Prof. Ozan ERDİNÇ

Personal Information

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Biography

Prof. Dr. Ozan Erdinç was born on May 12, 1985, in Istanbul. He is married and has two children. He received his Bachelor's degree in Electrical Engineering from Yıldız Technical University in 2007. He completed his Master's and Ph.D. studies in the Electrical Facilities Program of the Electrical Engineering Department at the Institute of Science of Yıldız Technical University in 2009 and 2013, respectively. During his postgraduate studies, he held various positions in the private sector, including managerial roles.

In May 2013, he began working as a paid postdoctoral researcher on a European Union project funded by the 7th Framework Programme in Portugal. In January 2015, he joined the Electrical Engineering Department of Yıldız Technical University as a faculty member. He was awarded the title of Associate Professor in April 2016. In September 2021, at the relatively young age of 36 and with private sector experience, he achieved the title of Professor. He continues to serve as a Board Member of the Institute of Clean Energy Technologies at Yıldız Technical University. In the past, he has held positions such as Head of the Information Technologies Department at Yıldız Technical University, Chair of the Alternative Energy Electrical Systems Division of the Electrical Engineering Department, and Director of the Energy Application and Research Center. Additionally, he serves as a board and scientific committee member in leading scientific and industry-focused non-governmental organizations, including the Electrical Engineers Association (ETMD).

Prof. Dr. Ozan Erdinç conducts research on renewable energy systems, smart grids, electric vehicles, and various optimization problems in electric power systems. He provides consultancy services to different distribution companies on new approaches for the grid integration of electric vehicles and renewable energy-based distributed generation facilities. Additionally, he advises various governmental and industrial stakeholders on topics such as effective bidding strategies in energy markets, generation and consumption forecasting, and energy management system design for different applications.

Furthermore, he is the coordinator of the Horizon Europe-funded "Energy Communities Excellence Hubs: Catalyzing Energy Innovation Ecosystems (ECHO)" project, which has a budget of 5 million Euros and started in December 2024. He has also participated as a principal investigator, researcher, and consultant in numerous projects funded by various organizations.

Between 2019 and 2023, he served as the Chair of the IEEE Power and Energy Society (PES) Turkey Section, the world's largest professional organization in the field. He holds the IEEE Senior Member status and is actively involved in editorial activities for globally recognized IEEE journals. Notably, between 2018 and 2024, he was the only Turkish editor in five IEEE PES journals, including IEEE Transactions on Sustainable Energy. He also serves as an editor for IEEE Transactions on Intelligent Transportation Systems, IEEE Transactions on Systems, Man, and Cybernetics: Systems, IEEE Power

Engineering Letters, IEEE Open Access Journal of Power and Energy, IEEE Access, IEEE Systems Journal, IEEE Internet of Things Journal, IET Renewable Power Generation (2019-2024), IET Smart Grid, IET Generation, Transmission & Distribution, e-Prime: Advances in Electrical Engineering, Electronics and Energy, and the Turkish Journal of Electrical Engineering & Computer Sciences.

To date, he has received over 8,000 citations for more than 150 international scientific publications, with an h-index of 43. He has served as honorary chair, organizing committee chair, technical committee chair, and technical committee member in various IEEE-supported conferences.

For his outstanding contributions, he has received multiple prestigious awards, including:

- -The 2014 Postdoctoral Research Award from the Portuguese Science, Research, and Technology National Support Agency (FCT) (selected among over 1,000 applicants).
- -The 2020 Outstanding Young Scientist Award (TÜBA-GEBİP) from the Turkish Academy of Sciences.
- -The 2021 IEEE Turkey Academic Encouragement Award for contributions to power system operation and renewable energy.
- -The 2023 100th Anniversary TÜBİTAK Incentive Award for his exceptional work on renewable energy sources, energy storage systems, electric vehicles, and demand flexibility in power system operation.
- -The 2024 Science Academy BAGEP Award.

Since 2019, he has been listed annually in Stanford University's "World Top 2% Scientists List," which identifies the world's leading academics.

