

## Asst. Prof. GÜRHAN ERTAŞGIN

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: AAG-4558-2019

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### Education Information

Doctorate, University of Adelaide, Faculty of Sciences, Engineering and Technology, Electrical and Electronic Engineering, Australia 2005 - 2010

Postgraduate, University of Technology Sydney, UTS Faculty of Engineering and IT, Software and Information Systems Engineering, Australia 2002 - 2004

Undergraduate, Sakarya University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, Turkey 1995 - 1999

### Foreign Languages

English, C2 Mastery

German, B1 Intermediate

### Dissertations

Doctorate, Low-Cost Current-Source 1-ph Photovoltaic Grid-Connected Inverter, University of Adelaide, 2010

### Research Areas

Electrical and Electronics Engineering, Energy, Direct Energy Conversion and Energy Storage, Generating Stations and Plants, Renewable energy, Power Electronics, Power Converters, Engineering and Technology

### Academic and Administrative Experience

Bilecik Seyh Edebali University, 2013 - 2016

### Courses

Temel Bilgisayar Bilimleri ve Programlama Dilleri, Undergraduate, 2013 - 2014, 2012 - 2013

Teknik İngilizce 1, Undergraduate, 2013 - 2014  
Güneş Enerjisi Teknolojileri, Doctorate, 2013 - 2014  
Mikroişlemciler, Undergraduate, 2013 - 2014  
Girişimcilik ve İş Tasarımı, Undergraduate, 2013 - 2014, 2012 - 2013  
Sayısal Elektronik, Undergraduate, 2013 - 2014, 2012 - 2013  
Sayısal Devre Tasarımı, Undergraduate, 2013 - 2014, 2012 - 2013  
Teknik İngilizce 2, Undergraduate, 2013 - 2014, 2012 - 2013  
Güneş Enerjisi Teknolojileri, Postgraduate, 2013 - 2014  
Güç Elektroniği, Associate Degree, 2012 - 2013

## Advising Theses

ERTAŞGIN G., Havacılığa yönelik turboelektrik itki sistemi için matematiksel model tasarımı, Doctorate, E.ŞENER(Student), 2021  
ERTAŞGIN G., Şebeke bağlantılı inverterlerde super lift lu konverter uygulanması, Postgraduate, E.ŞENER(Student), 2016

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Current-source 1-Ph inverter design for aircraft applications**  
ŞENER E., ERTAŞGIN G.  
Aircraft Engineering and Aerospace Technology, vol.92, no.8, pp.1295-1305, 2020 (SCI-Expanded)
- II. **Baseline architecture design for a turboelectric distributed propulsion system using single turboshaft engine operational scenario**  
YAZAR I., ŞENER E., ERTAŞGIN G., YAMIK H.  
International Journal of Turbo and Jet Engines, 2020 (SCI-Expanded)
- III. **Analysis of dc link energy storage for single-phase grid-connected pv inverters**  
ERTAŞGIN G., Whaley D. M., Ertugrul N., Soong W. L.  
Electronics (Switzerland), vol.8, no.6, 2019 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Design of a Half-Bridge Current-Source Inverter Topology for Avionic Systems**  
Şener E., Ertaşgın G.  
Aerospace, vol.9, no.7, 2022 (Scopus)
- II. **Single Turboshaft Engine Failure Analysis of an Inner Bus Tie Architecture for Turboelectric Distributed Propulsion System**  
ŞENER E., YAZAR I., ERTAŞGIN G.  
SAE International Journal of Aerospace, vol.13, no.2, pp.155-170, 2020 (ESCI)
- III. **An interleaved super lift Luo converter design for aircraft applications**  
ERTAŞGIN G.  
Bilecik Şeyh Edebali Üniversitesi Fen Bilimleri Dergisi, vol.7, no.1, pp.394-403, 2020 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Analysis of a Piecewise Linear Model for Rapid Simulation of PV Modules**  
Ertaşgın G., Şener E.  
2nd International Conference on Engineering, Natural and Social Sciences ICENSOS 2023, Konya, Turkey, 4 - 06

