

Assoc. Prof. Can Baran Aktaş

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: KRP-9024-2024

ScopusID: 36350732000

Yoksis Researcher ID: 275482

Biography

Dr. Aktaş completed his undergraduate and graduate studies within the Department of Civil Engineering at Middle East Technical University. He continued his doctoral studies at University of Pittsburgh where he graduated from in 2011. Following his graduation, he joined University of New Haven as an Assistant Professor within the Department of Civil and Environmental Engineering and coordinated the Sustainability Studies program during his time there. In 2018, he was promoted to Associate Professor and granted tenure at the University. Soon after he returned to Turkey and joined TED University.

Dr. Aktaş's expertise lies in sustainable engineering design. He has authored many publications on resilient and critical infrastructure design, integrated renewable energy systems, life cycle assessments, and Design for Environment. You can find a partial list of related publications from his [Google Scholar page](#). He has taught courses on sustainability, engineering design, and construction management as well as engineering statistics, building materials, and engineering ethics. In addition to his full-time appointment at TED University, he continues to hold an adjunct faculty position at University of New Haven in the U.S.

Dr. Aktaş has served on the study committee for CT Academy of Science and Engineering, on technical evaluation committees of international conferences in his field, and continues to serve as a reviewer for several prominent journals related to his field of expertise. One of the articles he published was awarded the "Most Cited Paper Award 2019" by Resources, Conservation and Recycling, a prestigious journal in the field.

Education Information

Doctorate, University of Pittsburgh, Faculty of Engineering / Department of Civil and Environmental Engineering, United States Of America 2007 - 2011

Postgraduate, Middle East Technical University, Faculty Of Engineering, Department Of Civil Engineering, Turkey 2005 - 2007

Undergraduate, Middle East Technical University, Faculty Of Engineering, Department Of Civil Engineering, Turkey 2000 - 2005

Foreign Languages

English, C2 Mastery

Research Areas

Environmental Risk Assessment, Materials in Civil Engineering, Concrete Technology, Building Components and Materials, Applications of Insulation Materials, Informatics in Construction Management, Construction Management, Project and Construction Management, Statistical Analysis and Applications

Academic Titles / Tasks

Associate Professor, TED University, Faculty of Engineering, Department of Civil Engineering, 2020 - Continues
Assistant Professor, TED University, Faculty of Engineering, Department of Civil Engineering, 2018 - 2020
Associate Professor, University of New Haven, Mühendislik Fakültesi, Civil And Environmental Engineering, 2018 - 2018
Assistant Professor, University of New Haven, Mühendislik Fakültesi, Civil And Environmental Engineering, 2012 - 2018
Research Assistant, University of Pittsburgh, Mühendislik Fakültesi, Civil And Environmental Engineering, 2007 - 2011
Research Assistant, Middle East Technical University, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü, 2005 - 2007

Academic and Administrative Experience

Sustainable TEDU Committee Member, TED University, Faculty of Engineering, Department of Civil Engineering, 2021 - Continues
Vice Dean, TED University, Faculty Of Engineering, Department Of Civil Engineering, 2023 - 2023
Assistant Director of the Institute, TED University, Graduate School, 2023 - 2023
Civil Engineering Graduate Program Director , TED University, Faculty Of Engineering, Department Of Civil Engineering, 2021 - 2023

Courses

Master's Thesis II, Postgraduate
Materials Science, Undergraduate, 2023 - 2024, 2021 - 2022, 2020 - 2021, 2018 - 2019
Sustainable Construction, Undergraduate, 2023 - 2024, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019
Introduction to Probability and Statistics for Engineers, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019
Master's Thesis I, Postgraduate, 2022 - 2023
Sustainable Construction, Postgraduate, 2021 - 2022
Special Topics in Civil Engineering, Postgraduate, 2022 - 2023
Construction Engineering and Management, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019
Practical Aspects of Construction Management, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018
Practical Aspects of Construction Manage, Postgraduate, 2021 - 2022
Pre-thesis Seminar, Postgraduate, 2022 - 2023
Summer Practice I, Undergraduate, 2018 - 2019
Pre-thesis seminar, Postgraduate, 2018 - 2019
Research Methods and Academic Publication Ethics, Postgraduate, 2017 - 2018

Advising Theses

- Aktaş C. B., ULTRA-HIGH PERFORMANCE CONCRETE (UHPC): INNOVATIONS, APPLICATIONS, AND PATHWAYS TO SUSTAINABILITY, Postgraduate, K.GÜNEŞER(Student), 2024
- Aktaş C. B., An Investigation of the Most Prevalent Sustainability Initiatives at Universities, Postgraduate, K.Ehab(Student), 2023
- Aktaş C. B., Yaman İ. Ö., Estimation of Lightweight Expanded Clay Concrete's Compressive Strength by Using Meta-Analysis, Postgraduate, İ.Uslu(Student), 2023
- Aktaş C. B., Yaman İ. Ö., Physical and mechanical properties of lightweight expanded clay aggregate concrete, Postgraduate, O.UYSAL(Student), 2023
- Aktaş C. B., BIM in vonstruction project planning, building sustainability, and its current state in turkey, Postgraduate, S.Massum(Student), 2020
- Aktaş C. B., CFD Simulation and Analysis of Energy Consumption in Residential Buildings in Northeastern U.S., Postgraduate, M.Golbazi(Student), 2017
- Aktaş C. B., Evaluating the Life Cycle Environmental and Economic Performance of Biochar Compared with Activated Carbon, Postgraduate, H.Adnan(Student), 2016

