**1. Name Surname:** MEHMET TİMUR AYDEMİR

**2.  Date of Birth:** 13 January 1962

**3. Title:** Assos. Prof. Dr.

**4. Gender :** Male

**5. Nationality :** Turkish

**6. Marital Status :** Married

**7. Address :** Camlik Sitesi D3-2 Bilkent Ankara TURKEY

**8. Degrees:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Degree**  | **Field**  | **University**  | **Year**  |
| BSc. | Electric-Electronic Eng.. | Black Sea Technical University – Trabzon - TURKEY | 1983 |
| MSc.  | Electric-Electronic Eng. | Black Sea Technical University – Trabzon - TURKEY | 1985 |
| PhD.  | Electrical and Computer Eng. | University of Wisconsin-Madison | 1995 |

**9. Academic Titles:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Title** | **Department** | **University** | **Year** |
| Assist. Prof. Dr. | Electric-Electronic Eng. | Gazi Univ | 1995 |
| Assoc. Prof. Dr.  | Electric-Electronic Eng. | Gazi Univ | 2010 |
| Professor |  |  |  |

**10. Work Experience**

|  |  |  |
| --- | --- | --- |
| **Position** | **University/Association** | **Year** |
| Research Assistant | Black Sea Technical University – Trabzon - TURKEY | 1984-87 |
| Teaching Assistant | University of Wisconsin – Madison USA | 1992-95 |
| Assistant Professor | Gazi University | 1995-2010 |
| Assoc. Professor | Gazi University | 2010 - |

**11. Master / Ph.D. Theses Supervision:**

**11.1 Master Thesis- Completed:**

1. (Ahmet Devrim Erdogan) Analysis of Buck and Synchronous Buck Converters Operating in Parallel; Gazi University, Institute of Science and Technology, July 2001

2. (Nihat Akyuz) Design and Construction of Microprocessor Controlled Cathodic Protection Circuit; Gazi University, Institute of Science and Technology, July 2001

3. (Kutlay Aydin) Vector Control of Induction Motor And SRDCL Inverter; Gazi University, Institute of Science and Technology, July 2001

4. (Alper Sarikan) Active Power Filter Application with Arc Furnaces; Gazi University, Institute of Science and Technology, July 2001

5. (Umut Demirezen) The Analysis and Simulations of Vector Controlled Permanent Magnet Synchronous Motor and Brushless DC Motor Drive System; Gazi University, Institute of Science and Technology, Sept 2002

6. (Yavuz Öziba) Use of Multilevel Inverters in Charging the Batteries of Electric Vehicles, Gazi University, Institute of Science and Technology, May 2005

7. (Asuman Saglikcioglu) Inverter Design for a 100 W Fuel Cell, Gazi University, Institute of Science and Technology, June 2005

8. (Gokhan Cakir) A Soft-Switching Boost DC-DC Converter Topology, Gazi University, Institute of Science and Technology, April 2006.

9. (Mustafa Ergin Sahin) Design and Implementation of a Synchronous Buck Converter for Hydrogen Production by Electrolysis, Gazi University, Institute of Science and Technology, May 2006

10. (Isa Gok) Phase-Shift Soft-Switching PWM DC-DC Converter Design for a Battery Charger, Gazi University, Institute of Science and Technology, November 2006

11. (Serife Camci) Design and Modelling of a Stand-Alone Residential Power Source using Fuel Cells and Solar Cells, Gazi University, Institute of Science and Technology, October 2007

12. (Fatih Evran) Switched Capacitor, Soft Switching Half Bridge DC-DC Converter, Gazi University, Institute of Science and Technology, January 2008.

13. (Emin Yildiriz) A Low Power Wind Turnine Implementation Using Brushless DC Generator, Gazi University, Institute of Science and Technology, July 2008

14. (Arzu Koparan) Implementation of 200 Ampere, High Frequency Switching DC And AC/DC Arc Welding Machines, Gazi University, Institute of Science and Technology, July 2010.

15. (Bahadır Bülbül) Design and Implementation of MPPT Algorithm Test System, Gazi University, Institute of Science and Technology, Sept. 2011.

16. (F. Ercan Karagöz) Operation of Boost DC-DC Converters in Parallel with Droop Control Method; Gazi University, Institute of Science and Technology, Oct. 2011.

