

CURRICULUM VITAE

2020

Seyed Alireza Davari

Date of birth: 4 May 1981

Associate Professor, Electrical Engineering Faculty,

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EDUCATION

Ph.D.: Electrical Engineering, Electrical Machines Drives

Iran University of Science and Technology, IRAN, Sep. 2006- February 2012.

Thesis Title: “**Simulation and Implementation of Sensorless Predictive Torque Control.**”

Supervisor: **Dr. Davood Arab Khaburi** , Advisor: **Prof. Ralph Kennel**

M.Sc.: Electrical Engineering, Power System

Iran University of Science and Technology, Tehran, IRAN, Sep. 2004 – Sep. 2006

Dissertation Title: “**Distribution Current Estimation Method Based on Electromagnetic Field Measurement in Steady State and Transient States.**”

Supervisors: **Dr. Seyed Mohammad Shahrtash**

B.Sc.: Electrical Engineering, Electronics

University of Semnan, Semnan, IRAN, Sep. 1999 – Jul. 2004

Project Title: “**Design and Implementation of a MIDI Synthesizer by means of 8951 Microcontroller.**”

Supervisor: **Dr. Khashayar Yaghmaie**



PROFESSIONAL EXPERIENCES

1. Faculty Member, Electrical Engineering Faculty, Shahid Rajae Teacher Training University, Tehran, IRAN, since Apr. 2013.
2. Technical and student affairs deputy dean, Electrical Engineering Faculty, Shahid Rajae Teacher Training University, Tehran, IRAN, since Oct. 2015.
3. General Chair of 11th IEEE Power Electronics, Drive Systems and Technology Conference, Shahid Reajae Teacher Training University, Feb. 2020.
- 4.
5. Head of drive systems and power electronics (DSPE) research laboratory, Electrical Engineering Faculty, Shahid Rajae Teacher Training University, Tehran, IRAN, since Sep. 2013.
6. Power group management, Electrical Engineering Faculty, Shahid Rajae Teacher Training University, Tehran, IRAN, Sep. 2014- Oct. 2015.
7. Internship affairs office responsible, Electrical Engineering Faculty, Shahid Rajae Teacher Training University, Tehran, IRAN, Jan. 2014- Sep. 2014.
8. Lecturer, Electrical Engineering Faculty, Shahid Rajae Teacher Training University, Tehran, IRAN, Sep. 2012- Apr. 2013.
9. Supervising 11 master students and two PHD student, drive systems and power electronics (DSPE) research laboratory, Electrical Engineering Faculty, Shahid Rajae Teacher Training University, Tehran, IRAN, from Sep. 2013.
10. Performed 2 finished funded research projects, drive systems and power electronics (DSPE) research laboratory, Electrical Engineering Faculty, Shahid Rajae Teacher Training University, Tehran, IRAN, from Sep. 2013.
11. Visiting PhD. student, Technische Universität Muenchen, Munich, GERMANY, Sep. 2009-Aug. 2010.
12. Teaching Courses:
 - "Power Electronics 2" (Graduate Class)
 - "Electrical Motor Drive Systems" (Graduate Class)
 - "Industrial Electronics."
 - "Electrical Machines I"
 - "Electrical Machines II."
 - "Electrical Machines III."
 - "Electrical Measurements"
 - "Power System Analysis"
 - "Electrical Machines Lab"

HONORS AND AWARDS

- **Senior Member of IEEE**
- **Rank first GPA among 30** Ms. graduate students in power system in Iran University of Science and Technology, 2006.
- **Rank 26th** among more than 20000 participants of Tehran province's pre-university entrance exam, 1998.
- Winner of **University award for top students**, 2005.
- **Rank 2nd among 80** participants of power engineering PhD entrance exam at Iran University of Science and Technology, 2006.
- Chosen as the **Best Lecturer** in Shariaty Technical College, Tehran, Iran , May. 2009.
- Winner of **Best paper award** in IEEE PEDSTC conference, Tehran, Iran, February 2012.
- Winner of **Best paper award** in IEEE PEDSTC conference, Tehran, Iran, February 2014.
- Winner of **Best paper award** in IEEE PEDSTC conference, Tehran, Iran, February 2018.
- Winner of **Best paper award** in IEEE PRECEDE conference, Quanzhou, China, June 2019.

MEMBERSHIP IN INSTITUTES

- **IEEE (Institute of Electrical and Electronics Engineers), United States of America, Senior Member**
- **PESI (Power Electronics Society of Iran), Iran**

INTERNATIONAL RESEARCH EXPERIENCE

Apr. 2018- Mar. 2019, University of Undress Bello, Santiago, Chile, Shahid Rajae Teacher Training University, Tehran, Iran, Project Number: 1170167,

- Predictive control for energy transmission with multilevel converters.
Supervisor: **Prof. Jose Rodriguez**

Oct. 2010 –June 2011, TU Muenchen, Institute for Electrical Drive Systems and Power Electronics

- Implementation of sensorless predictive torque control for induction motors.
Supervisor: **Prof. Ralph Kennel**
- Design and implement 10KW 2- level inverter. Supervisor: **Prof. Ralph Kennel**

RESEARCH EXPERIENCE

1. **Jun. 2018- present,** “Design and implement a firmware for MAPCS boards,” MECO, MAPNA group, Tehran, Iran.
2. **Apr. 2017- present,** “Loss minimization of induction motor by the drive system,” Niroo Research Institute, Tehran, Iran.
3. **Aug. 2015-March.2016.,** “Design and implementation of a controllable load system,” Shahid Rajae Teacher Training University, Tehran, Iran.
4. **May. 2014-March.2015.,** “Design and implementation of a drive system setup,” Shahid Rajae Teacher Training University, Tehran, Iran.
5. **Sep. 2011-Aug.2012.** “Study the reasons of damages on the Yaghchian substation,” Niroo Research Institute, Power Transmission and Distribution Research Center, Tehran, Iran.
6. **Aug. 2009-Aug.2010.** “Study the effects of the transient voltage, resonance, and Ferro-resonance on the transformer of the Anjirak substation,” Niroo Research Institute, Power Transmission and Distribution Research Center, Tehran, Iran.

PRESENTATIONS IN CONFERENCES

1. “Virtual Flux Model Predictive Direct Power Control (VF-MPDPC) of AFE Rectifier with New Current Prediction Method and Negative Sequence Elimination,” Sep. 2017, Plzen, Czech Republic, IEEE PRECEDE Conference (in English).
2. “Sensorless Predictive Control Method of Three-Phase AFE Rectifier with MRAS Observer for Robust Control,” Sep. 2017, Plzen, Czech Republic, IEEE PRECEDE Conference (in English).
3. “Predictive Torque Control of DFIG with Torque Ripple Reduction,” Nov. 2016, Malacca, Malaysia, IEEE PECON Conference (in English).
4. “Voltage Model Observer Based Encoderless Predictive Control of DFIG for Wind Turbine Applications,” Feb. 2015, Tehran, Iran, IEEE PEDSTC Conference (in English).
5. “Predictive rotor control of DFIG supplied with back-back converters for variable speed wind turbine application,” Jun. 2014, Istanbul, Turkey, IEEE ISIE Conference (in English).
6. “Using Predictive Control and q-ZSI to Drive an Induction Motor Supplied by a PV Generator”, Feb. 2014, Tehran, Iran, IEEE PEDSTC Conference (in English).
7. “Robust Sliding Mode Voltage Model Observer for Sensorless PTC of Induction Motors”, Feb. 2012, Tehran, Iran, IEEE PEDSTC Conference (in English).
8. “A Sensorless Predictive Torque Control by means of Sliding Mode Observer” May 2008, Tehran, Iran, ICEE Conference (in Persian).
9. “Sensorless Predictive Torque Control by means of Sliding Mode Observer”, Nov. 2008 Johorbahru, Malaysia, IEEE PECON Conference (in English).
10. “Sensorless Vector Control of Induction Motor with Adaptive Fuzzy Method” May 2009, Tehran, Iran, ICEE Conference (in Persian).