Taught Courses And Trainings

- Aktaş C. B., Circular Economy with Examples for the Construction Industry, 2022 - 2022
- Aktaş C. B., Ted Ankara Koleji - Meslekler Günü Etkinliği - Meslek Tanıtımı, 2022 - 2022
- Aktaş C. B., Doktora Programı Seminerler Dizisi - İnşaat Mühendisliği ve Sürdürülebilirliğin Kesişiminde..., 2022 - 2022
- Aktaş C. B., TED Bodrum Koleji - Meslekler Günü Sunumu, 2021 - 2021
- Aktaş C. B., Beton Yol Semineri / Beton Yol Yaşam Döngüsü Maliyet Analizi, 2020 - 2020
- Aktaş C. B., İl Genel Meclis Başkanları Eğitim Semineri – Konuşmacı, 2019 - 2019
- Aktaş C. B., İnşaat Mühendisliği Meslek Tanıtımı, 2019 - 2019

Designed Courses And Trainings

- Aktaş C. B., Circular Economy with Examples for the Construction Industry, June 2022
- Aktaş C. B., Doktora Programı Seminerler Dizisi - İnşaat Mühendisliği ve Sürdürülebilirliğin Kesişiminde..., March 2022
- Aktaş C. B., İnşaat Mühendisliği Meslek Tanıtımı, May 2020

Designed Programs

- Aktaş C. B., Doctorate, Ph.D. in Civil Engineering, 2022 - Continues
- Aktaş C. B., Postgraduate, İnşaat Mühendisliği Yüksek Lisans Programı, 2020 - Continues

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **A survey of the most prevalent sustainability initiatives at universities**
Farak K., Aktaş C. B.
International Journal of Sustainability in Higher Education, vol.25, no.8, pp.1581-1609, 2024 (SSCI)
- II. **Environmental Assessment of Calcium Sulfoaluminate Cement: A Monte Carlo Simulation in an Industrial Symbiosis Framework**
Tanguler-Bayramtan M., Aktaş C. B., YAMAN İ. Ö.
Buildings, vol.14, no.11, 2024 (SCI-Expanded)
- III. **Dematerialization of Concrete: Meta-Analysis of Lightweight Expanded Clay Concrete for**

Compressive Strength

Uslu İ., Uysal O., Aktaş C. B., Chang B., YAMAN İ. Ö.

Sustainability (Switzerland), vol.16, no.15, 2024 (SCI-Expanded)

- IV. **Physical and Mechanical Properties of Lightweight Expanded Clay Aggregate Concrete**
Uysal O., Uslu İ., Aktaş C. B., Chang B., YAMAN İ. Ö.
Buildings, vol.14, no.6, 2024 (SCI-Expanded)
- V. **Willingness to pay for green buildings: A survey on students' perception in higher education**
Golbazi M., El Danaf A., Aktaş C. B.
ENERGY AND BUILDINGS, vol.216, 2020 (SCI-Expanded)
- VI. **Leed certification and patient wellbeing in green healthcare facilities**
Golbazi M., Aktaş C. B.
Journal of Green Building, vol.15, no.4, pp.3-18, 2020 (AHCI)
- VII. **Embedding sustainability in lean six sigma efforts**
Erdil N. O., Aktaş C. B., Arani O. M.
JOURNAL OF CLEANER PRODUCTION, vol.198, pp.520-529, 2018 (SCI-Expanded)
- VIII. **Prospects for meeting the corporate average fuel economy standards in the US**
Zielinski J., Andreucci R., Rajagopalan N., Aktaş C. B.
RESOURCES CONSERVATION AND RECYCLING, vol.136, pp.466-472, 2018 (SCI-Expanded)
- IX. **Energy efficiency of residential buildings in the US: Improvement potential beyond IECC**
Golbazi M., Aktaş C. B.
BUILDING AND ENVIRONMENT, vol.142, pp.278-287, 2018 (SCI-Expanded)
- X. **Application of GIS to Prioritize Brownfield Sites for Green Building Construction Based on LEED Criteria**
Aktaş C. B., Bartholomew P., Church S.
JOURNAL OF URBAN PLANNING AND DEVELOPMENT, vol.143, no.3, 2017 (SCI-Expanded)
- XI. **Life cycle environmental and economic performance of biochar compared with activated carbon: A meta-analysis**
Alhashimi H. A., