG wind turbines on FPGA boards," in *Proc. IEEE Power & Energy Conf. at Illinois (PECI)*, Urbana, IL, Feb. 12–13, 2010
19. D. Aliprantis, L. Tesfatsion, and H. Zhao, "An agent-based test bed for the integrated study of retail and wholesale power system operations," in *Proc. First Intern. Worksh. Agent Technologies for Energy Syst. (ATES)*, Toronto, Canada, May 11, 2010
20. D. Aliprantis, S. Penick, H. Zhao, and L. Tesfatsion, "Integrated retail and wholesale power system operation with smart grid functionality," in *Proc. IEEE Power Energy Soc. Gen. Meet.*, Minneapolis, MN, July 25–29, 2010
21. J. McCalley, E. Ibáñez, K. Gkritza, D. Aliprantis, L. Wang, A. Somani, and R. Brown, "National long-term investment planning for energy and transportation systems," in *Proc. IEEE Power Energy Soc. Gen. Meet.*, Minneapolis, MN, July 25–29, 2010
22. H. Chen and D. C. Aliprantis, "Induction generator with Vienna rectifier: feasibility study for wind power generation," in *Proc. Intern. Conf. Electr. Mach. (ICEM)*, Rome, Italy, Sep. 6–8, 2010
23. C. Cai, P. Jahangiri, A. G. Thomas, H. Zhao, D. C. Aliprantis, and L. Tesfatsion, "Agent-based simulation of distribution systems with high penetration of photovoltaic generation," in *Proc. IEEE Power Energy Soc. Gen. Meet.*, Detroit, MI, July 24–28, 2011
24. H. Zhao, A. Thomas, P. Jahangiri, C. Cai, L. Tesfatsion, and D. Aliprantis, "Two-settlement electric power markets with dynamic-price customers," in *Proc. IEEE Power Energy Soc. Gen. Meet.*, Detroit, MI, July 24–28, 2011
25. D. Wu, C. Cai, and D. C. Aliprantis, "Potential impacts of aggregator-controlled plug-in electric vehicles on distribution systems," in *Proc. Fourth IEEE Intern. Worksh. Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP)*, San Juan, PR, Dec. 15, 2011
26. A. M. Cramer, D. C. Aliprantis, and B. P. Loop, "Advanced generator modeling in medium voltage DC power systems," in *Proc. ASNE Electr. Mach. & Technol. Symp.*, Philadelphia, PA, May 23–24, 2012
27. P. Jahangiri, D. Wu, W. Li, D. C. Aliprantis, and L. Tesfatsion, "Development of an agent-based distribution test feeder with smart-grid functionality," in *Proc. IEEE Power Energy Soc. Gen. Meet.*, San Diego, CA, July 22–26, 2012
28. A. G. Thomas, C. Cai, D. C. Aliprantis, and L. Tesfatsion, "Effects of price-responsive residential demand on retail and wholesale power market operations," in *Proc. IEEE Power Energy Soc. Gen. Meet.*, San Diego, CA, July 22–26, 2012
29. M. H. Johnson, H. Chen, and D. C. Aliprantis, "Offshore wind farm with dc collection system," in *Proc. IEEE Power & Energy Conf. at Illinois (PECI)*, Urbana, IL, Feb. 22–23, 2013
30. Y. Li and D. C. Aliprantis, "Optimal design of electromechanical devices using a hybrid finite element/air-gap element method," in *Proc. IEEE Power & Energy Conf. at Illinois (PECI)*, Urbana, IL, Feb. 22–23, 2013
31. Y. Xu and D. C. Aliprantis, "Experimental parameterization procedure for a wound-rotor induction generator," in *Proc. IEEE Power & Energy Conf. at Illinois (PECI)*, Urbana, IL, Feb. 22–23, 2013