Considering his leadership in government, industry, and civil society organizations, his research and editorial work in top scientific journals, his high-budget industrial collaboration projects, and the prestigious awards he has received, Prof. Dr. Ozan Erdinç has established himself as a globally recognized academic at a young age in the fields of energy and information technologies.

Education Information

Doctorate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Elektrik Mühendisliği, Turkey 2009 - 2013

Postgraduate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Elektrik Mühendisliği, Turkey 2007 - 2009

Undergraduate, Yildiz Technical University, Faculty Of Electrical & Electronics, Elektrik Mühendisliği, Turkey 2003 - 2007

Research Areas

Electrical and Electronics Engineering, Energy, Direct Energy Conversion and Energy Storage, Power System Analysis, Electric Power Transmission, Distribution and Protection, Renewable energy, Engineering and Technology

Academic Titles / Tasks

Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department, 2021 - Continues

Associate Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department, 2016 - 2021

Assistant Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department,

Assistant Professor, Istanbul Arel University, Faculty Of Engineering-Architecture, Department Of Electrical And Electronics Engineering, 2014 - 2015

Academic and Administrative Experience

Manager of Research and Application Center, Yildiz Technical University, ------, Energy Application and Research Center, 2018 - Continues

Head of Department, Yildiz Technical University, Faculty of Electrical & Electronics, Electrical Engineering Department, 2017 - Continues

Rectorate Commissioner, Yildiz Technical University, ------, Akademik Teşvik Düzenleme, Denetleme ve İtiraz Komisyonu, 2017 - Continues

Deputy Head of Department, Yildiz Technical University, Faculty of Electrical & Electronics, Electrical Engineering Department, 2017 - 2018

Erasmus Coordinator, Yildiz Technical University, Faculty of Electrical & Electronics, Electrical Engineering Department, 2015 - 2016

Deputy Head of Department, Istanbul Arel University, Faculty Of Engineering And Architecture, Department Of Electrical And Electronics Engineering, 2014 - 2015

Courses

Doctorate

Optimization of Electric Energy Systems, Doctorate, 2019 - 2020, 2018 - 2019

Undergraduate

Renewable Energy Systems, Undergraduate, 2018 - 2019, 2017 - 2018, 2016 - 2017 Electric Vehicles, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017 Introduction to Smart Grids, Undergraduate, 2017 - 2018, 2016 - 2017

Supervised Theses

Erdinç O., Ortak enerji depolama sistemlerinin elektrik güç sistemlerinde talep cevabı konsepti için kullanılması, Postgraduate, A.ÇİÇEK(Student), 2018

Erdinç O., Mikroşebekelerde talep tarafının esnekliğini dikkate alan optimum işletim yaklaşımının geliştirilmesi, Postgraduate, A.KÜBRA(Student), 2018

Erdinç O., Elektrikli otobüslerin metrobüs hattında kullanımının tekno-ekonomik analizi, Postgraduate, A.ALTAY(Student), 2017

Erdinç O., Integration of distributed generation in Iraq electrical distribution system: Pre-results and suggestions, Postgraduate, A.ISAM(Student), 2017

Erdinç O., Design and implementation of an inverter for low power photovoltaic systems, Postgraduate, D.MOHAMMAD(Student), 2017

Published journal articles indexed by SCI, SSCI, and AHCI

- I. Fuel cell and battery powered light electric vehicle simulation
 Sahin H., Çetin M. S., Gençoğlu M. T., ERDİNÇ O.
 International Journal of Hydrogen Energy, 2025 (SCI-Expanded)
- II. Coordinated stochastic power system operation between TSO, renewable sources, energy storage and hydrogen energy equipped DSO, and HSO

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III. Overview and advancement of power system topology addressing pre- and post-event strategies under abnormal operating conditions

Yaldız A., GÖKÇEK T., ATEŞ Y., ERDİNÇ O.

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IV. Maximizing EV profit and grid stability through Virtual Power Plant considering V2G

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Energy Reports, vol.11, pp.3509-3520, 2024 (SCI-Expanded)

V. Energy Management Strategy of a Green Port Serving Emission-Free Ferries Considering EV Parking Lot Availability

Ozdemir H., GÜLDORUM H. C., ERENOĞLU A. K., Sengor I., Hayes B. P., ERDİNÇ O.

IEEE Transactions on Intelligent Transportation Systems, vol.25, no.6, pp.5640-5650, 2024 (SCI-Expanded)

VI. Development of a Cost Minimization Oriented Optimization Algorithm for Green Hydrogen Production in a Multi-Energy System Considering EVs and FCEVs Availability

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VII. Impacts of Distribution-Level Joint Scheduling of Electric Vehicle Battery Charging and Swapping Stations on Reliability Improvement

Kursat Aktar A., Tascikaraoglu A., ERDİNÇ O., Guner S.

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VIII. Preventive Energy Management Strategy Before Extreme Weather Events by Modeling EVs' Opt-In Preferences

Reza Salehizadeh M., Kubra Erenoglu A., Sengor I., Tascikaraoglu A., ERDİNÇ O., Liu J., Catalao J. P. S.

IEEE Transactions on Intelligent Transportation Systems, vol.25, no.11, pp.18368-18382, 2024 (SCI-Expanded)

IX. A Novel Closed-Loop Frequency Control Approach for Wireless Power Transfer Systems in On-Road Electric Vehicles

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X. Integration of electric vehicle parking lots into railway network considering line losses: A case study of Istanbul M1 metro line

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XI. Real-Time Allocation of Multi-Mobile Resources in Integrated Distribution and Transportation Systems for Resilient Electrical Grid

Erenoglu A. K., ERDİNÇ O.

IEEE Transactions on Power Delivery, vol.38, no.2, pp.1108-1119, 2023 (SCI-Expanded)

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Erdinc F. G., ÇİÇEK A., ERDİNÇ O.

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Uguz F., Turan A., GÖKÇEK T., Ates Y., ERDİNÇ O.

INTERNATIONAL TRANSACTIONS ON ELECTRICAL ENERGY SYSTEMS, vol.2022, 2022 (SCI-Expanded)

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Zare Oskouei M., Mohammadi-Ivatloo B., ERDİNÇ O., Gulsen Erdinc F.

INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.46, no.10, pp.14462-14477, 2022 (SCI-Expanded)

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ÇİÇEK A., Sengor I., Guner S., Karakus F., Erenoglu A. K., ERDİNÇ O., Shafie-Khah M., Catalao J. P. S.

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Erenoglu A. K., Sancar S., Terzi I. S., ERDİNÇ O., Shafie-Khah M., Catalao J. P. S.

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XXI. Robust Control Strategies for Microgrids: A Review

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XXIII. Optimal energy management system for microgrids considering energy storage, demand response and renewable power generation

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IEEE TRANSACTIONS ON TRANSPORTATION ELECTRIFICATION, vol.7, no.4, pp.2429-2438, 2021 (SCI-Expanded)

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Cicek A., Guzel S., ERDİNÇ O., Catalao J. P. S.

ELECTRIC POWER SYSTEMS RESEARCH, vol.201, 2021 (SCI-Expanded)

XXX. A Topological Overview of Microgrids: from Maturity to the Future

Erenoğlu A. K., Sancar S., Erdinç O., Bağrıyanık M.

Turkish Journal Of Electrical Engineering And Computer Sciences, vol.1, pp.1-2, 2021 (SCI-Expanded)

XXXI. Post-Event Restoration Strategy for Coupled Distribution-Transportation System Utilizing
Spatiotemporal Flexibility of Mobile Emergency Generator and Mobile Energy Storage System
Erenoğlu A. K., Erdinç O.

Electric Power Systems Research, vol.1, pp.1, 2021 (SCI-Expanded)

XXXII. Effects of On-Site PV Generation and Residential Demand Response on Distribution System Reliability

Güner S., Erenoğlu A. K., Şengör İ., Erdinç O., Catalao J.

APPLIED SCIENCES-BASEL, vol.1, pp.1, 2021 (SCI-Expanded)

XXXIII. Considering the combinatorial effects of on-site distributed generation and battery-to-X option availability in electric vehicle battery swap station operation ERDİNÇ O.

