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International Researcher IDs

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Publons / Web Of Science ResearcherID: ABG-5253-2020

ScopusID: 55221885200

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Education Information

Post Doctorate, The University of Nottingham, Faculty of Engineering, Department of Architecture and Built Environment, England 2023 - Continues

Post Doctorate, The University of Nottingham, Faculty of Engineering, Department of Architecture and Built Environment, England 2016 - 2017

Doctorate, University of Nottingham, Faculty of Engineering, Mechanical Engineering, England 2013 - 2016

Doctorate, The University of Nottingham, Faculty of Engineering, Department of Architecture and Built Environment, England 2013 - 2016

Foreign Languages

English, C2 Mastery

Dissertations

Doctorate, Innovative Heating, Cooling and Ventilation Technologies For Low-Carbon Buildings, University of Nottingham, Faculty Of Engineering, Department Of Mechanical Engineering, 2016

Research Areas

Mechanical Engineering, Energy, Fluid Mechanics, Alternative Energy Resources, Solar energy, Advanced Energy Technologies, Thermodynamics, Heat and Mass Transfer, Heating, Refrigerating and Air Conditioning, Thermal Systems, Engineering and Technology

Academic Titles / Tasks

Associate Professor, Recep Tayyip Erdogan University, MÜHENDİSLİK VE MİMARLIK FAKÜLTESİ, MİMARLIK, 2021 -

Continues

Associate Professor, Recep Tayyip Erdogan University, MÜHENDİSLİK VE MİMARLIK FAKÜLTESİ, ENERJİ SİSTEMLERİ MÜHENDİSLİĞİ, 2020 - 2021

Assistant Professor, Recep Tayyip Erdogan University, MÜHENDİSLİK VE MİMARLIK FAKÜLTESİ, ENERJİ SİSTEMLERİ MÜHENDİSLİĞİ, 2018 - 2020

Assistant Professor, Bayburt University, Faculty Of Engineering, Department Of Mechanical Engineering, 2017 - 2018

Expert PhD, University of Nottingham, Faculty Of Engineering, Department Of Architecture And Built Environment, 2015 - 2016

Research Assistant, University of Nottingham, Faculty Of Engineering, Department Of Architecture And Built Environment, 2012 - 2015

Academic and Administrative Experience

Head of Department, Recep Tayyip Erdogan University, MÜHENDİSLİK VE MİMARLIK FAKÜLTESİ, MİMARLIK, 2023 - Continues

Head of Building Science Division, Recep Tayyip Erdogan University, MÜHENDİSLİK VE MİMARLIK FAKÜLTESİ, MİMARLIK, 2021 - Continues

Deputy Head of Department, Recep Tayyip Erdogan University, MÜHENDİSLİK VE MİMARLIK FAKÜLTESİ, ENERJİ SİSTEMLERİ MÜHENDİSLİĞİ, 2018 - 2021

Courses

ADVANCED FLUID MECHANICS, Postgraduate, 2020 - 2021

ENERGY EFFICIENCY AND MANAGEMENT, Undergraduate, 2018 - 2019

FLUID MECHANICS II, Undergraduate, 2018 - 2019

CLIMATE CHANGE AND ENVIRONMENT, Postgraduate, 2018 - 2019

ENERGY MANAGEMENT IN INDUSTRY AND BUILDINGS, Postgraduate, 2018 - 2019

ADVANCED THERMODYNAMICS, Postgraduate, 2018 - 2019

FLUID MECHANICS I, Undergraduate, 2018 - 2019

ENERGY MANAGEMENT IN INDUSTRY, Undergraduate, 2018 - 2019

HYDROELECTRIC POWER PLANTS, Undergraduate, 2018 - 2019

HEAT PUMPS AND APPLICATIONS, Postgraduate, 2018 - 2019

HEAT TRANSFER II, Undergraduate, 2017 - 2018

HEAT TRANSFER I, Undergraduate, 2017 - 2018

Advising Theses

Cüce E., Mert Cüce A. P., Güneş bacası güç santrallerinin parametrik optimizasyonu, Postgraduate, H.ŞEN(Student), 2021

Cüce E., Mert Cüce A. P., Termoelektrik soğutucularda nanoakışkan kullanımının soğutma gücü ve temel performans parametreleri üzerine etkisi, Postgraduate, T.GÜÇLÜ(Student), 2020

Cüce E., Mert Cüce A. P., Boşluklu yapı elemanlarında geometrik optimizasyon ile ısı direncin iyileştirilmesi için termal stratejilerin geliştirilmesi, Postgraduate, A.BURHANEDDİN(Student), 2020

Published journal articles indexed by SCI, SSCI, and AHCI

1. **Unlocking energy efficiency: Experimental investigation of bamboo fibre reinforced briquettes as sustainable solution with enhanced thermal resistance**

Cuce P., Alvur E., Cuce E., Alshahrani S., Prakash C., Tan H., Ustabas I.

