

# Prof. NECİBE FÜSUN OYMAN SERTELLER

## Personal Information

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## Education Information

Doctorate, Marmara University, Faculty of Technical Education, Electric Education, Turkey 1996 - 2000

Postgraduate, Istanbul Technical University, Nükleer Enerji Enstitüsü, Turkey 1992 - 1996

Undergraduate, Istanbul Technical University, Elektrik-Elektronik Fakültesi, Elektrik Mühendisliği Bölümü, Turkey 1983 - 1988

## Foreign Languages

English, C1 Advanced

## Dissertations

Doctorate, Kafesli Asenkron Makinalarda Zaman Harmonik Etkilerinin Oluk Tasarımı ile azaltılmasına katkılar, Marmara Üniversitesi, Faculty of Technical Education, Electric Education, 2000

Postgraduate, Reaktörlerde Kullanılan Transformatörlerde Isı Dağılımının İncelenmesi, İstanbul Teknik Üniversitesi, Nükleer Enerji Enstitüsü, 1996

## Research Areas

Engineering and Technology

## Academic Titles / Tasks

Professor, Marmara University, Faculty of Technology, Elektrik Ve Elektronik Mühendisliği Bölümü, 1992 - Continues

## Academic and Administrative Experience

Marmara University, Faculty of Technology, Elektrik Ve Elektronik Mühendisliği Bölümü, 2014 - Continues

## Advising Theses

OYMAN SERTELLER N. F., Anahtarlamalı relüktans motorlarda kutup sayısı değişiminin çalışma parametrelerine etkisinin incelenmesi, Postgraduate, B.Geçer(Student), 2019

OYMAN SERTELLER N. F., Fırçasız doğru akım motorlarında optimal hall sensör konumunun motor parametrelerine

etkisi, Postgraduate, K.Hasanusta(Student), 2016

OYMAN SERTELLER N. F., Fırçalı doğru akım motorların dizaynında manyetik sıvıların etkisinin analizi, Postgraduate, A.Ekineker(Student), 2011

OYMAN SERTELLER N. F., Fırçasız doğru akım motoru (FSDAM) ve sürücü devresi eğitim seti analizi geliştirilmesi ve motorun bilgisayar ortamında incelenmesi, Postgraduate, Y.Bektaş(Student), 2011

## Jury Memberships

Competition, Necibe fusun oyman serteller/TÜBİTAK 2204 B Ortaokul Öğrencileri Araştırma Projeleri Bölge Yarışması, Marmara University, March, 2020

Associate Professor Exam, Associate Professor Exam, Marmara Üniversitesi, February, 2020

Associate Professor Exam, Associate Professor Exam, Marmara Üniversitesi, September, 2018

Associate Professor Exam, Associate Professor Exam, Marmara Üniversitesi, April, 2018

Appointment to Academic Staff-Assistant Professorship, Appointment Academic Staff, Marmara Üniversitesi, September, 2017

Appointment to Academic Staff-Assistant Professorship, Appointment Academic Staff, İstanbul Teknik Üniversitesi, September, 2017

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, İstanbul Teknik Üniversitesi, January, 2016

