

## Prof. Ali Nezh Güven

### Personal Information

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### International Researcher IDs

ScholarID: 2qC1y1gAAAAJ

ORCID: 0000-0001-6041-7199

Publons / Web Of Science ResearcherID: D-8029-2011

ScopusID: 36845815800

Yoksis Researcher ID: 5097

### Education Information

Doctorate, The Ohio State University, Engineering, Electrical-Electronics Engineering, United States Of America 1981 - 1984

Postgraduate, The Ohio State University, Engineering, Electrical-Electronics Engineering, United States Of America 1979 - 1981

Undergraduate, Middle East Technical University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, Turkey 1974 - 1979

### Research Areas

Power System Analysis, Electric Power Transmission, Distribution and Protection, Renewable energy

### Academic Titles / Tasks

Professor, Middle East Technical University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, 1986 - 2023

Assistant Professor, Michigan State University, Engineering, Electrical-Electronics Engineering, 1984 - 1985

Research Assistant, The Ohio State University, Engineering, Electrical-Electronics Engineering, 1981 - 1984

Research Assistant, Middle East Technical University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, 1979 - 1979

### Academic and Administrative Experience

Yürütme Kurulu Üyesi, TÜBİTAK-ELOTEG, 2017 - 2018

Administrative Board member Yönetim Kurulu Üyesi, TÜBİTAK-UZAY Research Institute, 2004 - 2008

National Team of Bologna Experts, Higher Education Council, 2004 - 2008

Erasmus Program Institutional Coordinator, Middle East Technical University, Presidency Office, 2003 - 2008

University Executive Board Member, Middle East Technical University, Odtü Kuzey Kıbrıs Kampusu (Kktc-Güzelyurt), 2001 - 2008

Council Member (METU Representative), Interuniversity Council of Turkey, 2000 - 2008

## Advising Theses

- Güven A. N., Security constrained optimal redispatch management in balancing markets, Doctorate, S.EREN(Student), 2023
- Güven A. N., Induction Motor-Based Dynamic Modeling of a Load Bus Using Extended Kalman Filter Parameter Estimation, Postgraduate, M.KARAHAN(Student), 2023
- Güven A. N., Optimum placement and cost-benefit analysis of battery energy storage systems, Postgraduate, İ.HARUN(Student), 2022
- Güven A. N., Monte Carlo based control algorithm for economic feasibility of v2G applications, Postgraduate, K.ŞAHİNKAYA(Student), 2019
- Güven A. N., GIS based modelling and analysis of unbalanced LV distribution networks with distributed energy resources, Postgraduate, İ.ÖZDAMAR(Student), 2019
- Güven A. N., Newton-Raphson based load flow analysis of AC/DC distribution systems with distributed generation, Postgraduate, F.EMRE(Student), 2019
- Güven A. N., Assessment of impacts of electric vehicles on low voltage distribution networks in Turkey, Postgraduate, A.TEMİZ(Student), 2015
- Güven A. N., Technical evaluation of synchronous interconnection between Mashriq countries, Postgraduate, G.YASİN(Student), 2014
- Güven A. N., Stochastic wind-thermal generation coordination for Turkish day-ahead electricity market, Postgraduate, A.AYDOĞDU(Student), 2014
- Güven A. N., Design of a special protection scheme and supplementary controls regarding HVDC back to back interconnection between Turkey and Georgia, Postgraduate, Ö.TANIDIR(Student), 2014
- Güven A. N., Transmission system security study for Akkuyu Nuclear Power Plant, Postgraduate, S.EREN(Student), 2014
- Güven A. N., Optimal bidding strategies for day ahead electricity market by risk constrained stochastic price based unit commitment, Postgraduate, A.SHİLEH(Student), 2014
- Güven A. N., Determination of wind power potential and optimal wind power plant locations in Turkey, Postgraduate, H.ÇETİNAY(Student), 2014
- Güven A. N., Determination of optimum values for voltage setpoints of power stations in Turkey, Postgraduate, İ.ELMA(Student), 2014
- Güven A. N., Congestion-driven transmission planning considering incentives for generator investments, Doctorate, O.BÜLENT(Student), 2008

