

CURRICULUM VITAE

- 1. Name Surname** : Ömer Cihan Kivanc
Address : Istanbul Okan University, Engineering Faculty, Electrical & Electronics Engineering, Akfirat/Istanbul
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Mail : cihan.kivanc@okan.edu.tr
2. Date of Birth : 1988
3. Academic Title : Assistant Professor
4. Education : Ph.D.

Degree	Department	University	Year
Bachelor	Electrical Engineering	Istanbul Technical University	2011
Ph.D.	Mechatronics Engineering	Istanbul Okan University	2016

5. Academic Titles

Title	Discipline	University	Year
Assistant Professor	Mechatronics Engineering	Istanbul Okan University	2016
Research Assistant	Mechatronics Engineering	Istanbul Okan University	2011-2015

6. Supervised Master and Ph.D. Thesis

6.1. Title of Master Thesis

- Cemre Kavvasoğlu, “Developing De-noising Algorithm Improved with Least Mean Squares Filter for Autonomous-Vehicles Lidar in Snowfall”, *Institute of Sciences and Engineering, Power Electronics & Clean Energy Systems*, Master Thesis, August, 2019.

6.2. Dissertation Title

7. Publications

7.1. International Refereed Journal Publications

- [1] O. C. Kivanc and S. B. Ozturk, “Low-cost position sensorless speed control of PMSM drive using four-switch inverter,” *Energies*, vol. 12, no. 4, 741, 2019. (SCI)
- [2] O. C. Kivanc and O. Ustun, “Dynamic control of electronic differential in the field weakening region,” *International Journal of Electronics*, vol. 106, no. 10, pp. 1583–1601, 2019. (SCI-Expanded)

- [3] **O. C. Kivanc**, T. E. Mungan, B. Atila and G. Tosun, "An integrated approach to development of unmanned ground vehicle: design, analysis, implementation and suggestions," *Journal of The Faculty of Engineering and Architecture of Gazi University*, vol. 34, no. 4, pp. 1957–1973, 2019. (**SCI-Expanded**)
- [4] **O. C. Kivanc**, "An approach to improve the performance of cooperative unmanned vehicle team," *Turkish Journal of Electrical Engineering & Computer Sciences*, vol. 27, pp. 1428–1444, 2019. (**SCI-Expanded**)
- [5] O. Ustun, **O. C. Kivanc**, S. Senol and B. Fincan, "On field weakening performance of a brushless direct current motor with higher winding inductance: why does design matter?," *Energies*, vol. 11, no. 11, 3119, 2018. (**SCI**)
- [6] **O. C. Kivanc** and S. B. Ozturk, "Sensorless PMSM drive based on stator feedforward voltage estimation improved with MRAS multi-parameter estimation," *IEEE/ASME Transactions on Mechatronics*, vol. 23, no. 3, pp. 1326–1337, 2018. (**SCI**)
- [7] O. Ustun, R. N. Tuncay, M. S. Mokukcu, **O. C. Kivanc**, G. Tosun, C. Gokce and M. Cakan, "An integrated approach to development of electric vehicle powertrain: design, analysis and implementation," *Turkish Journal of Electrical Engineering & Computer Sciences*, vol. 26, pp. 1541–1554, 2018. (**SCI-Expanded**)
- [8] **O. C. Kivanc** and S. B. Ozturk, "Sector determination for SVPWM based four-switch three phase voltage source inverter," *IET Journal of Electronics Letters*, vol. 53, no. 5, pp. 343–345, 2017. (**SCI**)
- [9] P. Ali Zada, R. N. Tuncay, S. B. Ozturk, **O. C. Kivanc**, H. A. Mamedov and S. A. Abdullaev, "Parametrical method of low-frequency harmonics suppression in rectifier's output voltage under supply voltage unbalances," *Scientific Journal of Mathematical & Computer Modelling*, vol. 13, 2017.
- [10] **O. C. Kivanc** and S. B. Ozturk, "MATLAB function-based approach to FOC of PMSM drive," *International Journal of Simulation Systems, Science & Technology (IJSSST)*, vol. 17, no. 33, 2016.