17. (Nabeel ALTANNEH) Design and Implementation of a Battery Charge System for a Small Electric Vehicle Powered by Batteries and Fuel Cells; Gazi University, Institute of Science and Technology, May 2012.

18. (Hüseyin KÖSE) Design and Implementation of Static Transfer Switches for Uninterrupted Power Supplies; Gazi University, Institute of Science and Technology, May 2012.

19. (Hacer KARAGÖL) Electromagnetic Compatibility Problems And Solution Offers In Dc/Dc Converters, Gazi University, Institute of Science and Technology, June 2013.

20. (Atilla SARITAŞ) Smart Grid And Investigation of Phasor Measurement Optimal Placement On Grid; Gazi University, Institute of Science and Technology, July 2013.

21. (Ali Pashaei), Design And Implementation of a Pulse Width Modulated Rectifier for Industrial Applications, Gazi University, Institute of Science and Technology,, December 2013.

22. (Adem Ergun), Bidirectional DC-DC Converter Design and Implementation for Electrical Vehicles with Hybrid Energy Storage Systems, Gazi University, Institute of Science and Technology, November 2014.

23. (Faruk Keskin), AC Voltage Regulation with Phase Shifted Pulse Width Modulation, Gazi University, Institute of Science and Technology, December 2014.

24. (Ceren Kahraman) Development And Validation of a Hardware in the Loop Model of the Control System Design for a Hydroelectric Power Plant, Gazi University, Institute of Science and Technology, June 2015.

25. (Abdul Karim Mesbah) Application of Optimum Phasor Measurement Unit Placement Algorithms for Smart Grids to Afhganistan, Gazi University, Institute of Science and Technology, June 2015.

**11.2 Ph.D. Thesis- Completed:**

1. (H. Murat UNVER) Control of Power Units of Induction Steel Furnaces by Using PLCs; Kirikkale University, Institute of Science and Technology, Jan 2004, Kirikkale

2. (Ahmet Devrim Erdoğan) Development and Implementation of Novel Paralleling Methods for Boost Dc-Dc Converters used at the Outputs of Fuel Cells, Gazi University, Institute of Science and Technology, Feb. 2009, Ankara

3. (Kutlay Aydin) Design and Implementation of a Flywheel Energy Storage that can be Used in Satellite Integrated Power and Attitude Control Systems; Gazi University, Institute of Science and Technology, September 2010.

4. (Alper Sarıkan) Application of Real Time Digital Simulation and Hardware in the Loop Techniques to Satellite Attidue Control Systems; Gazi University, Institute of Science and Technology, September 2010.

5. (Fatih EVRAN) High Gain z-source DC-DC Converter Topologies Utilizing Coupled Inductors, Gazi University, Institute of Science and Technology, September 2012.

6. (Bulent Dag) Generalized Stability Analysis for Inverter Interfaced Microgrids, Gazi University, Institute of Science and Technology, October 2015.