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

- I. **CVaR-based stochastic wind-thermal generation coordination for Turkish electricity market**  
Aydoğdu A., Tör O. B., GÜVEN A. N.  
Journal of Modern Power Systems and Clean Energy, vol.7, no.5, pp.1307-1318, 2019 (SCI-Expanded)
- II. **Dynamic optimization of long term primary electric distribution network investments based on planning metrics Primer elektrik dağıtım şebekelerinin uzun dönem kapasite artış yatırımlarının planlama ölçütlerine dayalı dinamik optimizasyonu**  
Tör O. B., Cebeci M. E., Koç M., GÜVEN A. N.  
Journal of the Faculty of Engineering and Architecture of Gazi University, vol.33, no.1, pp.227-237, 2018 (SCI-Expanded)
- III. **Implementation of low voltage express feeder (LVEF) to reduce of no-load losses of distribution transformers which suffer high seasonal load deviation Alçak gerilim ekspres fider uygulaması ile sezonsal yüklenme farkları yüksek olan dağıtım transformatörlerin boшта kayıplarının azaltılması**  
Tör O. B., Cebeci M. E., Kaş N., Göktepe M., Kalkan E., Yılmaz S. C., Gündoğdu A., GÜVEN A. N.

Journal of the Faculty of Engineering and Architecture of Gazi University, vol.33, no.3, pp.979-994, 2018 (SCI-Expanded)

- IV. **Optimal siting and sizing of wind farms**  
Cetinay H., Kuipers F. A., GÜVEN A. N.  
Renewable Energy, vol.101, pp.51-58, 2017 (SCI-Expanded)
- V. **Probabilistic day-ahead system marginal price forecasting with ANN for the Turkish electricity market**  
Özgüner E., Tör O. B., GÜVEN A. N.  
Turkish Journal of Electrical Engineering and Computer Sciences, vol.25, no.6, pp.4923-4935, 2017 (SCI-Expanded)
- VI. **Promoting the investment on IPPs for optimal grid planning**  
Tor O. B., GÜVEN A. N., Shahidehpour M.  
IEEE Transactions on Power Systems, vol.25, no.3, pp.1743-1750, 2010 (SCI-Expanded)
- VII. **Congestion-driven transmission planning considering the impact of generator expansion**  
Tor O. B., GÜVEN A. N., Shahidehpour M.  
IEEE Transactions on Power Systems, vol.23, no.2, pp.781-789, 2008 (SCI-Expanded)

### Articles Published in Other Journals

- I. **A Cost-Based Approach to Elicit Ancillary Service Tariffs from Unified Capacity and Energy Tariffs**  
Sezer H., Guven A. N., TOR O. B., Cebeci M. E., Teimourzadeh S.  
Balkan Journal of Electrical and Computer Engineering, vol.10, no.1, pp.53-63, 2022 (Peer-Reviewed Journal)
- II. **Technical and economic feasibility of conversion to a higher voltage distribution**  
Ozay N., GÜVEN A. N., Tureli A., Demiroglu M.  
IEE Proceedings: Generation, Transmission and Distribution, vol.142, no.5, pp.468-472, 1995 (Scopus)
- III. **Algorithms for efficient vectorization of repeated sparse power system network computations**  
Aykanat C., Giiven N.  
IEEE Transactions on Power Systems, vol.10, no.1, pp.448-456, 1995 (Scopus)
- IV. **A proposed application of an industrial dos computer for distribution substation monitoring and control**  
Batur I., GÜVEN A. N., Ozay N.  
IEEE Transactions on Power Delivery, vol.9, no.2, pp.729-735, 1994 (Scopus)
- V. **Analysis of ground fault current distribution along underground cables**  
GÜVEN A. N., Sebo S.  
IEEE Transactions on Power Delivery, vol.1, no.4, pp.9-18, 1986 (Scopus)