CASE STUDIES IN THERMAL ENGINEERING, vol.60, pp.104680, 2024 (SCI-Expanded)

- II. **Impact of support pillars geometry on thermal insulation performance of vacuum glazing: CFD research and exergy analysis**
Mert Cüce A. P., Cüce E., Şen H.
INTERNATIONAL JOURNAL OF EXERGY, vol.44, no.3, pp.1-16, 2024 (SCI-Expanded)
- III. **ANN and CFD driven research on main performance characteristics of solar chimney power plants: Impact of chimney and collector angle**
Mert Cüce A. P., Cüce E., Mandal D. K., Gayen D. K., Asif M., Bouabidi A., Alshahrani S., Prakash C., Soudagar M. E. M.
CASE STUDIES IN THERMAL ENGINEERING, vol.59, pp.104568, 2024 (SCI-Expanded)
- IV. **Contemporary Evaporative Cooling System with Indirect Interaction in Construction Implementations: A Theoretical Exploration**
Mert Cüce A. P., Cüce E., Riffat S.
BUILDINGS (BASEL), vol.14, no.4, pp.994, 2024 (SCI-Expanded)
- V. **Assessing performance of an external compound parabolic concentrator solar collector with cascaded latent heat thermal storage**
Satchi C. S., Muthuraman P. V., Thakur A. K., Mert Cüce A. P., Cüce E., Balavadivel R.
ENVIRONMENTAL PROGRESS AND SUSTAINABLE ENERGY, vol.43, no.2, pp.14392, 2024 (SCI-Expanded)
- VI. **Fire retardation, compressive strength and durability analysis of concrete reinforced with novel plasters: An experimental, computational and statistical research**
Ustabas I., Cuce P., Alvur E., Kesepera D., Yilmaz Y., Cuce E., Alshahrani S.
CASE STUDIES IN THERMAL ENGINEERING, vol.55, pp.104156, 2024 (SCI-Expanded)
- VII. **Thermal and energy analysis of a novel solar updraft tower design with divergent chimney and convergent collector concept: CFD analysis with experimental validation**
Mert Cüce A. P., Saxena A., Cüce E., Kontoleon K. J., Oztekin E. K., Shaik S., Guo S.
INTERNATIONAL JOURNAL OF LOW CARBON TECHNOLOGIES, vol.19, pp.714-722, 2024 (SCI-Expanded)
- VIII. **Design, modelling, environmental, economic and performance analysis of parabolic trough solar collector (PTC) based cogeneration systems assisted by thermoelectric generators (TEGs)**
Mert Cüce A. P., Güçlü T., Cüce E.
SUSTAINABLE ENERGY TECHNOLOGIES AND ASSESSMENTS, vol.64, pp.103745, 2024 (SCI-Expanded)
- IX. **Passive sustainability strategies in traditional Gaziantep residences: a critical report on historical development**
Anaç M., Mert Cüce P., Cüce E.
INTERNATIONAL JOURNAL OF LOW CARBON TECHNOLOGIES, vol.19, pp.245-256, 2024 (SCI-Expanded)
- X. **Thermal Analysis of Building Roofs with Latent Heat Storage for Reduction in Energy Consumption and CO₂ Emissions: An Experimental and Numerical Research**
Cüce E., Shaik S., Roy A., Arumugam C., Afzal A., Cuce P. M., Ghosh A., Alam T., Shaik S. V.
ADVANCES IN CIVIL ENGINEERING, vol.2024, pp.1-15, 2024 (SCI-Expanded)
- XI. **Analysis of the benefits of adopting roof sandwich panels integrated with PCM versus PUR to mitigate energy costs and carbon dioxide emissions**
Arumugam C., Shaik S., Roy A., Kontoleon K. J., CÜCE E., Shaik A. H., Chakraborty S., Alwetaishi M., MERT CÜCE A. P., Gupta M.
Journal of Energy Storage, vol.77, 2024 (SCI-Expanded)
- XII. **Experimental performance assessment of a novel insulation plaster as an energy-efficient retrofit solution for external walls: A key building material towards low/zero carbon buildings**
Cüce E., Mert Cüce A. P., Alvur E., Yilmaz Y. N., Saboor S., Ustabas İ., Linul E., Asif M.
CASE STUDIES IN THERMAL ENGINEERING, vol.49, 2023 (SCI-Expanded)
- XIII. **Thermodynamic Performance Analysis of a Low-Cost, Recycled and Energy-Efficient Solar Air Heater with Waste Beverage Cans: An Experimental Research**
Mert Cüce A. P., Saxena A., Cüce E., Yilmaz Y. N., Shaik S., Guo S.
JOURNAL OF THERMAL SCIENCE, vol.32, no.4, pp.1657-1670, 2023 (SCI-Expanded)
- XIV. **Experimental studies of latent heat storage based solar air heater for space heating: A comparative**

analysis

Saxena A., CÜCE E., Singh D., Sethi M., MERT CÜCE A. P., Sagade A., Kumar A.

JOURNAL OF BUILDING ENGINEERING, vol.69, pp.106282, 2023 (SCI-Expanded)