April 2023, pp.348-352

- II. **Implementation of a Single-Phase Half-Bridge Grid-Connected PV Inverter**  
ŞENER E., ERTAŞGIN G., YAZAR I.  
5h International Symposium on Multidisciplinary Studies and Innovative Technologies, ISMSIT 2021, Ankara, Turkey, 21 - 23 October 2021, pp.510-515
- III. **1.2kW Interleaved synchronous buck converter design for aviation systems**  
ŞENER E., YAZAR I., ERTAŞGIN G., YAMIK H.  
ISATECH 2019, 9 - 11 October 2019, vol.314, pp.2005
- IV. **270VDC-28VDC Synchronous Interleaved 1.2kW Buck Converter Design for Avionics**  
ŞENER E., YAZAR I., ERTAŞGIN G., YAMIK H.  
ISATECH 2019, 9 - 11 October 2019
- V. **Electrical architecture design for a turbo electric aircraft propulsion system on Matlab / Simulink**  
ŞENER E., ERTAŞGIN G., YAZAR I.  
ISSA 2019, Budapest, Hungary, 26 - 29 May 2019
- VI. **A 3-ph Grid-Connected Photovoltaic Inverter Utilizing Super-Lift Luo Converter**  
ŞENER E., ERTAŞGIN G.  
2nd International Symposium on Multidisciplinary Studies and Innovative Technologies, ISMSIT 2018, Kizilcahamam, Ankara, Turkey, 19 - 21 October 2018
- VII. **Design of a 400 Hz Current-Source Single-Phase Converter for Avionic Systems**  
ŞENER E., ERTAŞGIN G., ZUBER D.  
14th IEEE Vehicle Power and Propulsion Conference, VPPC 2017, Belfort, France, 14 - 17 December 2017, vol.2018-January, pp.1-6
- VIII. **DESIGN OF A 400 HZ CURRENT SOURCE 1 PH INVERTER TOPOLOGY FOR AVIONIC SYSTEMS**  
ŞENER E., ERTAŞGIN G.  
ICAT 2017, İstanbul, Turkey, 9 - 12 May 2017
- IX. **Low-pass filter design of a current-source 1-ph grid-connected PV inverter**  
ERTAŞGIN G., WHALEY D., SOONG W., ERTUGRUL N.  
57th International Scientific Conference on Power and Electrical Engineering of Riga Technical University, RTUCON 2016, Riga, Latvia, 13 - 14 October 2016
- X. **A grid-connected single-phase photovoltaic microinverter based on super-lift luo converter**  
ŞENER E., ERTAŞGIN G.  
ISSA 2016, İstanbul, Turkey, 29 May - 01 June 2016
- XI. **Energy storage element sizing for single-phase grid-connected photovoltaic converter**  
ERTAŞGIN G., WHALEY D., ERTUGRUL N., SOONG W.  
16th International Power Electronics and Motion Control Conference and Exposition, PEMC 2014, Antalya, Turkey, 21 - 24 September 2014, pp.1005-1010
- XII. **Analysis and design of single-phase current-source grid-connected PV inverter**  
ERTAŞGIN G., SOONG W., ERTUGRUL N.  
2013 15th European Conference on Power Electronics and Applications, EPE 2013, Lille, France, 2 - 06 September 2013
- XIII. **Implementation and performance evaluation of a low cost current source grid connected inverter for PV applications**  
ERTAŞGIN G., WHALEY D. M., ERTUGRUL N., SOONG W. L.  
ICSET 2008, Singapore, 24 - 27 November 2008
- XIV. **Analysis and design of energy storage for current source 1 ph grid connected PV inverters**  
ERTAŞGIN G., WHALEY D. M., ERTUGRUL N., SOONG W. L.  
APEC 2008, Austin, TX, United States Of America, 24 - 28 February 2008
- XV. **A current-source grid-connected converter topology for Photovoltaic systems**  
ERTAŞGIN G., WHALEY D. M., ERTUGRUL N., SOONG W. L.  
AUPEC 2006, Melbourne, Australia, 10 - 13 December 2006
- XVI. **Investigation of a Low Cost Grid Connected Inverter for Small Scale Wind Turbines Based on a**

### **Constant Current Source PM Generator**

WHALEY D. M., ERTAŞGIN G., SOONG W. L., ERTUGRUL N., DARBYSHIRE J., NAYAR C. V., DEHBONEI H.  
IECON 2006, Paris, France, France, 6 - 10 November 2006, pp.4297-4302

### **Supported Projects**

ERTAŞGIN G., Project Supported by Higher Education Institutions, Fotovoltaik Uygulamaları İçin Düşük Maliyetli Gerilim Kaynaklı Şebeke Bağlantılı Mikroinverter Tasarımı, 2014 - 2016