32. N. David and D. C. Aliprantis, "DFIG with grid-connected rotor for wind energy conversion system," in *Proc. IEEE Intern. Electr. Mach. & Drives Conf. (IEMDC)*, Chicago, IL, May 12–15, 2013
33. Y. Li and D. C. Aliprantis, "Optimum stator teeth shapes for torque ripple reduction in switched reluctance motors," in *Proc. IEEE Intern. Electr. Mach. & Drives Conf. (IEMDC)*, Chicago, IL, May 12–15, 2013
34. N. David, S. Debnath, M. A. Ahmed, D. C. Aliprantis, and M. Saedifard, "Development of a new power electronics curriculum relevant to tomorrow's power engineering challenges," in *Proc. 2013 ASEE Ann. Conf. & Expo.*, Atlanta, GA, June 23–26, 2013
35. H. Villegas, D. C. Aliprantis, and E. C. Hoff, "Reachability analysis of power system frequency dynamics with new high-capacity HVAC and HVDC transmission lines," in *Proc. 2013 IREP Symposium – Bulk Power System Dynamics and Control – IX Optimization, Security and Control of the Emerging Power Grid*, Rethymnon, Crete, Greece, Aug. 25–30, 2013
36. M. H. Johnson and D. C. Aliprantis, "Analysis and control of PMSG-based wind turbine with Vienna rectifier near current zero crossings," in *Proc. IEEE Power & Energy Conf. at Illinois (PECI)*, Urbana, IL, Feb. 28–Mar. 1, 2014. **Best Paper Award.**
37. N. David and D. C. Aliprantis, "Improved efficiency of DFIG wind energy conversion systems by operating in the rotor-tied configuration," in *Proc. Intern. Conf. Electr. Mach. (ICEM)*, Berlin, Germany, Sep. 2–5, 2014
38. Y. Xu and D. C. Aliprantis, "Wound-rotor induction machine model with saturation and high-frequency effects," in *Proc. Intern. Conf. Electr. Mach. (ICEM)*, Berlin, Germany, Sep. 2–5, 2014
39. P. Huynh, H. Zhu, and D. Aliprantis, "Non-intrusive parameter estimation for single-phase induction motors using transient data," in *Proc. IEEE Power & Energy Conf. at Illinois (PECI)*, Urbana, IL, Feb. 20–21, 2015
40. Y. Li, S. Ravi, and D. C. Aliprantis, "Tooth shape optimization of switched reluctance motors for improved torque profiles," in *Proc. IEEE Intern. Electr. Mach. & Drives Conf. (IEMDC)*, Coeur d'Alene, ID, May 10–13, 2015
41. H. N. Villegas Pico, D. C. Aliprantis, and S. D. Sudhoff, "Reachability analysis of shipboard power systems with uncertain pulsed loads," in *Proc. IEEE Electric Ship Technologies Symp. (ESTS)*, Alexandria, VA, June 21–24, 2015
42. S. Zhao, H. Villegas, X. Lin, D. Aliprantis, and M. Chen, "Online multi-stage decisions for robust power-grid operations under high renewable uncertainty," in *Proc. IEEE Intern. Conf. Comp. Comm. (INFOCOM)*, San Francisco, CA, Apr. 10–15, 2016
43. A. Batek and D. Aliprantis, "Improving home appliance energy use scheduling: insights from a remodeled, energy efficient home," in *Proc. IEEE Conf. Innovative Smart Grid Technologies (ISGT)*, Minneapolis, MN, Sep. 6–9, 2016
44. P. Huynh, H. Zhu, and D. Aliprantis, "Parameter estimation for single-phase induction motors using test measurement data," in *Proc. North Amer. Power Symp. (NAPS)*, Denver, CO, Sep. 18–20, 2016
45. H. N. Villegas Pico, D. C. Aliprantis, and X. Lin, "Transient stability assessment of power systems with uncertain renewable generation," in *Proc. IREP'2017 – Bulk Power Systems Dynamics and Control Symposium – X*, Espinho, Portugal, Aug. 27–Sep. 1, 2017
46. Y. Zou, X. Lin, D. Aliprantis, and X. Lin, "Robust multi-stage power grid operations with energy storage," in *Proc. IEEE INFOCOM 2018*, Honolulu, HI, Apr. 15–19, 2018
47. A. Sayed, D. Aliprantis, L. Wu, G. Zhou, and S. Dutta, "Mitigation of dc-link voltage oscillations caused by resolver error in an electric vehicle drivetrain," in *Proc. 2018 IEEE Energy Conversion Congress and Exposition (ECCE 2018)*, Portland, OR, Sep. 23–27, 2018

48. D. Haddad, T. Konstantinou, A. Prasad, Z. Hua, D. Aliprantis, K. Gkritza, and S. Pekarek, “Data-driven design and assessment of dynamic wireless charging systems,” in *Proc. 2019 IEEE PELS Workshop on Emerging Technologies: Wireless Power Transfer (WoW)*, London, England, June 17–21, 2019
49. P. Kulkarni, D. Aliprantis, B. Loop, and N. Wu, “Autonomous power dispatch for a deep space vehicle power system,” in *Proc. 2020 IEEE Power & Energy Conference at Illinois (PECI)*, Champaign, IL, Feb. 27–28, 2020. **Best Paper Award.**
50. P. Kulkarni, D. Aliprantis, N. Wu, and B. Loop, “Fault identification in dc-dc converters using support vector machines with power spectrum-based features,” in *Proc. 2021 IEEE International Symposium on Diagnostics for Electric Machines, Power Electronics and Drives (SDEMPED)*, virtual conference, Aug. 22–25, 2021

## PATENTS

1. D. Aliprantis, G. Zhou, A. Sayed, “Systems and Methods for Reducing Dc-Link Oscillations”, U.S. patent No.: 10,284,127 B2, May 7, 2019.