SAMPLE SUPERVISING THE THESIS

1. Efficiency control of the induction motor supplied by a PV system.
2. Feedback gain design for a closed loop reduced order observer.
3. Using predictive control to reduce the torque ripple of doubly fed induction generator (DFIG) in wind energy application.
4. Direct flux estimation in induction motor drives by means of MRAS system.
5. AFE Rectifier Control Based on Virtual Flux and Extended Power Theory Under Unbalanced Network Condition.
6. AC Voltage Sensorless Predictive Control Method of Three-Phase AFE Rectifier

PUBLICATIONS

Journal paper

- [1] S. A. Davari, D. A. Khaburi and R. Kennel, "An Improved FCS-MPC algorithm for Induction Motor with Imposed Optimized Weighting Factor," *IEEE Tran. Power Elec.*, Vol.27, No. 3, pp. 1540 - 1551, Mar. 2012.
- [2] S. A. Davari, D. A. Khaburi, F. Wang and R. Kennel "Using Full Order and Reduced Order Observers for Robust Sensorless Predictive Torque Control of Induction Motors," , *IEEE Tran. Power Elec*, Vol. 27, No. 7, pp. 3423-3433, Jul. 2012.
- [3] S. A. Davari, D. A. Khaburi and R. Kennel, "Robust Sensorless Predictive Control of Induction Motors with Sliding Mode Voltage Model Observer," *Turkish Journal of lectrical engineering and Computer Science*, Volume 21, Issue 6, pp. 1539-1552, Nov. 2013.
- [4] F. Wang, Z. Zhang, S.A. Davari, R. Fotouhi, D. Arab Khaburi, J Rodriguez and R. Kennel, "An Encoderless Predictive Torque Control for an Induction Machine with a Revised Prediction Model and EFOSMO," *IEEE Tran. Ind. Elec.*, Vol.61, No. 12, pp. 6635 - 6644, Dec. 2014.
- [5] F. Wang, Z. Zhang, S.A. Davari, J Rodriguez and R. Kennel, "An experimental assessment of finite-state Predictive Torque Control for electrical drives by considering different online-optimization methods," *Elsevier Journal of Control Engineering Practice*, Vol.31, 2014.
- [6] F. Wang, S. A. Davari, Z. Chen, Z. Zhang, D. Arab Khaburi, J.Rodr'iguez, and R. Kennel, "Finite Control Set Model Predictive Torque Control of Induction Machine with a Robust Adaptive Observer," *IEEE Tran. Ind. Electron.*, Vol.64, No. 4, pp. 2631 - 2641, Apr. 2017.
- [7] S. A. Davari, "Predictive Direct Angle Control of Induction Motor," *IEEE Tran. Ind. Electron.*, Vol. 63, No. 8, pp. 5276-5284, Aug. 2016.
- [8] F. Wang, S. A. Davari, Z. Chen, Z. Zhang, D. Arab Khaburi, J.Rodr'iguez, and R. Kennel, "Finite Control Set Model Predictive Torque Control of Induction Machine with a Robust Adaptive Observer," *IEEE Tran. Ind. Electron*, Vol. 64, No. 4, pp. 2631-2641, Apr. 2017.
- [9] M. Mokhtari Vayeghan1, and S. A. Davari, "Torque ripple reduction of DFIG by a new and robust predictive torque control method," *IET Renewable Power Generation*, Vol. 11 Iss. 11, pp. 1345-1352, Sept. 2017.
- [10] S. A. Davari, F. Wang, and R. M. Kennel, "Robust Deadbeat Control of Induction Motor by Stable MRAS Speed and Stator Estimation," *IEEE Tran. Ind. Inf.*, vol. 14, no. 1, pp. 200-209, Jan. 2018.
- [11] S. A. Davari and J. Rodriguez, "Predictive Direct Voltage Control of Induction Motor with Mechanical Model Consideration for Sensorless Applications," *IEEE J. Emerg. Sel. Top. Power Electron.*, p. 1, 2018.
- [12] M. Mehreganfar, M. H. Saeedinia, S. A. Davari, C. Garcia, J. Rodriguez , "Sensorless Predictive Control of AFE Rectifier With Robust Adaptive Inductance Estimation," *IEEE Tran. Ind. Inf.*, vol. 15, no. 6, pp. 3420-3431, Jun. 2018.
- [13] A. Askari, B. Zarei, S. A. Davari, F. Wang, R. Kennel, "A Modified Closed loop Voltage Model Observer Based on Adaptive Direct Flux Magnitude Estimation in Sensorless Predictive Direct Voltage Control of Induction Motor" *IEEE Tran. Pow. Elec.*, vol. 35, no. 1, pp. 630-639, Jan. 2020.
- [14] F. Wang, H. Xie, Q. Chen, S. A. Davari, J. Rodriguez, "Parallel Predictive Torque onrol for Induction Machines without Weighting Factors" *IEEE Tran. Ind. Elec.*, vol. 35, no. 2, pp. 1779-1788, Feb. 2020.
- [15] S. R. Eftekhari, S. A. Davari, P. Naderi, C. Garcia and J. Rodriguez, "Robust Loss Minimization for Predictive Direct Torque and Flux Control of an Induction Motor With Electrical Circuit Model," in *IEEE Transactions on Power Electronics*, vol. 35, no. 5, pp. 5417-5426, May 2020.