**12. Publications**

**12.1. International Journals**

1. M. SAHIN, M. Timur AYDEMIR, H.I. OKUMUS, “Implementation of an Electrolysis System with DC/ DC Synchronous Buck Converter”, International Journal of Hydrogen Energy, 39 (2014), pp: 6802-6812.
2. F.EVRAN, M. Timur AYDEMİR; “Isolated High Step-Up Dc-Dc Converter With Low Voltage Stress”, IEEE Trans. On Power Electronics, vol.29, no.7, pp.3591,3603, July 2014.
3. Kutlay AYDIN, M. Timur AYDEMIR; “Sizing design and implementation of a flywheel energy storage system for space applications”, Turkish Journal of Electrical Engineering & Computer Sciences. Accepted for Publication (DOI: 10.3906/elk-1306-206).
4. Kutlay AYDIN, M. Timur AYDEMIR; “A control algorithm for a simple flywheel energy storage system to be used in space applications”, Turkish Journal of Electrical Engineering & Computer Sciences. (2013) 21: 1328 - 1339
5. F. EVRAN, M. Timur AYDEMIR; “A Novel z-Source Based Isolated High Step Up Converter”, IET Power Electronics, Jan. 2013, pp: 117-124.
6. Kutlay AYDIN, M. Timur AYDEMIR; “A New Current Reference Driving Method for the Electric Motors Used in Satellite Attitude Control Systems (in Turkish)”, Journal of Gazi University Faculty of Engineering and Architecture, 26 (1), 125-138, 2011.
	1. D. Erdoğan, M. T. Aydemir, "Use of Input Power Information for Load Sharing in Parallel Connected Boost Converters", Electrical Engineering 91 (2009) 229-250: DOI : 10.1007/s00202-009-0138-6)
7. Alper Sarikan, M. Timur Aydemir; “Real Time Digital Simulation and Hardware in the Loop Support; Applications and Restrictions (in Turkish; Gerçek Zamanli Benzetim ve Kapali Döngü İçerisinde Donanim Desteği: Uygulamalar ve Sinirlamalar)”, Gazi University Journal of Engineering and Architecture Faculty, vol. 24, no 3, 517-524, 2009.
8. Emin Yildiriz, M. Timur Aydemir; “Analysis, Design And Implementation of an Axial Flux, Permanent Magnet Machine to be used in a Low Power Wind Generator, (in Turkish; Küçük Güçlü Bir Rüzgar Jeneratöründe Kullanim için Eksenel Akili Bir Sürekli Miknatisli Motorun Analizi, Tasarimi ve Gerçekleştirilmesi)”, Gazi University Journal of Engineering and Architecture Faculty, vol. 24, no 3, 525-531, 2009.
9. Parlak, K.S., Ozdemir, M., Erdoğan, A.D., Mehmet Timur Aydemir; "Active And Reactive Power Sharing and Frequency Restoration in a Distributed Power System Consisting of Two UPS Units", Electrical Power and Energy Systems, 31 (2009) 220-226.
10. Parlak, K.S., Ozdemir, M., Mehmet Timur Aydemir; “Active and Reactive Power Sharing and Frequency Restoration in a Distributed Power System Consisting of Two UPS Units”, International Journal of Electrical Power and Energy Systems, 31 (2009) 220-226.
11. Parlak, K.S., Ozdemir, M., Mehmet Timur Aydemir; “Elimination of Voltage Harmonics Caused by Nonlinear Loads in Distributed Power Systems Consisting of Inverters”, International Review of Electrical Engineering, vol.4, no:2, March-April 2009, pp: 228-234.
12. Aydemir, M.T., F. Evran; “Operation Principles of a Switched Capacitor Snubber Circuit Suggested for Half-Bridge DC-DC Converters”, International Journal of Electronics, vol. 96, no. 1, January 2009, pp. 29–42
13. Aydemir, M.T., F. Evran; “Soft Switched Half-Bridge DC-DC Converter with Switched Capacitor Snubber”, Electromotion, vol. 15, no.1, January-February 2008, pp:19-30.
14. Unver, H.M., Aydemir, M.T.; Celik, V.; Control freaks (Induction Furnace Logic Controller), Power Engineer (IEE), Volume 19, Issue 3, June/July 2005 Page(s):36 - 39
15. Gorazd Stumberger, Mehmet Timur Aydemir, Damir Zarko, and Thomas A. Lipo; Design of a Linear Bulk Superconductor Magnet Synchronous Motor for Electromagnetic Aircraft Launch Systems; IEEE Transactions on Applied Superconductivity, vol. 14, No. 1, March 2004, pp: 54-62
16. Y. Murai, H. Nakamura, T. A. Lipo, M.T. Aydemir: "Pulse-split Concept in Series Resonant DC Link Power Conversion for Induction Motor Drives", IEEE Ind. Appl. Trans., vol. 30, no. 1, Jan./Feb. 1994, pp.45-51
17. M.T. Aydemir, P. Caldeira, T.A. Lipo, Y. Murai, E. Da Silva, G. Ledwich: "Utilization of Series Resonant DC Link Power Conversion for a DC Motor Drive", IEEE Ind. Appl. Trans., vol. 29, no. 5, Sept./Oct. 1993, pp. 949-958