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

- I. **An Educational Study of Electromagnetic Phenomena on Ferromagnetic Structure Using a Software Environment**  
OYMAN SERTELLER N. F.  
Proceedings of the National Academy of Sciences India Section A - Physical Sciences, vol.94, no.1, pp.37-45, 2024 (SCI-Expanded)
- II. **The Design of the Outer-Rotor Brushless DC Motor and an Investigation of Motor Axial-Length-to-Pole-Pitch Ratio**  
Tosun O., OYMAN SERTELLER N. F.  
SUSTAINABILITY, vol.14, no.19, 2022 (SCI-Expanded)
- III. **Speed Estimation of Brushless Direct Current (BLDC) Motor with Multilayer Perceptron**  
OYMAN SERTELLER N. F., Bektaş Y., Nogay S., AKINCI T. Ç.  
PRZEGLAD ELEKTROTECHNICZNY, vol.88, pp.255-260, 2012 (SCI-Expanded)
- IV. **A basic introduction to finite element methods for solving electrical problems**  
Serteller N. F.  
ENERGY EDUCATION SCIENCE AND TECHNOLOGY PART B-SOCIAL AND EDUCATIONAL STUDIES, vol.3, no.4, pp.487-496, 2011 (SCI-Expanded)
- V. **Brushless direct current (BLDC) motor driving experimental set**  
Bektaş Y., OYMAN SERTELLER N. F.  
ENERGY EDUCATION SCIENCE AND TECHNOLOGY PART A-ENERGY SCIENCE AND RESEARCH, vol.27, no.2, pp.455-466, 2011 (SCI-Expanded)
- VI. **Experimental Study of Moment Method for Undergraduates in Electromagnetic**  
Serteller N. F., Ak A., Koçyiğit G., Akıncı T. Ç.  
ELEKTRONIKA IR ELEKTROTEHNIKA, no.3, pp.115-118, 2011 (SCI-Expanded)
- VII. **Thermal analysis of ferromagnet actuator by finite element method**  
Serteller F., Atalay M.  
PHYSICA B-CONDENSED MATTER, vol.372, pp.366-368, 2006 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Design of a renewable based PV power supply system for a machine laboratory: Operation and performance analysis**  
NANISH A. I. I., AKPOLAT A. N., OYMAN SERTELLER N. F.  
Turkish Journal of Electromechanics & Energy, vol.8, no.3, pp.118-124, 2023 (Peer-Reviewed Journal)
- II. **Modeling and Simulation of Faulty Induction Motor in DQ Reference Frame Using MATLAB/SIMULINK with MATLAB/GUIDE for Educational Purpose**  
Rahmatullah R., OYMAN SERTELLER N. F., TOPUZ V.  
INTERNATIONAL JOURNAL OF EDUCATION AND INFORMATION TECHNOLOGIES, vol.17, pp.7-20, 2023 (ESCI)
- III. **Design of Sliding Mode Control using SVPWM Modulation Method for Speed Control of Induction Motor**  
Rahmatullah R., Ak A., Oyman Serteller N. F.  
Elsevier BV, vol.70, pp.226-233, 2023 (Scopus)
- IV. **Microcontroller Training Kit Design Compatible with Drawings of the ISIS Simulation Program**  
Oyman Serteller N. F., Apaydın H.  
INTERNATIONAL JOURNAL OF EDUCATION AND INFORMATION TECHNOLOGIES , vol.14, pp.22-30, 2020 (ESCI)
- V. **Elektromekanik Enerji Dönüşüm Prensipleri Denklemlerinden Yararlanarak Elektrik Motorlarının Tork Analizi**  
OYMAN SERTELLER N. F., DİNDAR T.  
3e Electrotech, 2018 (Peer-Reviewed Journal)
- VI. **Examination and Comprasion of nuclear Energy with other Available Energy sources for Electricity Production inTurkey**  
OYMAN SERTELLER N. F.  
International Journal of Humanities and Social Science Research, 2017 (Peer-Reviewed Journal)
- VII. **Fırçasız Doğru akım makinalarında Optimal Hall Sensör Yerinin Bulunması Çalışmaları**  
hasanusta k., OYMAN SERTELLER N. F.  
Düzce Üniversitesi Bilim ve teknoloji Dergisi, vol.4, no.2016, pp.801-811, 2016 (Peer-Reviewed Journal)
- VIII. **Numerical Solution of Energy Transmission Lines Equivalent Circuit Equations with Adomian Decomposition Method**  
Oyman Serteller N. F., Üstündağ D.  
Journal of Applied Nonlinear Dynamics, vol.1, no.5, pp.65-71, 2016 (Scopus)
- IX. **Numerical Solution of Energy Transmission Lines Equivalent circuit Equation With Adomian Decomposition Method**  
OYMAN SERTELLER N. F., ÜSTÜNDAĞ D.  
Journal of Applied Nonlinear of Dynamics, vol.5, no.1, pp.65-71, 2016 (Peer-Reviewed Journal)
- X. **Fırçasız Doğru Akım motorlarında FSDAM Optimal Hall sensör yerinin İncelenmesi ve Motora Etkisi**  
OYMAN SERTELLER N. F., hasanusta k.  
Afyon Üni. Fen Bilimleri Enstitüsü, vol.15, no.1, pp.1-7, 2015 (Peer-Reviewed Journal)
- XI. **Fırçasız doğru akım motoru kontrolünde PWM ve histerizis bant tekniğinin karşılaştırılması**  
BEKTAŞ Y., OYMAN SERTELLER N. F.  
SDU international journal of science and technology, vol.2, no.3, 2010 (Peer-Reviewed Journal)
- XII. **Brushless direct current BLDC machine Bipolar Unipolar Driving Circuit education study**  
OYMAN SERTELLER N. F., yan g.  
Procedia - Social and Behavioral Sciences, 2010 (Peer-Reviewed Journal)
- XIII. **Computational Techniques to Solve Electromagnetic Problems by Using FEM**  
Oyman Serteller N. F., Üstündağ D.  
WSEAS Transactions on Electronics, vol.5, no.5, pp.166-175, 2008 (Conference Book)