- [16] **S. A. Davari**, M. Norambuena, V. Nekoukar, C. Garcia and J. Rodriguez, "Even-Handed Sequential Predictive Torque and Flux Control," in *IEEE Transactions on Industrial Electronics*, vol. 67, no. 9, pp. 7334-7342, Sept. 2020.
- [17] A. Aliaskari, B. Zarei, **S. A. Davari**, "Using the Poles Shifting Method in a New Reduced-Order Observer for Direct Torque Control Technique in Induction Motor," *Tabriz Journal of electrical engineering*, accepted.
- [18] M. H. Saeedinia, M. Mehreganfar, and **S. A. Davari**, "AFE Rectifier Control Based on Virtual Flux Direct Power Control and Power Ripple Elimination under Unbalanced Network Condition," *Tabriz Journal of electrical engineering*, accepted.
- [19] A. Mirzakhani, R. Ghandehari, **S. A. Davari**, "A New DPC-based Control Algorithm for Improving the Power Quality of DFIG in Unbalance Grid Voltage Conditions" *International Journal of Renewable Energy Research*, vol. 8, no. 4, 2018.
- [20] Soroush Ghabusnejad, Ashkan Majdi, **S. A. Davari**, "Using P&O Based Sensorless Method In Single- Axis Solar Tracker" *International Journal of Renewable Energy Research*, vol. 9, no. 1, 2019.
- [21] A. Mirzakhani, R. Ghandehari, **S. A. Davari**, "Modeling and dynamic response of double-feed induction generator and back-to-back converters in unbalanced grid voltage conditions" *Wind Engineering*, May 2019.
- [22] **S. A. Davari**, V. Nekoukar, C. Garcia and J. Rodriguez, "Online Weighting Factor Optimization by Simplified Simulated Annealing for Finite Set Predictive Control," in *IEEE Transactions on Industrial Informatics*, doi: 10.1109/TII.2020.2981039.
- [23] H. Rostami, M. R. Azizian, **S. A. Davari** and S. M. Rad, "Single-Phase Three-Level Neutral-Point-Clamped Inverter Based on Modified Z-Source Network with Reduced Voltage Stress on Capacitors," in *IEEE Journal of Emerging and Selected Topics in Power Electronics*, doi: 10.1109/JESTPE.2020.2966286.