- XV. **Renewable energy potential towards attainment of net-zero energy buildings status-A critical review**
Christopher S., Vikram M., Bakli C., Thakur A., Ma Y., Ma Z., Xu H., MERT CÜCE A. P., CÜCE E., Singh P.
JOURNAL OF CLEANER PRODUCTION, vol.405, pp.136942, 2023 (SCI-Expanded)
- XVI. **Detection, location, and diagnosis of different faults in large solar PV system-a review**
Venkatakrisnan G., Rengaraj R., Tamilselvi S., Harshini J., Sahoo A., Saleel C., Abbas M., CÜCE E., Jazlyn C., Shaik S., et al.
INTERNATIONAL JOURNAL OF LOW-CARBON TECHNOLOGIES, vol.18, pp.659-674, 2023 (SCI-Expanded)
- XVII. **Effect of using hybrid nanofluids as a coolant on the thermal performance of portable thermoelectric refrigerators**
MERT CÜCE A. P., CÜCE E., Guclu T., Shaik S., Alshahrani S., Saleel C. A.
SUSTAINABLE ENERGY TECHNOLOGIES AND ASSESSMENTS, vol.53, 2022 (SCI-Expanded)
- XVIII. **Performance Evaluation of Solar Chimney Power Plants with Bayburt Stone and Basalt on the Ground as Natural Energy Storage Material**
MERT CÜCE A. P., CÜCE E., Alshahrani S., Saboor S., Sen H., Veza I., Saleel C. A.
SUSTAINABILITY, vol.14, no.17, 2022 (SCI-Expanded)
- XIX. **A thermodynamic review on solar ponds**
Saxena A., CÜCE E., Singh D. B., MERT CÜCE A. P., Gupta P., Suryavanshi A., Farrokhi M., El-Sebaai A. A.
SOLAR ENERGY, vol.242, pp.335-363, 2022 (SCI-Expanded)
- XX. **UV coated acrylics as a substitute for generic glazing in buildings of Indian climatic conditions: Prospective for energy savings, CO₂ abatement, and visual acceptability**
Maduru V. R., Shaik S., CÜCE E., Afzal A., Panchal H., MERT CÜCE A. P.
ENERGY AND BUILDINGS, vol.268, 2022 (SCI-Expanded)
- XXI. **Floating PVs in Terms of Power Generation, Environmental Aspects, Market Potential, and Challenges**
CÜCE E., MERT CÜCE A. P., Saboor S., Ghosh A., Sheikhejad Y.
SUSTAINABILITY, vol.14, no.5, 2022 (SCI-Expanded)
- XXII. **Performance assessment of solar chimney power plants with natural thermal energy storage materials on ground: CFD analysis with experimental validation**
Cüce E., Saxena A., Mert Cüce A. P., Sen H., Eroğlu H., Selvanathan S. P., Sudhakar K., Hasanuzzaman M.
INTERNATIONAL JOURNAL OF LOW-CARBON TECHNOLOGIES, vol.17, pp.752-759, 2022 (SCI-Expanded)
- XXIII. **Solar Chimney Power Plants: A Review of the Concepts, Designs and Performances**
CÜCE E., MERT CÜCE A. P., Carlucci S., Sen H., Sudhakar K., Hasanuzzaman M., Daneshazarian R.
SUSTAINABILITY, vol.14, no.3, 2022 (SCI-Expanded)
- XXIV. **TiO₂ nano-coated thin film PV glazing with superior thermal resistance, self-cleaning, electricity generation and adaptive optical control**
CÜCE E., MERT CÜCE A. P., Riffat S.
INTERNATIONAL JOURNAL OF LOW-CARBON TECHNOLOGIES, vol.17, pp.130-139, 2022 (SCI-Expanded)
- XXV. **Applications of solar PV tree systems with different design aspects and performance assessment**
MERT CÜCE A. P., Saxena A., CÜCE E., Riffat S.
INTERNATIONAL JOURNAL OF LOW-CARBON TECHNOLOGIES, vol.17, pp.266-278, 2022 (SCI-Expanded)
- XXVI. **Performance analysis of a novel solar desalination system - Part 2: The unit with sensible energy storage with thermal insulation and cooling system**
MERT CÜCE A. P., CÜCE E., Tonyali A.
SUSTAINABLE ENERGY TECHNOLOGIES AND ASSESSMENTS, vol.48, 2021 (SCI-Expanded)
- XXVII. **Harmonic problems in renewable and sustainable energy systems: A comprehensive review**
EROĞLU H., CÜCE E., MERT CÜCE A. P., GÜL F., İSKENDEROĞLU A.
SUSTAINABLE ENERGY TECHNOLOGIES AND ASSESSMENTS, vol.48, 2021 (SCI-Expanded)
- XXVIII. **Performance assessment of solar chimney power plants with the impacts of divergent and**

convergent chimney geometry

CÜCE E., Saxena A., MERT CÜCE A. P., Sen H., Guo S., Sudhakar K.

INTERNATIONAL JOURNAL OF LOW-CARBON TECHNOLOGIES, vol.16, no.3, pp.704-714, 2021 (SCI-Expanded)