**12.2 International Symposium and Conferences**

1. Aksoy, H; Aydemir, M.T. “Comparison of Zero Voltage Switching Phase-Shifted PWM Full Bridge DC-DC Converter Topologies”, International ACEMP-OPTIM-ELECTROMOTION 2015, Side Turkey, 2-4 Ekim 2015, pp: 818-824.
2. Aydın, E.; Li Y.; Aydın, I.; M.T. Aydemir,; Sarlioglu, B., "Minimization of torque ripples of interior permanent magnet synchronous motors by particle swarm optimization technique," IEEE Transportation Electrification Conference and Expo (ITEC), 2015, pp.1-6, 14-17 June 2015.
3. K. Dokumacı, M. U. Salamcı, M. T. Aydemir; “Modeling, PID Control and Simulation of a Rocket Launcher System”, 16th International Power Electronics and Motion Control Conference and Exposition Antalya, Turkey 21-24 Sept 2014, pp: 1518, 1523.
4. Bülent Dag, M. Timur Aydemir, Mohamed S. Smiai; “Modelling and Analysis of Unsymmetrical Multi-microgrid Operation of Active Distribution Networks”, 4th International Conference on Power Engineering, Energy and Electrical Drives, 13-17 May, 2013, Istanbul, Turkey,
5. Bülent Dag, M. Timur Aydemir, Mohamed S. Smiai; “An Unbalanced Load Flow Analysis Tool For Inverter Interfaced Distributed Generation Networks”, EWRES - The European Workshop on Renewable Energy Systems, Antalya, TURKEY, 10-20 Sep. 2012.
6. Fatih Evran, M. Timur Aydemir; “A Coupled-Inductor Z-Source Based Dc-Dc Converter With High Step-Up Ratio Suitable For Photovoltaic Applications”, 3rd International Symposium on Power Electronics for Distributed Generation Systems; May 2012, Aalborg-Denmark, p: 647-652.
7. D. Vyawahare, H. Kose, M. T. Aydemir, M.C. Chandorkar, “Design and Analysis of PLLs for Line-Connected Converters in Three Phase Systems” International Aegean Conference on Electrical Machines and Power Electronics & Electromotion Joint Conference, Istanbul Turkey, 8-10 September 2011.
8. Alper Sarikan, M.T. Aydemir; “Real Time Digital Simulation of a Satellite Attitude Control System”, SPEEDAM 2010, International Symposium on Power Electronics, Electrical Drives, Automation and Motion, Pisa-ITALY, 14-17 June, 2010, p:827-832.
9. Kutlay Aydin, M.T. Aydemir; “Utilization of the Inverter as a Boost Rectifier for the Voltage Regulation of Mechanical Batteries”, MELECON 2010, Valetta-Malta, 25-28 April, 2010, p:1204,1028.
10. Alper Sarikan, M.T. Aydemir; “Real Time Digital Simulation (RTDS) Software and Hardware in the Loop (HIL) Architecture for Brushless DC Motors”, MELECON 2010, Valetta-Malta, 25-28 April, 2010, p:779-783.
11. Ahmet Devrim Erdoğan, Mehmet Timur Aydemir, “Application of Adaptive Droop Method to Boost Converters Operating at the Output of Fuel Cells”, 6th International Conference on Electrical and Electronics Engineering (ELECO), 5-8 November 2009, Bursa, TURKEY, v1. 321-325.
12. Lebens, N., G. Venkataramanan, M.T. Aydemir, “Analysis, Design and Evaluation of a Floating Capacitor Soft Switching High Power Single Phase Boost Rectifier”, 5th International Conference on Electrical and Electronics Engineering (ELECO), 5-9 December 2007, Bursa, TURKEY
13. A. D. Erdogan, M. T. Aydemir; “Hot-Swap Parallel Operation of Boost Converters Designed for the Output of Fuel Cells”, International Aegean Conference on Electric Machines, Power Electronics and Electromotion Joint Conference, Bodrum-Turkey, Sept. 10-12, 2007, Conference Proceedings pp: 676-683
14. Parlak, K.S., Ozdemir, M., Erdogan, A.D., Mehmet Timur Aydemir; “Elimination of Voltage Harmonics at the Output of Three-Phase Inverters Operating with Nonlinear Loads”, 3rd International Conference on Technical and Physical Problems in Power Engineering, 29-31 May 2006, Ankara-TURKEY, Conference Proceedings, pp. 353-359.
15. Parlak, K.S., Mehmet Timur Aydemir, Ozdemir, M.; “Active and Reactive Power Sharing in Parallel Operated Inverters”, IEEE MELECON 2006 Mediterranean Electrotechnical Conference, Benaimcidena (Mcilaga), Spain, 16-19 May 2006 Page(s):1052 - 1055
16. Parlak, K.S., Mehmet Timur Aydemir, Mehmet Özdemir; “Active Power Sharing and Frequency Restoration in Parallel Operated Inverters”, Eleventh International Conference on Electrical Machines, Drives and Power Systems (ELMA 2005), Sept. 15-16, 2005, Sofia, Bulgaria; pp: 448-452
17. Unver, M, Aydemir, M.T.; “A Simple Induction Heating Design for the Steel Molds of Aluminum Extrusion Presses”; 2nd International Conference on Technical and Physical Problems in Power Engineering, 2-8 September, 2004, Tabriz-Iran, Conference Proceedings, pp. 57-60.
18. Stumberger, G., Aydemir M.T., Zarko, D., Lipo, T.A.; “Design and Comparison of Linear Synchronous Motor and Linear Induction Motor for Electromagnetic Aircraft Launch Systems”, Electric Machines and Drives Conference, 2003. IEMDC'03. IEEE International, Volume: 1 , 1-4 June 2003, Page(s): 494 -500 vol.1.
19. M. T. Aydemir, A. Bendre, G. Venkataramanan, “A Critical Evaluation of High Power Hard and Soft Switched Isolated DC-DC Converters”, IEEE Ind. Appl. Soc. Ann. Meet, 2002, Volume: 2 , pp. 1338 -1345
20. S.G. Abeyratne, M.T Aydemir, T. A. Lipo, Y. Murai, M. Yoshida: "Current Clamped, PWM, Quasi Resonant DC Link Series Resonant Converter", IEEE Ind. Appl. Soc. Ann. Meet., 2-6 Oct. 1994, Denver USA, pp. 820-824
21. E. Da Silva, G. Ledwich, M.T. Aydemir: "A PWM High Frequency Series Resonant DC Link Converter and Its Utilization as a DC Motor Drive", 9th Brazilian Conf. Automatic Control 1992, Conference Records
22. G. Ledwich , E. Da Silva, M.T. Aydemir, T. A. Lipo "Impact of Control Strategy on Component Ratings of Series Resonant DC Link Current Converter", First International Aegean Conf. on Electrical Machines and Power Electronics, May 27-29 Kusadasi-Turkey, pp. 511-516
23. E. Da Silva, G. Ledwich, M.T. Aydemir, T. A. Lipo: "Pulse Width Modulated Series Resonant Converter", IEEE Ind. Appl. Soc. Ann. Meet. Conf. Rec., 1992, pp. 744-749
24. Rasim Aldemir, A. Sezgin, M. Timur Aydemir: "Investigation through the Use of Park Vectors of a Voltage Controlled Three Phase Induction Motor", International Conference on Evolution and Aspects of Induction Machines, July 8-11 1986, Torino-Italy, pp. 490-494.