### Refereed Congress / Symposium Publications in Proceedings

- I. **An AGC Algorithm for Multi-Area Power Systems in Network Splitting Conditions**  
Temiz A., GÜVEN A. N.  
2023 IEEE PES Generation, Transmission and Distribution International Conference and Exposition, GTD 2023, İstanbul, Turkey, 22 - 25 May 2023, pp.77-81
- II. **Optimized Congestion Management in Balancing Markets for Electricity Transmission System Operator**  
Eren S., Güven A. N.  
Operations Research Conference , Karlsruhe, Germany, 6 - 09 September 2022, vol.1, pp.297-304
- III. **Multi-Period Reactive Power Optimization for Determination of Switch Statuses of Shunt Elements and Voltage Setpoints of Power Plants**  
Elma I., GÜVEN A. N.  
13th International Conference on Electrical and Electronics Engineering, ELECO 2021, Virtual, Bursa, Turkey, 25 -

27 November 2021, pp.6-10

- IV. **Implementation of 1 kV on LV feeders: A smart alternative to MV line investments to solve voltage drop problems at LV systems**  
Ozen K., Cebeci M. E., Tor O. B., Batar G., Kilic A., Turkmen U., GÜVEN A. N.  
5th International Istanbul Smart Grids and Cities Congress and Fair, ICSG 2017, İstanbul, Turkey, 19 - 21 April 2017, pp.27-31
- V. **Theoretical and practical aspects of implementing a low voltage express feeder between nearby distribution transformers to reduce annual losses**  
Kas N., Tor O. B., Cebeci M. E., Goktepe M., Kalkan E., Yilmaz S. C., Güven A. N., Gundogdu A.  
5th International Istanbul Smart Grids and Cities Congress and Fair, ICSG 2017, İstanbul, Turkey, 19 - 21 April 2017, pp.70-74
- VI. **Optimization of long-term investments of electric distribution systems considering planning metrics**  
Koc M., Tor O. B., Cebeci M. E., Güven A. N., Guler F., Taskin H., Tuncer A., Okul U.  
5th International Istanbul Smart Grids and Cities Congress and Fair, ICSG 2017, İstanbul, Turkey, 19 - 21 April 2017, pp.60-64
- VII. **Feasibility of distributing electric power through single-phase transformers at rural regions of Turkey based on rural characteristic indices**  
Erdagistanli N., Yuksel H., Sagir D., Yilmaz I., Koc M., Cebeci M. E., Tor O. B., GÜVEN A. N.  
2017 IEEE Power and Energy Conference at Illinois, PECE 2017, Illinois, United States Of America, 23 - 24 February 2017
- VIII. **Price Based Unit Commitment for Bidding Strategies in Turkish Market Under Unit and System Constraints**  
Okuslug A., GÜVEN A. N., Tor O. B., Bara A., Oprea S. V.  
8th International Conference on Energy and Environment, CIEM 2017, Bucharest, Romania, 19 - 20 October 2017, pp.59-63
- IX. **Assessment of impacts of Electric Vehicles on LV distribution networks in Turkey**  
Temiz A., GÜVEN A. N.  
2016 IEEE International Energy Conference, ENERGYCON 2016, Leuven, Belgium, 4 - 08 April 2016
- X. **Determination of zonal power demand S-curves with GA based on top-to-bottom and end-use approaches**  
Tursun F., Cebeci M. E., Tör O. B., Şahin A., Taşkin H. G., GÜVEN A. N.  
4th International Istanbul Smart Grid Congress and Fair, ICSG 2016, İstanbul, Turkey, 20 - 21 April 2016
- XI. **A geographical zoning methodology for nodal transmission use-of-system tariffs**  
Cebeci M., Tor O., Gencoglu C., GÜVEN A. N.  
2012 IEEE Power and Energy Society General Meeting, PES 2012, San Diego, CA, United States Of America, 22 - 26 July 2012
- XII. **Investigation of necessary transmission enforcements at the Balkan region of ENTSO/E in the sense of inter-area oscillations after interconnection of Turkey**  
Tör O. B., Gençoğlu C., Tanidir Ö., Cebeci M. E., GÜVEN A. N.  
7th International Conference on Electrical and Electronics Engineering, ELECO 2011, Bursa, Turkey, 1 - 04 December 2011
- XIII. **Transmission and substation expansion planning using mixed integer programming**  
Cebeci M. E., Eren S., Tor O. B., GÜVEN A. N.  
43rd North American Power Symposium, NAPS 2011, Boston, MA, United States Of America, 04 August 2011 - 06 August 2011
- XIV. **Damping measures against prospective oscillations between Turkish grid and ENTSO-E system**  
Tor O. B., Gencoglu C., Yilmaz O., Cebeci M. E., GÜVEN A. N.  
2010 International Conference on Power System Technology: Technological Innovations Making Power Grid Smarter, POWERCON2010, Hangzhou, China, 24 - 28 October 2010
- XV. **Modeling and investigation of fault ride through capability of variable speed wind turbines Değişken hızlı rüzgar türbinlerinin modellenmesi ve arıza sonrası sisteme katkı yeteneklerinin incelenmesi**

Koç E., GÜVEN A. N.

2010 7th National Conference on Electrical, Electronics and Computer Engineering, ELECO 2010, Bursa, Turkey, 2 - 05 December 2010, pp.22-26

- XVI. **Damping measures against low frequency inter area oscillations and solutions for Turkey ENTSO-E CESA interconnection Bölgeler arasi düşük frekansli generatör salinimlerini sönümleyici faktörler ve Türkiye ENTSO-E CESA enterkonneksiyonu için çözümler**

Gençoğlu C., Tör O. B., GÜVEN A. N.

2010 7th National Conference on Electrical, Electronics and Computer Engineering, ELECO 2010, Bursa, Turkey, 2 - 05 December 2010, pp.153-157

- XVII. **Assessment of the effect of hydroelectric power plants' governor settings on low frequency inter area oscillations**

Gencoglu C., Tor O., Cebeci E., Yilmaz O., GÜVEN A. N.

2010 International Conference on Power System Technology: Technological Innovations Making Power Grid Smarter, POWERCON2010, Hangzhou, China, 24 - 28 October 2010

- XVIII. **Design and implementation of a feeder automation system for distribution networks**

Ozay N., GÜVEN A. N., Buyuksemerci A., Fettahlioglu M.

1999 International Conference on Electric Power Engineering, PowerTech Budapest 1999, Budapest, Hungary, 29 August - 02 September 1999, pp.122

- XIX. **GIS based outage analysis system for electric distribution networks**

GÜVEN A. N., Ozay N., Tunalı E.

Proceedings of the 1996 8th Mediterranean Electrotechnical Conference, MELECON'06. Part 3 (of 3), Bari, Italy, 13 - 16 May 1996, vol.2, pp.761-764

- XX. **Utilisation of AM/FM systems in the operation of distribution networks**

GÜVEN A. N., Ozay N., Celenk E., Guven A. S.

Proceedings of the 7th Mediterranean Electrotechnical Conference - MELECON. Part 1 (of 3), Antalya, Turkey, 12 - 14 April 1994, vol.3

- XXI. **Accurate determination of neutral conductor current distribution along low voltage feeders**

Ozay N., GÜVEN A. N., Aksu A.

Proceedings of the 7th Mediterranean Electrotechnical Conference - MELECON. Part 1 (of 3), Antalya, Turkey, 12 - 14 April 1994, vol.3

- XXII. **Efficient vectorization of forward/backward substitutions in solving sparse linear equations**

Aykanat C., Ozgu O., GÜVEN A. N.

Proceedings of the 7th Mediterranean Electrotechnical Conference - MELECON. Part 1 (of 3), Antalya, Turkey, 12 - 14 April 1994, vol.1

## Metrics

Publication: 34

Citation (Scopus): 333

H-Index (Scopus): 9

## Non Academic Experience

Other Public Institution, Türkiye Elektrik İletim A.Ş., Genel Müdürlük