- XXIX. **Thin film coated windows towards low/zero carbon buildings: Adaptive control of solar, thermal, and optical parameters**
CÜCE E., MERT CÜCE A. P., Riffat S.
SUSTAINABLE ENERGY TECHNOLOGIES AND ASSESSMENTS, vol.46, 2021 (SCI-Expanded)
- XXX. **Impacts of Ground Slope on Main Performance Figures of Solar Chimney Power Plants: A Comprehensive CFD Research with Experimental Validation**
CÜCE E., MERT CÜCE A. P., Sen H., Sudhakar K., Berardi U., SERENCAM U.
INTERNATIONAL JOURNAL OF PHOTOENERGY, vol.2021, 2021 (SCI-Expanded)
- XXXI. **Enhanced performance figures of solar cookers through latent heat storage and low-cost booster reflectors**
Cuce P. M., Kolaylı S., Cuce E.
INTERNATIONAL JOURNAL OF LOW-CARBON TECHNOLOGIES, vol.15, no.3, pp.427-433, 2020 (SCI-Expanded)
- XXXII. **Improving thermal performance of thermoelectric coolers (TECs) through a nanofluid driven water to air heat exchanger design: An experimental research**
Cuce E., Guclu T., Cuce P. M.
ENERGY CONVERSION AND MANAGEMENT, vol.214, 2020 (SCI-Expanded)
- XXXIII. **Numerical performance modelling of solar chimney power plants: Influence of chimney height for a pilot plant in Manzanares, Spain**
CÜCE E., SEN H., CUCE P. M.
SUSTAINABLE ENERGY TECHNOLOGIES AND ASSESSMENTS, vol.39, 2020 (SCI-Expanded)
- XXXIV. **On the Use of Nanofluids in Solar Energy Applications**
Cuce E., Cuce P. M., Guclu T., Besir A. B.
JOURNAL OF THERMAL SCIENCE, vol.29, no.3, pp.513-534, 2020 (SCI-Expanded)
- XXXV. **Performance analysis of a novel solar desalination system - Part 1: The unit with sensible energy storage and booster reflector without thermal insulation and cooling system**
CÜCE E., Cuce P. M., SAXENA A., GÜÇLÜ T., BESIR A. B.
SUSTAINABLE ENERGY TECHNOLOGIES AND ASSESSMENTS, vol.37, 2020 (SCI-Expanded)
- XXXVI. **Sustainable ventilation strategies in buildings: CFD research**
CÜCE E., Sher F., Sadiq H., Cuce P. M., GÜÇLÜ T., BESIR A. B.
SUSTAINABLE ENERGY TECHNOLOGIES AND ASSESSMENTS, vol.36, 2019 (SCI-Expanded)
- XXXVII. **Optimised performance of a thermally resistive PV glazing technology: An experimental validation**
CÜCE E., Cuce P. M.
ENERGY REPORTS, vol.5, pp.1185-1195, 2019 (SCI-Expanded)
- XXXVIII. **A novel method based on thermal conductivity for material identification in scrap industry: An experimental validation**
Cuce E., Cuce P. M., Guclu T., Besir A., Gokce E., Serencam U.
MEASUREMENT, vol.127, pp.379-389, 2018 (SCI-Expanded)
- XXXIX. **Box type solar cookers with sensible thermal energy storage medium: A comparative experimental investigation and thermodynamic analysis**
Cuce P. M.
SOLAR ENERGY, vol.166, pp.432-440, 2018 (SCI-Expanded)
- XL. **Concentrating photovoltaic thermal (CPVT) collectors and systems: Theory, performance assessment and applications**
DANESHAZARIAN R., Cuce E., Cuce P. M., Sher F.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.81, pp.473-492, 2018 (SCI-Expanded)
- XLI. **Toward cost-effective and energy-efficient heat recovery systems in buildings: Thermal performance monitoring**
Cuce P. M., Cuce E.

- ENERGY, vol.137, pp.487-494, 2017 (SCI-Expanded)
- XLII. **An accurate model for photovoltaic (PV) modules to determine electrical characteristics and thermodynamic performance parameters**
Cuce E., Cuce P. M., Karakas I. H., BALI T.
ENERGY CONVERSION AND MANAGEMENT, vol.146, pp.205-216, 2017 (SCI-Expanded)
- XLIII. **Solar Pond Window Technology for Energy-Efficient Retrofitting of Buildings: An Experimental and Numerical Investigation**
Cuce E., Cuce P. M.
ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, vol.42, no.5, pp.1909-1916, 2017 (SCI-Expanded)
- XLIV. **Thermal performance assessment of a novel liquid desiccant-based evaporative cooling system: An experimental investigation**
Cuce P. M.
ENERGY AND BUILDINGS, vol.138, pp.88-95, 2017 (SCI-Expanded)
- XLV. **Renewable and sustainable energy saving strategies for greenhouse systems: A comprehensive review**
Cuce E., Harjunowibowo D., Cuce P. M.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.64, pp.34-59, 2016 (SCI-Expanded)
- XLVI. **Novel glazing technologies to mitigate energy consumption in low-carbon buildings: a comparative experimental investigation**
Cuce E., Cuce P. M., Riffat S.
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.40, no.4, pp.537-549, 2016 (SCI-Expanded)
- XLVII. **The impact of internal aerogel retrofitting on the thermal bridges of residential buildings: An experimental and statistical research**
Cuce E., Cuce P. M.
ENERGY AND BUILDINGS, vol.116, pp.449-454, 2016 (SCI-Expanded)
- XLVIII. **Energy saving potential of heat insulation solar glass: Key results from laboratory and in-situ testing**
Cuce E., Cuce P. M., Young C.
ENERGY, vol.97, pp.369-380, 2016 (SCI-Expanded)
- XLIX. **Vacuum glazing for highly insulating windows: Recent developments and future prospects**
Cuce E., Cuce P. M.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.54, pp.1345-1357, 2016 (SCI-Expanded)
- L. **A novel roof type heat recovery panel for low-carbon buildings: An experimental investigation**
Cuce P. M., Cuce E., Riffat S.
ENERGY AND BUILDINGS, vol.113, pp.133-138, 2016 (SCI-Expanded)
- LI. **A state of the art review of evaporative cooling systems for building applications**
Cuce P. M., Riffat S.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.54, pp.1240-1249, 2016 (SCI-Expanded)
- LII. **Theoretical investigation of hot box solar cookers having conventional and finned absorber plates**
Cuce E., Cuce P. M.
INTERNATIONAL JOURNAL OF LOW-CARBON TECHNOLOGIES, vol.10, no.3, pp.238-245, 2015 (SCI-Expanded)
- LIII. **A comprehensive review of heat recovery systems for building applications**
Cuce P. M., Riffat S.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.47, pp.665-682, 2015 (SCI-Expanded)
- LIV. **A successful application of homotopy perturbation method for efficiency and effectiveness assessment of longitudinal porous fins**
Cuce E., Cuce P. M.
ENERGY CONVERSION AND MANAGEMENT, vol.93, pp.92-99, 2015 (SCI-Expanded)
- LV. **Tilt Angle Optimization and Passive Cooling of Building-Integrated Photovoltaics (BIPVs) for Better Electrical Performance**
Cuce E., Cuce P. M.
ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, vol.39, no.11, pp.8199-8207, 2014 (SCI-Expanded)