**12.3. International Conferences Attended**

* International ACEMP-OPTIM-ELECTROMOTION 2015, Side Turkey, 2-4 Ekim 2015
* 16th International Power Electronics and Motion Control Conference and Exposition Antalya, Turkey 21-24 Sept 2014
* 4th International Conference on Power Engineering, Energy and Electrical Drives, 13-17 May, 2013, Istanbul, Turkey,
* 3rd International Symposium on Power Electronics for Distributed Generation Systems; May 2012, Aalborg-Denmark
* International Aegean Conference on Electrical Machines and Power Electronics & Electromotion Joint Conference, Istanbul Turkey, 8-10 September 2011.
* SPEEDAM 2010, International Symposium on Power Electronics, Electrical Drives, Automation and Motion, Pisa-ITALY, 14-17 June, 2010
* MELECON 2010, Valetta-Malta, 25-28 April, 2010
* 6th International Conference on Electrical and Electronics Engineering (ELECO), 5-8 November 2009, Bursa, TURKEY
* International Aegean Conference on Electric Machines, Power Electronics and Electromotion Joint Conference, Bodrum-Turkey, Sept. 10-12, 2007
* 3rd International Conference on Technical and Physical Problems in Power Engineering, 29-31 May 2006, Ankara-TURKEY
* IEEE Ind. Appl. Soc. Ann. Meet., 2-6 Oct. 1994, Denver USA
* First International Aegean Conf. on Electrical Machines and Power Electronics, May 27-29 Kusadasi-Turkey
* International Conference on Evolution and Aspects of Induction Machines, July 8-11 1986, Torino-Italy.