## Books & Book Chapters

- I. **SMC Controller Design for DC Motor Speed Control Applications and Performance Comparison with FLC, PID and PI Controllers**  
Rahmatullah R., Ak A., Oyman Serteller N. F.  
in: Intelligent Sustainable Systems, Atulya K. Nagar, Dharm Singh Jat, Durgesh Kumar Mishra, Amit Joshi, Editor, Springer, Singapore, pp.607-617, 2023
- II. **Harmoniklerin Tanımı ve Elektrik Motorlarında Harmonikler**  
OYMAN SERTELLER N. F.  
Alim Kitapları, İstanbul, 2014

## Refereed Congress / Symposium Publications in Proceedings

- I. **Effect of PI, PID, Fuzzy Logic, and Genetic Algorithm Methods in DC Motor Speed Control**  
Tosun Ö., Geçer B., OYMAN SERTELLER N. F., AK A.  
3rd International Conference on Engineering, Natural and Social Sciences, Turkey, 16 May 2024
- II. **Design and Control of Switched Reluctance Motors with Different Stator and Rotor Pole Numbers by Co-simulation: Comparatively Performance Analysis**  
GEÇER B., OYMAN SERTELLER N. F., AKPOLAT A. N.  
11. EUROPEAN CONFERENCE ON RENEWABLE ENERGY SYSTEMS ECRES 2023, Riga, Latvia, 18 - 20 May 2023
- III. **Comparison of Permanent Magnet Electric Motors Used in Electric Vehicles**  
Alaca E., OYMAN SERTELLER N. F., Kömürgöz Kırış G.  
20th IEEE International Power Electronics and Motion Control Conference, PEMC 2022, Brasov, Romania, 25 - 28 September 2022, pp.107-112
- IV. **Design, Optimization and Experimental Study of Axial and Hub BLDC Motors in-Wheel Application for Light Electric Vehicles**  
TOKER K., Tosun O., OYMAN SERTELLER N. F., TOPUZ V.  
21st IEEE Mediterranean Electrotechnical Conference (IEEE MELECON), Palermo, Italy, 14 - 16 June 2022, pp.354-359
- V. **Understanding the Foundations of Electromagnetic Field Theory with Computer Software**  
Serteller N. F., Kari G.  
10th IEEE Global Engineering Education Conference (EDUCON), Dubai, United Arab Emirates, 9 - 11 April 2019, pp.755-760
- VI. **Magnetic Levitation Circuit System Using Ferromagnetic and Hard magnetic material: Experimental Study**  
OYMAN SERTELLER N. F.  
icesen 2018 konferans, 12 - 16 October 2018
- VII. **A Poynting Vector Approach to Electromechanical Energy Conversion on Electric Machine Operation**  
OYMAN SERTELLER N. F.  
icesen2018, 12 - 16 October 2018
- VIII. **DC control**  
OYMAN SERTELLER N. F., DİNDAR T.  
konfereans, 22 - 25 November 2017
- IX. **STUDYING WITH FEEDBACK CONTROLLER PARAMETERS ON A PERMANENT MAGNET DIRECT CURRENT MOTOR**  
AYIRGA H., OYMAN SERTELLER N. F., DİNDAR T.  
International Conference on Technics, Technologies and Education ICTTE2017, 19 - 20 October 2017
- X. **A Dynamic Analysis of BLDC Motor by Using Matlab/Simulink and Mathematica**  
Tatar G., TOKER K., OYMAN SERTELLER N. F., KORKMAZ H.  
CHILEAN Conference on Electrical, Electronics Engineering, Information and Communication Technologies