- LVI. **Optimizing insulation thickness and analysing environmental impacts of aerogel-based thermal superinsulation in buildings**
Cuce E., Cuce P. M., Wood C. J., Riffat S. B.
ENERGY AND BUILDINGS, vol.77, pp.28-39, 2014 (SCI-Expanded)
- LVII. **Toward aerogel based thermal superinsulation in buildings: A comprehensive review**
Cuce E., Cuce P. M., Wood C. J., Riffat S. B.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.34, pp.273-299, 2014 (SCI-Expanded)
- LVIII. **An experimental analysis of illumination intensity and temperature dependency of photovoltaic cell parameters**
Cuce E., Cuce P. M., BALI T.
APPLIED ENERGY, vol.111, pp.374-382, 2013 (SCI-Expanded)
- LIX. **Homotopy perturbation method for temperature distribution, fin efficiency and fin effectiveness of convective straight fins with temperature-dependent thermal conductivity**
Cuce E., Cuce P. M.
PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART C-JOURNAL OF MECHANICAL ENGINEERING SCIENCE, vol.227, no.8, pp.1754-1760, 2013 (SCI-Expanded)
- LX. **A comprehensive review on solar cookers**
Cuce E., Cuce P. M.
APPLIED ENERGY, vol.102, pp.1399-1421, 2013 (SCI-Expanded)
- LXI. **Effects of concavity level on heat loss, effectiveness and efficiency of a longitudinal fin exposed to natural convection and radiation**
Cuce E., Cuce P. M.
INTERNATIONAL JOURNAL OF NUMERICAL METHODS FOR HEAT & FLUID FLOW, vol.23, no.7, pp.1169-1178, 2013 (SCI-Expanded)
- LXII. **A novel model of photovoltaic modules for parameter estimation and thermodynamic assessment**
Mert Cüce A. P., Cüce E.
INTERNATIONAL JOURNAL OF LOW-CARBON TECHNOLOGIES, vol.7, no.2, pp.159-165, 2012 (SCI-Expanded)

Articles Published in Other Journals

- I. **A Novel Moist Airflow Heating System for Low/Zero Carbon Buildings: a Numerical Study**
Mert Cüce A. P., Riffat S.
SUSTAINABLE AND CLEAN BUILDINGS, vol.1, no.1, pp.23-41, 2024 (Peer-Reviewed Journal)
- II. **Experimental Investigation of Internal Aerogel Insulation Towards Low/Zero Carbon Buildings: A Comprehensive Thermal Analysis for a UK Building**
Cüce E., Mert Cüce A. P., Wood C., Gillott M., Riffat S.
Sustainable and Clean Buildings, vol.1, no.1, pp.1-22, 2024 (Peer-Reviewed Journal)
- III. **Internal Or External Thermal Superinsulation Towards Low/Zero Carbon Buildings? A Critical Report**
Mert Cüce A. P., Cüce E., Alvir E.
Gazi Mühendislik Bilimleri Dergisi, vol.9, no.3, pp.435-442, 2023 (Peer-Reviewed Journal)
- IV. **Rotary desiccant wheel systems: A review**
Cüce E., Mert Cüce A. P., Yilmaz Y. N., Alvir E.
Turkish Journal of Electromechanics and Energy, vol.8, no.2, pp.56-65, 2023 (Peer-Reviewed Journal)
- V. **Global technological advancement and challenges of glazed window, facade system and vertical greenery-based energy savings in buildings: A comprehensive review**
Akram M., Hasannuzaman M., Cuce E., Cuce P.
ENERGY AND BUILT ENVIRONMENT, vol.4, pp.206-226, 2023 (Scopus)
- VI. **Performance Analysis of Fresnel Lens Driven Hot Water/Steam Generator for Domestic and Industrial Use: A CFD Research**