Conference Papers

- [1] **S. A. Davari**, S. M. Shahrtash, "Current Estimation in Distribution Lines Based on Environmental Electromagnetic Field Measurement," *First Power System Protection Conference*, Amirkabir University of Technology, Jan 2007.
- [2] A. Kazemi, **S. A. Davari**, "A Reference Detection Algorithm for Series Active Power Filters, Aimed at Current Harmonics and Reactive Power Compensation," *Industrial Electronics and Applications, ICIEA 2007*. 2nd IEEE Conference 23-25 May 2007 Page(s):1761 - 1766.
- [3] **S. A. Davari**, S. M. Shahrtash, "Fault Classification in Distribution Power Lines Based on Magnetic Field Measurement and Fourier Transform," *IEEE*, 16-20 July 2007 page(s):1 - 5.
- [4] **S. A. Davari**, S. M. Shahrtash, "Fault Classification in Distribution Power Lines Based on Magnetic Field Measurement and Wavelet Transform," *IEEE IPEC 2007*.
- [5] **S. A. Davari**, D. Arab Khaburi, "Sensorless Predictive Torque Control by means of Sliding Mode Observer," *IEEE Power and Energy Conference, PECon*, 11-3 Dec. 2008 Page(s):707 - 711.
- [6] **S. A. Davari**, D. Arab Khaburi, "A Sensorless Predictive Torque Control by means of Sliding Mode Observer," *16th Iranian Conference on Electrical Engineering, ICEE 2008 (Persian)*.
- [7] **S. A. Davari**, D. Arab Khaburi, "Sensorless Vector Control of Induction Motor with Adaptive Fuzzy Method," *17th Iranian Conference on Electrical Engineering, ICEE 2009 (Persian)*.
- [8] **S. Alireza Davari**, Farhad montazeri and Davood Arab Khaburi, "A Comparative Study of Matrix Converter Based DTC with Complete Vectors Application and an Improved Predictive Torque Control Using Two- Level Inverter," *IEEE 6th International Conference on Electrical and Electronics Engineering, ELECO*, Nov. 2009, p.p. 410-414.
- [9] **S. Alireza Davari**, Farshad montazeri and Davood Arab Khaburi, "Efficiency Assessment of Utilizing Photo Voltaic Cells for High Efficiency DTC Branched Methods," *24th Power System Conference, PSC*, Oct. 2009.
- [10] **S.A. Davari**, E. Hasankhan and D.A. Khaburi, "A Comparative Study of DTC-SVM with Three- Level Inverter and an Improved Predictive Torque Control Using Two-Level Inverter," *2nd IEEE Power Electronics, Drive Systems and Technologies Conference (PEDSTC)*, pp. 379-384, 2011.
- [11] **S. A. Davari** and D. A. Khaburi, "Sensorless Predictive Torque Control of Induction Motor by means of Reduced Order Observer," *2nd IEEE Power Electronics, Drive Systems and Technologies Conference (PEDSTC)*, pp. 484-488, 2011.
- [12] **S. A. Davari**, D. A. Khaburi, P. Stolze and R. Kennel, "An Improved Finite Control Set - Model Predictive Control (FCS-MPC) algorithm with Imposed Optimized Weighting Factor", *EPE 2011*.
- [13] Fengxiang Wang, **S. Alireza Davari**, Davood A. Khaburi and Ralph Kennel, "Sensorless Model Predictive Torque Control for Induction Machine by using the Sliding Mode Full- Order Observer," *SLED 2011*.
- [14] **S. A. Davari**, D. A. Khaburi, F. Wang and R. Kennel "Robust Sliding Mode Voltage Model Observer for Sensorless PTC of Induction Motors," *PEDSTC 2012*. (best paper award)
- [15] **S. A. Davari**, D. A. Khaburi, and R. Kennel, "Using a weighting factor table for FCS-MPC of induction motors with extended prediction horizon," *IECON 2012*
- [16] **S. A. Davari**, and D. A. Khaburi, "Using Predictive Control and q-ZSI to Drive an Induction Motor Supplied by a PV Generator," *PEDSTC 2014*. (best paper award)