6.2. International Conference Presentation & Proceedings

- [1] I. H. Hayirli, B. Kelleci, **O. C. Kivanc**, S. B. Ozturk, R. N. Tuncay and O. Citci, "Design and analysis of 240-Watt SEPIC converter for LED applications," in *Proc. IEEE ISIE*, Vancouver, Canada, Jun. 12-14, 2019.
- [2] Y. R. Sen, **O. C. Kivanc** and R. N. Tuncay, "Optimal positioning of electric vehicle charging stations for a pilot region," in *Proc. International Symposium on Engineering Natural Sciences and Architecture*, pp. 113–119, Kocaeli, Turkey, 2019.
- [3] P. Norouzi, O. Ustun and **O. C. Kivanc**, " High performance position control of double-sided air core linear brushless DC motor," in *Proc. 10th International Conference on Electrical and Electronics Engineering (ELECO)*, Bursa, Turkey, 2017.
- [4] O. Ustun, D. Bayram & **O. C. Kivanc**, " Study on development of line start IPM synchronous motor for super premium efficiency class," in *Proc. 18th International Symposium on Applied Electromagnetics and Mechanics (ISEM)*, Chamonix, France, September, 2017.

- [5] O. Ustun, D. Bayram and **O. C. Kivanc**, " Comparison of different line start interior permanent magnet synchronous motor types with respect to IE4 efficiency class," in *Proc. Electromagnetic Fields in Mechatronics, Electrical and Electronic Engineering (ISEF) Book of Abstracts*, Lodz, Poland, 2017.
- [6] S. B. Ozturk, **O. C. Kivanc**, B. Atila, S. U. Rehman, B. Akin and H. A. Toliyat, "A simple least squares approach for low speed performance analysis of indirect FOC induction motor drive using low-resolution position sensor," in *Proc. IEEE International Electric Machines and Drives Conference (IEMDC)*, pp. 1–8, Miami, USA, 2016.
- [7] **O. C. Kivanc**, S. B. Ozturk, R. N. Tuncay, E. Kesici and C. Yazici, "Electro-hydraulic power steering system modelling for parameter fault detection based on model reference adaptive frame," in *Proc. Annual Conference of IEEE Industrial Electronics Society*, pp. 1808–1814, Florence, Italy, 2016.
- [8] **O. C. Kivanc**, O. Ustun, G. Tosun and R. N. Tuncay, "On regenerative braking capability of BLDC motor," *Annual Conference of IEEE Industrial Electronics Society*, pp. 1710–1715, Florence, Italy, 2016.
- [9] O. Ustun, G. Tanc, **O. C. Kivanc** and G. Tosun, "In pursuit of proper BLDC motor design for electric bicycles," in *Proc. IEEE International Conference on Electrical Machines*, pp. 1808–1815, 2016, Switzerland.
- [10] G. Tosun, **O. C. Kivanc**, O. Ustun, E. Oguz and Y. Mutlu, "Design of a position controlled electric actuator used in fluid control valves," in *Proc. IEEE International Conference on Power Electronics and Motion Control*, pp. 551–556, Varna, Bulgaria, 2016.
- [11] **O. C. Kivanc** and S. B. Ozturk, "MATLAB function-based approach to FOC of PMSM drive," in *Proc. IEEE European Modeling Symposium (EMS)*, pp. 96–102, Madrid, Spain, 2015.
- [12] G. Tosun, O. Ustun, **O. C. Kivanc**, E. Oguz, O. Ustun and R. N. Tuncay, "Development of high efficiency multi-output flyback converter for industrial applications," in *Proc. 9th International Conference on Electrical and Electronics Engineering (ELECO)*, pp. 1102–1108, 2015.
- [13] O. Ustun, M. Cakan, R. N. Tuncay, M. S. Mokukcu, **O. C. Kivanc**, Y. Mutlu and G. Tosun, "Design and manufacture of electric vehicle powertrain and its cooling system for ITU EV project," in *Proc. International Conference on Electrical Machines (ICEM)*, pp. 730–735, 2014.
- [14] P. G. Ali-Zade, R. N. Tuncay, S. B. Ozturk and **O. C. Kivanc**, "Quasi-smart construction synchronous machine working with extensive cycling load," in *Proc. International Conference on Application of Information and Communication Technology and Statistics in Economy and Education (ICAICTSEE)*, pp. 93–101, Sofia, Bulgaria, Oct, 2012.
- [15] O. Ustun, S. B. Ozturk, **O. C. Kivanc**, P. G. Ali Zade and R. N. Tuncay, "Exciting system selection for brushless synchronous machine," in *Proc. 8th Mediterranean Conference on Transmission, Distribution and Energy Conversion (MEDPOWER)*, pp. 1–6, Cagliari, Italy, 2012.