- Mert Cüce A. P., Cüce E.
Hittite Journal of Science and Engineering, vol.10, no.1, pp.1-9, 2023 (Peer-Reviewed Journal)
- VII. **New approaches in solar chimney power plants: Recent applications of hybrid power production**
ŞEN H., MERT CÜCE A. P., CÜCE E.
Recep Tayyip Erdogan Universitesi, vol.3, pp.125-135, 2022 (Peer-Reviewed Journal)
- VIII. **Collector factor in a solar chimney power plant: CFD analysis for the pilot plant in Manzanares**
Cüce E., Şen H., Mert Cüce A. P.
ENERGETIKA, vol.68, no.1, pp.33-42, 2022 (Scopus)
- IX. **The effect of nanofluid usage on electricity consumption in thermoelectric refrigeration application: An experimental study**
MERT CÜCE A. P., GÜÇLÜ T., CÜCE E.
Gazi Mühendislik Bilimleri Dergisi, vol.8, no.2, pp.228-236, 2022 (Peer-Reviewed Journal)
- X. **A systematic review of thermal insulation performance of hollow bricks as a function of hollow geometry**
MERT CÜCE A. P., CÜCE E., Sudhakar K.
INTERNATIONAL JOURNAL OF AMBIENT ENERGY, vol.43, no.1, pp.4406-4415, 2022 (ESCI)
- XI. **Impact of Tower Diameter on Power Output in Solar Chimney Power Plants**
MERT CÜCE A. P., ŞEN H., CÜCE E.
Gazi Mühendislik Bilimleri Dergisi, vol.7, 2021 (Peer-Reviewed Journal)
- XII. **Toplayıcı Yarıçapı ve Yüksekliğinin Güneş Bacası Güç Santrallerinin Performans Parametreleri Üzerine Etkileri: Manzanares, İspanya için Bir Vaka Çalışması**
ŞEN H., MERT CÜCE A. P., CÜCE E.
Recep Tayyip Erdoğan Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, 2021 (Peer-Reviewed Journal)
- XIII. **Energy Saving Aspects of Green Facades: Current Applications and Challenges**
MERT CÜCE A. P., CÜCE E., GÜÇLÜ T., DEMİRÇİ V.
Green Building & Construction Economics, 2021 (Peer-Reviewed Journal)
- XIV. **Thermal behavior of human clothing in real-life conditions and its reflections on thermal comfort**
Mert Cüce A. P., Cüce E., Sen H., Priya S. S., Sukumaran S.
World Journal of Textile Engineering and Technology, vol.7, pp.25-35, 2021 (Peer-Reviewed Journal)
- XV. **A thorough performance assessment of solar chimney power plants: Case study for Manzanares**
Cuce E., Cuce P., Sen H.
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- XVI. **Improving Electricity Production in Solar Chimney Power Plants with Sloping Ground Design: An Extensive CFD Research**
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- XVII. **Improving thermal resistance of lightweight concrete hollow bricks: A numerical optimisation research for a typical masonry unit**
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- XIX. **Heat transfer enhancement in cylindrical fins through longitudinal parabolic perforations**
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- XX. **Strategies for ideal indoor environments towards low/zero carbon buildings through a biomimetic approach**
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- XXI. **Performance Assessment of Solar Chimneys: Part I – Impact of Chimney Height on Power Output**
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- XXII. **Performance Assessment of Solar Chimneys: Part 2 – Impacts of Slenderness Value and Collector Slope on Power Output**
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- XXIII. **Novel, Practical and Reliable Analytical Models to Estimate Electrical Efficiency of Building-Integrated Photovoltaic/Thermal (BIPVT) Collectors and Systems**
MERT CÜCE P.
Uludağ University Journal of The Faculty of Engineering, vol.23, no.3, pp.191-206, 2018 (Peer-Reviewed Journal)
- XXIV. **Smart Retrofit Solutions of Buildings toward a Low Carbon World**
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- XXVI. **Hybrid Photovoltaic/Thermal (HPV/T) Systems: From Theory to Applications**
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- XXVII. **An Overview of Concentrating Photovoltaic Thermal (CPVT) Collectors**
DANESHAZARIAN R., CÜCE E., MERT CÜCE P.
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- XXVIII. **Energetic and exergetic performance assessment of solar cookers with different geometrical designs**
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- XXIX. **Comments on "Analytical expression for electrical efficiency of PV/T hybrid air collector" by S. Dubey, G.S. Sandhu, and G.N. Tiwari**
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- XXX. **Optimization of configurations to enhance heat transfer from a longitudinal fin exposed to natural convection and radiation**
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INTERNATIONAL JOURNAL OF LOW-CARBON TECHNOLOGIES, vol.9, no.4, pp.305-310, 2014 (ESCI)
- XXXI. **Homotopy perturbation method for temperature distribution, fin efficiency and fin effectiveness of convective straight fins**
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- XXXII. **Improving thermodynamic performance parameters of silicon photovoltaic cells via air cooling**
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- XXXIII. **He's homotopy perturbation method for prey and predator problem considering real life situations**
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Far East Journal of Applied Mathematics, vol.76, no.1, pp.13-24, 2013 (Peer-Reviewed Journal)
- XXXIV. **A novel model of photovoltaic modules for parameter estimation and thermodynamic assessment**
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Books & Book Chapters

- I. **Design and thermal modeling of solar cookers**
Saxena A., Cüce E., Mert Cüce A. P.
in: Solar Thermal Systems: Thermal Analysis and its Application, Manoj Kumar Gaur, Brian Norton, Gopal Nath Tiwari, Editor, Bentham Publishers, Singapore, pp.1-80, 2022
- II. **Methods of fabrication of bionanocomposites**
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in: Bionanocomposites for Food Packaging Applications, Shakeel Ahmed, Editor, Elsevier, pp.7-29, 2022
- III. **Thermal properties of aerogels: From theory to practice**
CÜCE E., MERT CÜCE A. P., GUCLU T., BESIR A. B.
in: Translucent silica aerogel: Properties, preparation and applications, Cinzia Buratti, Editor, Nova Science Publishers, Italy, pp.1-306, 2019
- IV. **Low/Zero-Carbon Buildings for a Sustainable Future**
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in: Low Carbon Transition, Valter Silva, Editor, Intech Open University Press, London, pp.29-50, 2018

Refereed Congress / Symposium Publications in Proceedings

- I. **Thermal insulation performance assessment of UK dwellings through co-heating test methodology: A critical review**
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Twentieth International Conference on Sustainable Energy Technologies, Nottingham, England, 15 - 17 August 2023, vol.1, pp.361-364
- II. **Analysis of Strength Data of Building Elements Reinforced with Special Insulation Plaster Under High Temperature Conditions**
Alvur E., Mert Cüce A. P., Ustabaş İ., Yılmaz Y. N., Cüce E.
4th International Congress of Turkish World Educational Sciences and Social Sciences, Antalya, Turkey, 30 November - 03 December 2023
- III. **A review on liquid desiccant based dehumidification systems**
MERT CÜCE A. P., ÖZTÜRK K., CÜCE E.
2. Uluslararası 19 Mayıs Yenilikçi Bilimsel Yaklaşımlar Kongresi, Samsun, Turkey, 27 - 29 December 2019
- IV. **Thermal performance assessment of solar box cookers with propolis based latent heat storage and low-cost booster reflectors**
MERT CÜCE A. P., KOLAYLI S., CÜCE E.
Eighteenth International Conference on Sustainable Energy Technologies, Kuala-Lumpur, Malaysia, 20 - 22 August 2019
- V. **Thermal performance of a novel thermoelectric refrigerator with a water to air heat exchanger and SiO₂, TiO₂ and Al₂O₃ nanofluids**
MERT CÜCE A. P., RIFFAT S., CÜCE E.
Eighteenth International Conference on Sustainable Energy Technologies, Kuala-Lumpur, Malaysia, 20 - 22 August 2019
- VI. **Experimental performance investigation of A solar powered water distillation system enhanced with passive solar reflector and sensible heat storage medium**
MERT CÜCE P.
Ereğli International Science and Academic Congress, Konya, Turkey, 9 - 10 March 2019
- VII. **Optical performance parameters of thermally resistive PV glazing (TR-PVG)**
MERT CÜCE A. P., CÜCE E.
International Conference on Photonics Research, Kastamonu, Turkey, 8 - 12 November 2018, pp.1
- VIII. **U-value analysis of argon filled double glazed windows**
CÜCE E., MERT CÜCE P., BEŞİR A. B., GÜÇLÜ T.
International Congress on Engineering and Life Science, 26 - 29 April 2018

- IX. **Role of greenery systems in the U-value of building envelopes**
BEŞİR A. B., GÜÇLÜ T., MERT CÜCE P., CÜCE E.
International Congress on Engineering and Life Science, 26 - 29 April 2018
- X. **Thermally resistive PV glazing (TR-PVG) systems**
CÜCE E., MERT CÜCE P., GÜÇLÜ T., BEŞİR A. B.
International Congress on Engineering and Life Science, 26 - 29 April 2018
- XI. **A new technique for sorting of metals in scrap industry.**
MERT CÜCE P., CÜCE E., GÜÇLÜ T., BEŞİR A. B., Gökçe E.
International Congress on Engineering and Life Science, 26 - 29 April 2018
- XII. **Global necessity to nearly zero-energy buildings (nZEB)**
BEŞİR A. B., GÜÇLÜ T., MERT CÜCE P., CÜCE E.
International Congress on Engineering and Life Science, 26 - 29 April 2018
- XIII. **Thermoelectric refrigeration systems: From theory to applications**
GÜÇLÜ T., BEŞİR A. B., MERT CÜCE P., CÜCE E.
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- XIV. **Role of greenery systems in the U-value of building envelopes**
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- XVII. **Thermal performance assessment of thermoelectric coolers for micro space cooling**
GÜÇLÜ T., BEŞİR A. B., MERT CÜCE P., CÜCE E.
International Conference on Engineering Technologies, Konya, Turkey, 7 - 09 December 2017
- XVIII. **Photovoltaic thermal (PV/T) powered multi-generation systems: A review**
ÖZTEKİN E. K., MERT CÜCE P., CÜCE E.
International Conference on Engineering Technologies, Konya, Turkey, 7 - 09 December 2017
- XIX. **The comparison of greenery systems in terms of energy saving**
GÜÇLÜ T., BEŞİR A. B., MERT CÜCE P., CÜCE E.
International Conference on Engineering Technologies, 7 - 09 December 2017
- XX. **Thermoelectric coolers (TECs) for potential air-conditioning applications in buildings**
GÜÇLÜ T., MERT CÜCE P., BEŞİR A. B., CÜCE E.
International Symposium on Multidisciplinary Studies and Innovative Technologies, 2 - 04 November 2017
- XXI. **Buildings of future: Smart, low-cost and energy-efficient solutions**
CÜCE E., MERT CÜCE P.
Second International Conference on Industrial, Mechanical, Electrical and Chemical Engineering and Annual Conference on Industrial and System Engineering, 6 - 07 October 2016
- XXII. **The role of plants in temperature regulation of external walls: An experimental and numerical research**
CÜCE E., MERT CÜCE P., SHER F., BALI T.
Fifteenth International Conference on Sustainable Energy Technologies, 19 - 22 July 2016
- XXIII. **Toward cost-effective and energy-efficient evaporative cooling systems in buildings**
MERT CÜCE P.
Fifteenth International Conference on Sustainable Energy Technologies, 19 - 22 July 2016
- XXIV. **In-situ thermal performance monitoring of a novel domestic heat recovery unit**
MERT CÜCE P., CÜCE E., BAYRAKTAR K. G., RIFFAT S.
Fifteenth International Conference on Sustainable Energy Technologies, 19 - 22 July 2016