- [17] **S. A. Davari**, "Predictive rotor control of DFIG supplied with back-back converters for variable speed wind turbine application," IEEE 23rd International Symposium on Industrial Electronics (ISIE), pp. 1415 – 1419, Jun. 2014.
- [18] **S. A. Davari**, and D. A. Khaburi, "Voltage Model Observer Based Encoderless Predictive Control of DFIG for Wind Turbine Applications," PEDSTC2015.
- [19] B. Mirshekarpour, and **S. A. Davari**, "Efficiency Optimization and Power Management in a Stand-Alone Photovoltaic (PV) Water Pumping System," PEDSTC 2016.
- [20] M. Mokhtari, and **S. A. Davari**, and , "Predictive Torque Control of DFIG with Torque Ripple Reduction," PECON 2016.
- [21] A. Aliaskari, and **S. A. Davari**, "An Improved Reduced Order Observer with Added Flux Feedback Term for Sensorless DTC Application," PEDSTC 2017.
- [22] B. Zarei, and **S. A. Davari**, "A Novel MRAS Observer Based on Direct Stator Flux Estimation in Sensorless Direct Torque Control Application," PEDSTC 2017.
- [23] M. Mehreganfar, and **S. A. Davari**, "Sensorless Predictive Control Method of Three-Phase AFE Rectifier with MRAS Observer for Robust Control," PRECEDE 2017.
- [24] M. H. Saeedinia, and **S. A. Davari**, "Virtual Flux Model Predictive Direct Power Control (VF-MPDPC) of AFE Rectifier with New Current Prediction Method and Negative Sequence Elimination," PRECEDE 2017.
- [25] X. Mei, X. Lu, **A. Davari**, E. A. Jarchlo, F. Wang, and R. Kennel, "Torque disturbance observer based model predictive control for electric drives," in 2018 9th Annual Power Electronics, Drives Systems and Technologies Conference (PEDSTC), 2018, pp. 499–504.
- [26] M. Mehreganfar, M. H. Saeedinia, **S. A. Davari**, and D. A. Khaburi, "Direct power control of AFE rectifier by line voltage sensorless predictive technique and MRAS inductance estimator," in 2018 9th Annual Power Electronics, Drives Systems and Technologies Conference (PEDSTC), 2018, pp. 247–252.
- [27] M. H. Saeedinia, M. Mehreganfar, **S. A. Davari**, and D. A. Khaburi, "AFE rectifier control based on virtual flux direct power control and active power ripple elimination under unbalanced network condition," in 2018 9th Annual Power Electronics, Drives Systems and Technologies Conference (PEDSTC), 2018, pp. 253–258.
- [28] M. S. Mousavi and **S. A. Davari**, "A novel maximum torque per ampere and active disturbance rejection control considering core saturation for induction motor," in 2018 9th Annual Power Electronics, Drives Systems and Technologies Conference (PEDSTC), 2018, pp. 318–323.
- [29] M. S. Mousavi and **S. A. Davari**, V. Nekoukar, J. Rodriguez "Robust Predictive Current Control for a Dual Inverter Fed Open-End Winding Induction Motor," in 2019 10th Annual Power Electronics, Drives Systems and Technologies Conference (PEDSTC), 2019.
- [30] Shirin Azadi , **S. Alireza Davari** , Arya Aghili Ashtiani , Cristian Garcia, Jose Rodrigues "Reducing Variation of Switching Frequency in Finite-State Predictive Torque of three-Phase Induction Motor," in 2019 10th Annual Power Electronics, Drives Systems and Technologies Conference (PEDSTC), 2019.
- [31] S. Rasul Eftekhari , **S. Alireza Davari** , Peyman Naderi, Cristian Garcia, Jose Rodriguez, "A Simple and Robust Model-Based Loss Minimization Method for Direct Torque Control of Induction Motor," 2019 10th International Conference on Power Electronics and ECCE Asia (ICPE 2019 - ECCE Asia).
- [32] Mahdi S. Mousavi, **S. Alireza Davari**, Cristian Garcia, Jose Rodriguez, Fengxiang Wang, "Cascaded Finite Control-Set Model Predictive Control for the Dual Inverter Fed Open-End Winding Induction Motor with Four-level Inversion," 2019 IEEE International Symposium on Predictive Control of Electrical Drives and Power Electronics (PRECEDE).
- [33] S. Lotfollahzadegan, S. A. Davari, C. Garcia and J. Rodriguez, "Capacitors Voltage Balancing in Neutral-Point Clamped Inverter Using Simplified Finite Set Model Predictive Control and Virtual Voltage Vectors," 2020 11th Power Electronics, Drive Systems, and Technologies Conference (PEDSTC), Tehran, Iran, 2020, pp. 1-6, doi: 10.1109/PEDSTC49159.2020.9088468.
- [34] A. Ja'afari, S. A. Davari, C. Garcia and J. Rodriguez, "Computation Reduction for Finite Set Model Predictive Control of Five-level Inverter," 2020 11th Power Electronics, Drive Systems, and Technologies Conference (PEDSTC), Tehran, Iran, 2020, pp. 1-6, doi: 10.1109/PEDSTC49159.2020.9088500.
- [35] A. Fereidooni, S. A. Davari, C. Garcia and J. Rodriguez, "Eliminating Current Sensors in Simplified Predictive Direct Voltage Control of RSM," 2020 11th Power Electronics, Drive Systems, and Technologies Conference (PEDSTC), Tehran, Iran, 2020, pp. 1-6, doi: 10.1109/PEDSTC49159.2020.9088442.
- [36] C. Garcia, J. Rodriguez, M. Norambuena, S. A. Davari, F. Wang and Y. Zhang, "Performance Evaluation Between SMPTC and PTC for PMSM Drives," 2019 10th International Conference on Power Electronics and ECCE Asia (ICPE 2019 - ECCE Asia), Busan, Korea (South), 2019, pp. 1-5.
- [37] Y. Li, Z. Zhang, S. A. Davari, C. Garcia and J. Rodriguez, "FCS-MPC Based Primary Control With Improved Performance for Islanded AC Microgrids," 2020 11th Power Electronics, Drive Systems, and Technologies Conference (PEDSTC), Tehran, Iran, 2020, pp. 1-6, doi: 10.1109/PEDSTC49159.2020.9088375.
- [38] M. S. Mousavi, S. A. Davari, V. Nekoukar, M. Norambuena, J. Rodriguez and F. Wang, "Four-Stage Cascaded Predictive Control for Zero-Sequence Current Suppression of Open-End Winding Induction Motor," 2020 11th