7.3. International Books/Chapters of Books

7.4. National Refereed Journal Publications

- [1] **O. C. Kivanc**, “Investigation of the effects of physical changes on li-ion battery,” *European Journal of Science and Technology*, vol. 16, no. 2, pp. 235–241, 2019. (**ULAKBİM**)
- [2] **O. C. Kivanc**, O. Ustun, G. Tosun, E. Oguz and Y. Mutlu, “Design and implementation of an electric actuated valve for precise fluid control,” *Gazi University Journal of Science*, vol. 32, no. 2, pp. 483–492, 2019. (**ULAKBİM**)
- [3] **O. C. Kivanc** and S. B. Ozturk, “Sensorless control of PMSG drive using reduced switch inverter,” *Pamukkale University Journal of Engineering Sciences*, vol. 25, no. 2, pp. 132–142, 2019. (**ULAKBİM**)
- [4] **O. C. Kivanc** and S. B. Ozturk, “Stator feedforward voltage estimation based sensorless permanent magnet synchronous generator drive using multi-parameter estimation based on MRAS,” *Çukurova University Journal of the Faculty of Engineering and Architecture*, vol. 32, no. 3, pp. 227–242, 2017. (**ULAKBİM**)

7.5. National Conference Presentations & Proceedings

- [1] B. Atila, T. E. Mungan and **O. C. Kivanc**, "Different filter approaches and performance analysis of fundamental sensors in autonomous ground vehicles," in *Proc. 24th Signal Processing and Communication Application Conference (SIU)*, pp. 1605–1608, Zonguldak, Turkey, 2016.
- [2] O. Ustun, R. N. Tuncay, M. S. Mokukcu, **O. C. Kivanc** and G. Tosun, “Istanbul Technical University full electric battery vehicle Project-ITU EV,” in *Proc. 7th Automotive Technologies Congress (OTEKON)*, Bursa, Turkey, 2014.
- [3] O. Ustun, R. N. Tuncay, **O. C. Kivanc**, B. Fincan and G. Tosun, “Development and implementation of field weakening algorithm for brushless DC motors,” in *Proc. Conference on Electrical and Electronics Engineering (ELECO)*, Bursa, Turkey, 2014.

7.6. Other Publications

- [1] Parviz Ali Zada Hasanoglu, Ramazan Nejat Tuncay, Salih Baris Ozturk, **Omer Cihan Kivanc**, “Internal resistance measurement method for power supplies like batteries or supercapacitors,” *WO2017111751 A1*, June 29, 2017
- [2] Parviz Ali Zada Hasanoglu, **Omer Cihan Kivanc**, Salih Baris Ozturk, Ramazan Nejat Tuncay, “Cok Kanatli Yelken Tipi Dairesel Bir Ruzgar Turbini,” *Turkish Patent Institute (TPE) Pub. No: 2013-G-456408*, July 21, 2015.
- [3] Parviz Ali Zada Hasanoglu, **Omer Cihan Kivanc**, Salih Baris Ozturk, Ramazan Nejat Tuncay, “Süper Kapasitörler İçin İç Direnç Ölçme Yöntemi,” *Turkish Patent Institute (TPE) Pub. No: 2015-GE-472052*, Aralık 21, 2015.