**12.4. Thesis**

Ph.D., Electrical Eng., University of Wisconsin-Madison

Advisor: Dr. Thomas A. Lipo

Title of the Thesis: Analysis and Comparison of Series Resonant DC Current Link Converter Topologies

M.Sc., Black Sea Technical University, Trabzon- Turkey

Advisors: Dr. Rasim Aldemir / Dr. Guven Önbilgin

Title of Thesis: Investigation of Three Phase Induction Machines Fed by AC Chopper Through the Use of Park Vectors

**12.5 Other Publications**

**Publications in National Refereed Journals**

Arzu Koparan, M. Timur Aydemir, Oğuz Şimşek; Design and Implementation of a 200 Ampere High Frequency Switching DC Welding Machine; Scientific Journal of Chamber of Electrical Engineers, v: 2, no: 3, pp: 51-61, June 2012.

Parlak, K.Ş., Mehmet Timur Aydemir, Mehmet Özdemir; “Active Power Control in Distributed Power Systems Consisting of Parallel UPSs (in Turkish)”, İTÜ Dergisi/D- Mühendislik, cilt:7, sayi:3, 3-12, Haziran 2008.

Parlak, K.S., Mehmet Timur Aydemir, Mehmet Özdemir; “Distributed Power System Consisting of Inverters (in Turkish)”, Firat Üniversitesi Fen ve Muhendislik Bilimleri Dergisi, cilt 19, sayi 1, 79-84, (2007)

**Papers Presented in National Conferences**

K. Dokumacı, M. U. Salamcı, M. T. Aydemir; “Matematical Modeling of a Permanent Magnet Synchronous Motor Actuated Rocket Launcher”, Turkish Automatic Control Meeting, TOK 2014, Kocaeli-Turkey, Sept. 11-13, 2014, pp: 60-65.

K. Dokumacı, M. U. Salamcı, M. T. Aydemir; “Control of an Electromagnetic Rocket Launcher with Calculated Torque + Sliding Mode Control”, Turkish Automatic Control Meeting, TOK 2014, Kocaeli-Turkey, Sept. 11-13, 2014, pp: 66-71.

Bulent Dag, M. T. Aydemir, Abdullah Nadar, “A Microgrid Concept with Inverter Interface Including Hybrid Renewable Energy Sources for Residential Areas (in Turkish)”, 2. National Congress on Electrical Installations, 24-27 November 2011, İzmir.

Fatih Evran, Mehmet Timur Aydemir, “Application of Real Time Simulation Techniques to Solar Energy Systems (in Turkish)” VI. Renewable Energy Resources Symposium, 14-16 October 2011, Denizli.

A.D. Erdoğan, M. T. Aydemir; “Current Sharing in Parallel Operating Boost DC/DC Converters by using Adaptive Droop Method”, 13th National Congress of Electrical, Electronics and Computer Engineering, 23-26 December 2009, Ankara, pp.159-164.

Kutlay Aydin, M. T. Aydemir ; “Electrical Dynamic Model of Active Magnetic Beds”, 13th National Congress of Electrical, Electronics and Computer Engineering, 23-26 December 2009, Ankara, pp.265-269.

Emin Yildiriz, M.T. Aydemir; "A Small-Power Hand-Made Axial-Flux-Permanent-Magnet Wind Generator Application", 2nd Wind Energy Symposium, 4-5 June 2009 Samsun, pp:104-107

K.Ş. Parlak, M.T. Aydemir, M. Özdemir; "Distributed Power System Consisting of Three Inverter Units", Electric-Electronic-Computer Engineering Conference (ELECO), 70-74, Bursa, 2008.

Aydin, K., M.T. Aydemir, “Enerji Saklayabilen Moment Kontrol Jiroskoplarinda (ESMKJ) Kullanilan Aktif Manyetik Rulmanlarin Enerji Tüketimi (Energy Consumption of Active Magnetic Bearings Used in Energy Storage Moment Control Gyroscopes)”, Electric-Electronic-Computer Engineering Conference (ELECO), 258-262, Bursa, 2008.