SUSTAINABLE ENERGY GRIDS & NETWORKS, vol.26, 2021 (SCI-Expanded)

XXXIV. An interactive multi-criteria decision-making framework between a renewable power plant planner and the independent system operator

Soltaniyan S., Salehizadeh M. R., TAŞCIKARAOĞLU A., ERDİNÇ O., Catalao J. P. S.

SUSTAINABLE ENERGY GRIDS & NETWORKS, vol.26, 2021 (SCI-Expanded)

XXXV. Optimal Allocation of Renewable Sources and Energy Storage Systems in Partitioned Power Networks to Create Supply-Sufficient Areas

Oskouei M. Z., Mohammadi-Ivatloo B., ERDİNÇ O., Erdinc F. G.

IEEE TRANSACTIONS ON SUSTAINABLE ENERGY, vol.12, no.2, pp.999-1008, 2021 (SCI-Expanded)

XXXVI. Real-Time Algorithm Based Intelligent EV Parking Lot Charging Management Strategy Providing PLL
Type Demand Response Program

Sengor I., Guner S., ERDİNÇ O.

IEEE TRANSACTIONS ON SUSTAINABLE ENERGY, vol.12, no.2, pp.1256-1264, 2021 (SCI-Expanded)

XXXVII. Implementing a Demand Side Management Strategy for Harmonics Mitigation in a Smart Home using Real Measurements of Household Appliances

Çiçek A., Erenoğlu A. K., Erdinç O., Bozkurt A., Taşcıkaraoğlu A., Catalao J.

INTERNATIONAL JOURNAL OF ELECTRICAL POWER & ENERGY SYSTEMS, vol.01420615, pp.1, 2021 (SCI-Expanded)

XXXVIII. Risk-averse optimal bidding strategy for a wind energy portfolio manager including EV parking lots for imbalance mitigation

Cicek A., ERDİNÇ O.

TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.29, no.2, pp.481-498, 2021 (SCI-Expanded)

XXXIX. Practical evidence-based evaluation of a combined heat reduction technique for power transformer buildings

Dursun İ., Güner S., Şengör İ., Erenoğlu A. K., Erdinç O., Catalão J. P. S.

Electronics (Switzerland), vol.9, pp.1-14, 2020 (SCI-Expanded)

XL. A Comprehensive Overview of Dynamic Line Rating Combined with Other Flexibility Options from an Operational Point of View

Erdinc F. G., ERDİNÇ O., YUMURTACI R., Catalao J. P. S.

ENERGIES, vol.13, no.24, 2020 (SCI-Expanded)

XLI. Decision Making Mechanism for A Smart Neighbourhood Fed by Multi-Energy Systems considering Demand Response

Çiçek A., Şengör İ., Erenoğlu A. K., Erdinç O.

Energy, vol.1, pp.1, 2020 (SCI-Expanded)

XLII. User-Comfort Oriented Optimal Bidding Strategy of an Electric Vehicle Aggregator in Day-Ahead and Reserve Markets

Şengör İ., Çiçek A., Erenoğlu A. K., Erdinç O., Catalao J.

INTERNATIONAL JOURNAL OF ELECTRICAL POWER & ENERGY SYSTEMS, vol.1, pp.1, 2020 (SCI-Expanded)

XLIII. Decision making mechanism for a smart neighborhood fed by multi-energy systems considering demand response

Cicek A., Sengor I., ERENOĞLU A. K., ERDİNÇ O.

ENERGY, vol.208, 2020 (SCI-Expanded)

XLIV. Electrical Layout Optimization of Onshore Wind Farms Based on a Two-Stage Approach

Deveci K., Barutçu B., ALPMAN E., Tascikaraoglu A., ERDİNÇ O.

IEEE TRANSACTIONS ON SUSTAINABLE ENERGY, vol.11, no.4, pp.2407-2416, 2020 (SCI-Expanded)

XLV. Optimal operation of a multi-energy system considering renewable energy sources stochasticity and impacts of electric vehicles

Ata M., Erenoğlu A. K., Şengör İ., Erdinç O., Taşcıkaraoğlu A., Catalao J. P.