- Power Electronics, Drive Systems, and Technologies Conference (PEDSTC), Tehran, Iran, 2020, pp. 1-6, doi: 10.1109/PEDSTC49159.2020.9088503.
- [39] M. A. Nodehi, S. A. Davari, R. Ghandehari, M. Norambuena and J. Rodriguez, "Using Virtual Voltage Vectors in Predictive Control of Three-Phase Inverters for Fixing Common-Mode Voltage," 2020 11th Power Electronics, Drive Systems, and Technologies Conference (PEDSTC), Tehran, Iran, 2020, pp. 1-6, doi: 10.1109/PEDSTC49159.2020.9088478.
- [40] S. R. Eftekhari, S. A. Davari, P. Naderi, C. Garcia and J. Rodriguez, "Reducing the Parameter Dependency of Model-Based Loss Minimization Method for Induction Motor Drives," 2020 IEEE International Conference on Industrial Technology (ICIT), Buenos Aires, Argentina, 2020, pp. 1106-1111, doi: 10.1109/ICIT45562.2020.9067291.
- [41] S. Lotfollahzadegan, S. A. Davari, C. Garcia and J. Rodriguez, "A Lookup Table Based Method for the Cost Function Computation Reduction in Finite Set Model Predictive Control," 2020 IEEE International Conference on Industrial Technology (ICIT), Buenos Aires, Argentina, 2020, pp. 1053-1058, doi: 10.1109/ICIT45562.2020.9067230.