Aydin, K., M.T. Aydemir, “Enerji Saklayabilen Moment Kontrol Jiroskobu Motor/Jenerator Ünitesindeki Kayiplar ve Kayip Azaltma Yontemleri (Losses of the Motor/Generator Unit of Energy Storage Moment Control Gyroscopes, and Loss Reduction Methods)”, SAVTEK 2008, 4. Defense Technologies Congress, June 26-27 2008, Ankara, Turkey, pp:457-464.

Aydin, K., M.T. Aydemir, “Enerji Saklayabilen Moment Kontrol Jiroskoplari (Energy Storage Moment Control Gyroscopes)”, 12th National Congress of Electrical, Electronics and Computer Engineering, November 14-18, 2007, Eskisehir, Turkey

K.S. Parlak, M.T. Aydemir, A.D.Erdogan, M. Özdemir; "Paralel Calisan Daginik Inverterlerde Aktif Yuk Paylasimi (Active Power Sharing in Parallel Operating Distributed Inverters)", TOK'05 Automatic Control National Meeting, June 2-3, 2005 Istanbul, pp: 557-561.

Erdogan, A.D., Aydemir, M.T.; “Paralel Bagli Buck Turu DC/DC Donusturuculerde Dalgalanma Analizi (Ripple Analysis of Parallel Connected Boost Converters)”, 10th National Congress of Electrical, Electronics and Computer Engineering, Sept. 18-21, 2003, Istanbul, Conf. Proceedings, Cilt 1, s. 173-176.

Rasim Aldemir, M. Timur Aydemir: " Üc Fazli Degisken Gerilim Kiyici ile Beslenen Asenkron Makinalarin Park Vektorleri ile Incelenmesi (Investigation through the Use of Park Vectors of a Voltage Controlled Three Phase Induction Motor)", Conf. Records of 1st National Congress of Electrical Engineers, Oct.1985, Adana, TURKEY, pp. 624-629

**Translated Books**

* Electric Circuits 3rd Edition; by J. Edminister and M. Nahvi; Schaum’s Outline Series; published in 1998 by Nobel Pub. Ankara (co-translator: K. Cem Nakiboglu)
* Electromagnetics; by J. Edminister; Schaum’s Outline Series; Sept. 2000 by Nobel Pub. Ankara. (co-translators: Erkan Afacan and K. Cem Nakiboglu)
* Signals and Systems; by H.P. Hsu, H.P. Hse; Schaum’s Outline Series; published in 2001 by Nobel Pub. Ankara, (co-translators: V.Silindir, H. Dag, E. Afacan and K. Cem Nakiboglu).
* Basic Engineering Circuit Analysis by Irwin; John Wiley and Sons; published in 2013 by Nobel Academic Pub. Ankara, (co-translators: Hasan Dag, Sedat Sunter, Halis Altun)
* Power Electronics: Devices, Circuıts, And Applications by M. Rashid) (4th Edition) published in 2015 by Nobel Academic Pub. Ankara, (co-editor)

**13. Projects**

(Finished)

1. Implementation of a 25 kHz 16 kW inverter type microprocessor controlled welding machine; Supported by TIDEB and Nuris Welding Machines.

2. DC/DC Converter Design for Plasma Cutting Machines (University of Wisconsin-Madison)

3. Application of Superconductor Bulk Permanent Magnets in Electromagnetic Aircraft Launching Systems (University of Wisconsin-Madison)

4. Solar-Hydrogen-Electricity Cycle, Supported by State Planning Agency of Turkey, Interdisciplinary project with Chemical and Mechanical Engineering (Clean Energy Research and Application Center)

5. 200 A High Frequency Switched DC and AC/DC Welding Machine Development; Supported by Ministry of Industry, in cooperation with NURIS Welding Machines.

6. Achieving Current Sharing in Parallel Operating DC-DC Converters by Using Adaptive Droop Method; Supported by Turkish Scientific and Technical Research Council.

7. Real Time Digital Simulation and Hardware in the Loop Testing of Satellite Attitude Systems; Supported by Turkish Scientific and Technical Research Council.