ENERGY, vol.186, 2019 (SCI-Expanded)

XLVI. Route optimization of an electric garbage truck fleet for sustainable environmental and energy management

Erdinc O., Yetilmezsoy K., Erenoğlu A. K., Erdinç O.

JOURNAL OF CLEANER PRODUCTION, vol.234, pp.1275-1286, 2019 (SCI-Expanded)

XLVII. A New Approach for Grid-Connected Hybrid Renewable Energy System Sizing Considering Harmonic Contents of Smart Home Appliances

Erenoğlu A. K., Çiçek A., Arıkan O., Erdinç O., Catalao J. P. S.

APPLIED SCIENCES-BASEL, vol.9, no.18, 2019 (SCI-Expanded)

XLVIII. Bi-Objective Optimization Model for Optimal Placement of Thyristor-Controlled Series Compensator Devices

Salehizadeh M. R., Koohbijari M. A., Nouri H., Tascikaraoglu A., ERDİNÇ O., Catalao J. P. S.

ENERGIES, vol.12, no.13, 2019 (SCI-Expanded)

XLIX. Effect of electric vehicle parking lots equipped with roof mounted photovoltaic panels on the distribution network

TURAN M. T., ATEŞ Y., ERDİNÇ O., GÖKALP E., Catalao J. P. S.

INTERNATIONAL JOURNAL OF ELECTRICAL POWER & ENERGY SYSTEMS, vol.109, pp.283-289, 2019 (SCI-Expanded)

L. Optimal Energy Management of EV Parking Lots Under Peak Load Reduction Based DR Programs
Considering Uncertainty

Şengör İ., Erdinç O., Yener B., Taşcıkaraoğlu A., Catalão J. P. S.

IEEE TRANSACTIONS ON SUSTAINABLE ENERGY, vol.10, pp.1034-1043, 2019 (SCI-Expanded)

LI. Novel Incentive Mechanism for End-Users Enrolled in DLC-Based Demand Response Programs
Within Stochastic Planning Context

ERDİNÇ O., Tascikaraoglu A., Paterakis N. G., Catalao J. P. S.

IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, vol.66, no.2, pp.1476-1487, 2019 (SCI-Expanded)

LII. Combining the Flexibility From Shared Energy Storage Systems and DLC-Based Demand Response of HVAC Units for Distribution System Operation Enhancement

Tascikaraoglu A., Paterakis N. G., ERDİNÇ O., Catalao J. P. S.

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LIV. Energy Management of a Smart Railway Station Considering Regenerative Braking and Stochastic Behaviour of ESS and PV Generation

ŞENGÖR İ., Kilickiran H. C., Akdemir H., KEKEZOĞLU B., ERDİNÇ O., Catalao J. P. S.

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LV. Comprehensive Optimization Model for Sizing and Siting of DG Units, EV Charging Stations, and Energy Storage Systems

ERDİNÇ O., Tascikaraoglu A., Paterakis N. G., Dursun I., Sinim M. C., Catalao J. P. S.

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Doğanşahin K., KEKEZOĞLU B., YUMURTACI R., ERDİNÇ O., Catalao J. P. S.
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YENER B., Tascikaraoglu A., ERDİNÇ O., BAYSAL M., Catalao J. P. S.

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LVIII. An overview of Demand Response: Key-elements and international experience

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LIX. End-User Comfort Oriented Day-Ahead Planning for Responsive Residential HVAC Demand Aggregation Considering Weather Forecasts

ERDİNÇ O., Tascikaraoglu A., PATERAKIS N. G., EREN Y., CATALAO J. P. S.

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PATERAKIS N. G., ERDİNÇ O., PAPPI I. N., Bakirtzis A. G., CATALAO J. P. S.

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ATEŞ Y., BOYNUEĞRİ A. R., Uzunoglu M., NADAR A., YUMURTACI R., ERDİNÇ O., PATERAKIS N. G., Catalao J. P. S. ENERGIES, vol.9, no.5, 2016 (SCI-Expanded)

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Non Academic Experience

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