(CHILECON), Pucon, Chile, 18 - 20 October 2017

- XI. **Analysis of Dynamic Behavior of Direct Current Motor with Electrical Braking Techniques**  
OYMAN SERTELLER N. F., ÜSTÜNDAĞ D.  
CHILEAN Conference on Electrical, Electronics Engineering, Information and Communication Technologies  
(CHILECON), Pucon, Chile, 18 - 20 October 2017
- XII. **Elektromekanik Enerji Dönüşüm Prensipleri Denklemlerinden Yararlanarak Elektrik Motorlarının Tork Analizi**  
OYMAN SERTELLER N. F., GEÇER B., DİNDAR T.  
ELEKTRİK ENERJİSİ DÖNÜŞÜM KONGRESİ, Turkey, 21 - 22 September 2017
- XIII. **Sürekli Mıknatıslı Fırçalı DA Motorunun Geçici Rejim Durumlarının Farklı Denetleyici Tipleriyle İyileştirilmesi**  
ayırğa H. Y., OYMAN SERTELLER N. F.  
TOK2016, Turkey, 29 September - 01 October 2016
- XIV. **Teaching Electromagnetic Problems with Mathematica**  
OYMAN SERTELLER N. F., ÜSTÜNDAĞ D.  
The 4th. world Congress on Education Research (WCER2016), 6 - 08 October 2016
- XV. **FIRÇASIZ DOĞRU AKIM MAKİNALARINDA OPTİMAL HALL SENSÖR YERİNİN BULUNMASI ÇALIŞMALARI**  
kemal h., OYMAN SERTELLER N. F.  
umas sempozyum, 10 - 12 September 2015
- XVI. **Examination of The Discharge of Gases Used in The Event of High Voltage**  
DİNDAR T., OYMAN SERTELLER N. F., GÖKMEN G., AKINCI T. Ç.  
International Conference Engineering, Technologies and System , TECHSYS 2013, Plovdiv, Bulgaria, 29 - 31 May 2013
- XVII. **TÜRKİYE DE KULLANILAN VE KULLANILABİLECEK OLAN ENERJİKAYNAKLARI ARASINDA NÜKLEER ENERJİNİN YERİ VE ÖNEM**  
OYMAN SERTELLER N. F.  
Dünya Enerji Konseyi Türk Milli Komitesi TÜRKİYE 10. ENERJİ KONGRESİ, Turkey, 12 - 15 June 2010
- XVIII. **Numerical Analysis of Electrical System on High Voltage Medium**  
OYMAN SERTELLER N. F., ÜSTÜNDAĞ D.  
the 16-th European Conference on Mathematics for Industry, 1 - 03 June 2010
- XIX. **Brushless direct current (BLDC) machine Bipolar - Unipolar Driving Circuit education study**  
Yan G., OYMAN SERTELLER N. F.  
2nd World Conference on Educational Sciences (WCES-2010), İstanbul, Turkey, 4 - 08 February 2010, vol.2, pp.2694-2699
- XX. **Application of the boundary element method for heat distribution on ferromagnetic core**  
Serteller F.  
7th WSEAS International Conference on Application of Electrical Engineering, Trondheim, Norway, 2 - 04 July 2008, pp.137-138
- XXI. **Comparing program techniques in the solution of EM type problems using FEM**  
Serteller N. F., ÜSTÜNDAĞ D.  
6th WSEAS International Conference on Applied Electromagnetics, Wireless and Optical Communications, Trondheim, Norway, 2 - 04 July 2008, pp.147-149
- XXII. **Design and control application of stepping motor for ventilating system**  
Apaydm H., OYMAN SERTELLER N. F.  
IEEE International Electric Machines and Drives Conference (IEMDC 2007), Antalya, Turkey, 3 - 05 May 2007, pp.1590-1591
- XXIII. **Time harmonic effects for rotor slot design considering deep bar squirrel cage induction motors**  
OYMAN SERTELLER N. F., Mergen A. F., Gizher E.  
9th International Conference on Optimization of Electrical and Electronic Equipment, Brasov, Romania, 20 - 22 May 2004, pp.141-144

- XXIV. Dynamic behaviour model of permanent magnet synchronous motor fed by PWM inverter and fuzzy logic controller for stator phase current, flux and torque control of PMSM**  
Guney I., Oguz Y., Serteller F.  
IEEE International Electric Machines and Drives Conference, Cambridge, Canada, 17 - 20 June 2001, pp.479-485

## **Other Publications**

- I. **Examination and Comparison of Nuclear Energy with other Available Energy Sources for Electricity Production in Turkey**  
Oyman Serteller N. F.  
Other, pp.38-42, 2017
- II. **The optimal hall sensor's position for brushless direct current machine: experimental study**  
Oyman Serteller N. F.  
Other, pp.218-225, 2016

## **Metrics**

Publication: 54  
Citation (WoS): 26  
Citation (Scopus): 64  
H-Index (WoS): 6  
H-Index (Scopus): 7

## **Non Academic Experience**

FIU(Florida International University)