8. Design and Implementation of a Small Land Vehicle Powered by Solar Panels and Fuel Cell, Supported by Gazi University Research Projects Fund.

9. Development of Static Transfer Switch for Uninterrupted Power Supplies; Supported by Ministry of Industry, in cooperation with GESS/OES Ortadoğu Elektronik San.

10. Design and Implementation of a Observation and Control System for a Renewable Energy Platform, (Gazi University Research Projects Fund)

11. Design and Implementation of a High Gain z-source DC-DC and DC-AC Converters Utilizing Coupled Inductors for Solar Energy Systems, Supported by Turkish Scientific and Technical Research Council.

12. Intelligent Motor Drive Hardware Development for Three Phase Induction Motors” Supported by Ministry of Science, Industry and Technology.

Research Projects (On-going)

1. Design and Implementation of a Lithium-Ion Battery Pack with Uninterruptable Power Supply Feature; Supported by Ministry of Science, Industry and Technology.

**14. Administrative Duties**

Head, Computer Science Division of Institute of Informatics, Gazi University; 2014-

Chairman, Gazi University, Dept. of Electrical and Electronic Engineering (Dec. 2012 - July 2013 )

Vice Chairman, Gazi University, Dept. of Electrical and Electronic Engineering (1997-98, 2002-04, 2007-2009)

Faculty Administrative Committee Member, Gazi University, Faculty of Engineering (1998-2001, 2004-2009 )

Dept. Accreditation Committee Head; Gazi University, Dept. of Electrical and Electronic Engineering (2003-)

LdV Program Coordinator for the Faculty of Eng. And Arch. (2004- )

Gazi University Strategic Planning Committee Member (2005-2008)

Gazi University Clean Energy Research and Application Center, Vice Director (2005-)

**15. Scientific and Professional Society Membership:**

Institute of Electrical and Electronics Engineers (IEEE),

Chamber of Turkish Engineers and Architects

**16. Courses Taught During the Last Two Semesters:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Academic Year** | **Semester** | **Course Name** | **Weekly taught hours** | **Number of Students** |
| **Theory** | **Lab** |
| **2013-2014** | **Fall** | Power Electronics I | **3** | **2** | **40** |
| EE Design | **1** | **2** | **35** |
| Switch Mode Power Supplies | **3** | **0** | **25** |
| **Spring** | Power Electronics II | **3** | **2** | **40** |
| EE Design | **1** | **2** | **35** |
| Dynamics and Control of AC Drives | **3** | **0** | **20** |
| **2014-2015** | **Fall** | Power Electronics I | **3** | **2** | **40** |
| Circuit Analysis I | **4** | **2** | **50** |
| EE Design | **1** | **2** | **40** |
| **Spring** | Power Electronics II | **3** | **2** | **40** |
| Circuit Analysis II | **4** | **2** | **50** |
| **2015-2016** | **Fall** | Power Electronics I | **3** | **2** | **40** |
| Circuit Analysis I | **4** | **2** | **45** |
| EE Design | **1** | **2** | **40** |

**17. Awards**

2001 Fulbright Research Scholarship

1987 Ph.D. Study Scholarship from the Turkish Ministry of Education

**18. Other Academic Activities**

Report: Sezai Dincer, M.T. Aydemir; Energy Report, State Statistics Institute, Eastern Anatolian Region Project, Ankara 2001

Chapter in Encyclopedia: Sezai Dincer, M.T. Aydemir; Superconducting Inductive Coils, Encyclopedia of Life Support Systems (www.eolss.net)

Chapter in Encyclopedia: Sezai Dincer, M.T. Aydemir; Electric Energy Storage, (www.eolss.net)

Chapter in Encyclopedia: M.T. Aydemir, Yalcin Gogus; Spinning Reserve, (www.eolss.net)

Member in the Conference Organization Committee; Third International Conference of Electrical Machines and Power Electronics (ACEMP), 27-29 May 2001, Kusadasi, Izmir, TURKEY

Member in the Conference Organization Committee; Fifth International Conference of Electrical Machines and Power Electronics (ACEMP), 27-29 May 2007, Bodrum, TURKEY.

Member in the Conference Organization Committee; Sixth International Conference of Electrical Machines and Power Electronics (ACEMP), 27-29 Sept 2011, İstanbul.