- XXV. **Cost-effective and energy-efficient strategies for greenhouse systems: A comprehensive review**
 CÜCE E., MERT CÜCE P.
 Fifteenth International Conference on Sustainable Energy Technologies, 19 - 22 July 2016
- XXVI. **Concentrated Photovoltaic Thermal (CPVT)solar collector systems: State-of-the-art, fundamental and design key-factors**
 DANESHAZARIAN R., CÜCE E., MERT CÜCE P.
 Fifteenth International Conference on Sustainable Energy Technologies, 19 - 22 July 2016
- XXVII. **Cooling Applications with Renewable Energy Powered Resorption Systems**
 PASTAKKAYA B., CÜCE E., MERT CÜCE A. P.
 Fourteenth International Conference on Sustainable Energy Technologies, 25 - 27 August 2015
- XXVIII. **Thermal performance assessment of porous fins via homotopy perturbation method**
 CÜCE E., MERT CÜCE P.
 Fourteenth International Conference on Sustainable Energy Technologies, 25 - 27 August 2015
- XXIX. **Preliminary performance investigation of a novel direct contact evaporative cooling system**
 MERT CÜCE P., BAYRAKTAR K. G., RIFFAT S., SIDDIG O.
 Fourteenth International Conference on Sustainable Energy Technologies, 25 - 27 August 2015
- XXX. **Building applications of heat recovery systems: A review**
 MERT CÜCE P., BAYRAKTAR K. G., RIFFAT S., SIDDIG O.
 Fourteenth International Conference on Sustainable Energy Technologies, 25 - 27 August 2015
- XXXI. **Toward low-carbon HVAC technologies in buildings**
 MERT CÜCE P.
 ETRI Solar Energy Workshop, 18 February 2015
- XXXII. **An experimental study on a novel heat recovery system**
 MERT CÜCE P., RIFFAT S., BAYRAKTAR K. G.
 Thirteenth International Conference on Sustainable Energy Technologies, 25 - 28 August 2014
- XXXIII. **Novel heat recovery technologies for domestic applications**
 MERT CÜCE P.
 Novel energy and biotechnology developments in the sustainable built environment, 24 - 27 March 2014
- XXXIV. **Passive cooling of building-integrated photovoltaics(BIPVs) for better electrical performance**
 MERT CÜCE P., CÜCE E.
 MEGS IV Annual Conference, 12 - 13 September 2013
- XXXV. **Tilt angle optimization of building-integrated photovoltaics(BIPVs) for cooler operating temperatures**
 CÜCE E., MERT CÜCE P.
 MEGS IV Annual Conference, 12 - 13 September 2013
- XXXVI. **Second law analysis of solar powered heatrecovery panels in buildings**
 MERT CÜCE P., CÜCE E., RIFFAT S.
 Twelfth International Conference on Sustainable Energy Technologies, 26 - 29 August 2013
- XXXVII. **Optimum insulation thickness of aerogel in buildings**
 CÜCE E., MERT CÜCE P., RIFFAT S.
 Twelfth International Conference on Sustainable Energy Technologies, 26 - 29 August 2013
- XXXVIII. **Theoretical investigation of solar powered heatrecovery panels in buildings**
 MERT CÜCE P., CÜCE E., RIFFAT S.
 Twelfth International Conference on Sustainable Energy Technologies, 26 - 29 August 2013
- XXXIX. **Effects of concavity level on heat loss, effectiveness and efficiency of a longitudinal fin exposed to natural convection and radiation**
 MERT CÜCE P., CÜCE E.
 Tenth International Conference on Sustainable Energy Technologies, 4 September - 07 June 2011

Supported Projects

CÜCE E., MERT CÜCE A. P., EU Framework Program Project, HERB – Holistic energy-efficient retrofitting of residential buildings, 2012 - 2016

CÜCE E., MERT CÜCE A. P., EU Framework Program Project, Development of heat insulation solar glass for low-carbon buildings, 2014 - 2015

CÜCE E., MERT CÜCE A. P., EU Supported Other Project, The EoN house retrofit research project, 2012 - 2013

Activities in Scientific Journals

Peer Review Journal of Solar & Photoenergy Systems, Editor, 2018 - Continues

Educational Research Applications, Editor, 2017 - Continues

Emergency Medicine Investigations, Editor, 2017 - Continues

Scientific Refereeing

Energy and Buildings, SCI Journal, January 2017

Building and Environment, SCI Journal, January 2017

Energy Efficiency, SCI Journal, January 2017

International Journal of Sustainable Energy, Other Indexed Journal, January 2017

Journal of Renewable and Sustainable Energy, SCI Journal, January 2017

International Journal of Ambient Energy, Other Indexed Journal, January 2016

Energy Conversion and Management, SCI Journal, January 2014

International Journal of low-carbon technologies, SCI Journal, January 2014

Applied Thermal Engineering, SCI Journal, January 2013

Applied Energy, SCI Journal, January 2013

Metrics

Publication: 142

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H-Index (WoS): 25

H-Index (Scopus): 25

Congress and Symposium Activities

Novel Energy and Biotechnology Developments in the Sustainable Built Environment, Invited Speaker, İstanbul, Turkey, 2014

East Midlands Universities Conference at the University of Leicester, Invited Speaker, Leicester, United Kingdom, 2013

Scholarships

Post-Doctorate Research Fellowship Post in the Institute of Sustainable Energy Technologies, Department of Architecture and Built Environment, Faculty of Engineering, University of Nottingham, University, 2015 - 2016

Postgraduate Research Scholarship of Doctoral research in Sustainable Energy Technologies at the University of Nottingham, University, 2013 - 2015

Awards

Cüce E., Mert Cüce A. P., Guclu T., Besir A. B., Best Paper Award, Thermal Science, January 2023

Cüce E., Saxena A., Mert Cüce A. P., Sen H., Guo S., Sudhakar K., Best Paper Award, Oxford University Press, August 2022

MERT CÜCE A. P., Highly Cited Paper Award from Web of Science. A comprehensive review of heat recovery. (%1 in the relevant academic field), Thomson Reuters, January 2018

MERT CÜCE A. P., Highly Cited Paper Award from Web of Science. A state of the art review of evaporative cooling. (%1 in the relevant academic field), Thomson Reuters, January 2018

MERT CÜCE A. P., CÜCE E., Highly Cited Paper Award from Web of Science. A state-of-the-art review on innovative glazing technologies. (%1 in the relevant academic field), Thomson Reuters, December 2017

CÜCE E., MERT CÜCE A. P., Hot Paper and Highly Cited Paper Award from Web of Science. Toward aerogel based thermal superinsulation in buildings: A comprehensive review. (%0.1 in the relevant academic field), Thomson Reuters, December 2017

MERT CÜCE A. P., Most-cited Article in International Journal of Low-Carbon Technologies through the paper entitled "A novel model of photovoltaic modules for parameter estimation and thermodynamic assessment", International Journal of Low-Carbon Technologies, January 2015