7. Projects

- [1] **TUBITAK-1501**- Development of an Electric Vehicle Charge Connector (*Consultant*)
- [2] **TUBITAK-1505**- Design and Implementation of Output Voltage Variable High Efficient SEPIC LED Driver (controlled by TMS320F28012) with Two Different Power (150 W & 240 W) (*Researcher*)
- [3] **TUBITAK-1505**- Intelligent Renewable Energy Management System (*Researcher*)
- [4] **TUBITAK-1505**- Development of an Advanced Autonomous Bus System (controlled by Nvidia Drive PX2) (*Researcher*)
- [5] **TUBITAK-1002**- Design and Implementation of High Manoeuvrability Autonomous Robot Platform for Industrial and Military Purposes (*Principle Investigator*)
- [6] **TUBITAK-3501**- Implementation of Position Sensorless Direct-Drive Permanent Magnet Generator-based Small-Scale Wind Power Generating System for Wide Speed Ranges (*Researcher*)
- [7] **TUBITAK-1002**- Very Low Speed Control of Three Phase AC Motor Using Least Mean Square (LMS) Method with Low Resolution Encoder (*Researcher*)
- [8] **ISTKA-TR10/14/YEN/0088**- Innovative & Sustainable Electric & Hybrid Electric Vehicle Technology Development & Clustering Centre (*Researcher*)
- [9] **ISTKA-TR10/15/YNK/0022**- Intelligent & Connected Vehicle Technologies Development & Clustering Centre (*Researcher*)
- [10] **KOSGEB**- Development of an E-Bike Power Train System (BLDC Machine, Driver controlled by DSPic30F6010A & Lin Bus Communication Protocol) (*Researcher*)
- [11] **KOSGEB**- Development of a Light Electric Vehicle Driver System (4 kW & 15 kW controlled by DSPic30F6010A) (*Researcher*)
- [12] **MEKATRO R&D**- Development of an Industrial Driver for Induction & Synchronous Reluctance Motors (*Researcher*)
- [13] **MEKATRO R&D**- Linear BLDC Motor (200 kN) & Driver (controlled by DSPic30F6010A) Design for a Ramp System (*Researcher*)
- [14] **MEKATRO R&D**- Design & Development of Electric Power Train (Outer Rotor BLDC Machine (1.5 kW x 2) & Inverter (controlled by TMS320F28335) & HMI & Can Bus Communication) for a Solar Car (*Researcher*)
- [15] **MEKATRO R&D**- Development of an Electric Power Train (Inverter controlled by TMS320F28335) for Outer Rotor BLDC Machine (15 kW x 2) Electric Vehicle Project (*Researcher*)
- [16] **MEKATRO R&D**- High Efficiency (IE4) Line Start Interior Permanent Magnet Synchronous Motor Design (*Researcher*)
- [17] **MEKATRO R&D**- Development of a Position Controlled (controlled by DSPic30F6010A) Electric Actuator Used in Fluid Control Valves (*Researcher*)
- [18] **MEKATRO R&D**- Development of a Smart Pump Selection Algorithm & Database System (*Researcher*)

[19] **MEKATRO R&D-** Development of a Three-Level & Parallel UPS Control (controlled by TMS320F28335) Software (*Researcher*)

9. Administrative Tasks

- Electrical and Electronics Engineering Department Head (2018-)
- Intelligent & Connected Vehicle Technologies Development & Clustering Centre (ISTKA)-TR10/15/YNK/0022 (Istanbul Okan University, Electrical Engineer)

10. Academic/Professional Membership

- IEEE, The Institute of Electrical and Electronics Engineers
- UCTEA, The Chamber of Electrical Engineers

11. Awards

12. Lectures

Academic Year	Semester	Lectures	Hours		Number of Student
			T	L	
2018-2019	Spring	Electrical Distribution Systems	3	0	12
2018-2019	Spring	High Voltage Techniques	3	0	14
2018-2019	Fall	Illumination & Indoor Wiring	3	0	20
2018-2019	Fall	Energy Laboratory	0	4	4
2017-2018	Spring	Electrical Distribution Systems	3	0	8
2017-2018	Spring	High Voltage Techniques	3	0	12
2017-2018	Fall	Illumination & Indoor Wiring	3	0	25
2017-2018	Fall	Energy Laboratory	0	4	5
2016-2017	Spring	Electrical Distribution Systems	3	-	25
2016-2017	Spring	High Voltage Techniques	3	-	25
2016-2017	Fall	Energy Laboratory	-	4	6
2016-2017	Fall	Control Systems	3	1	20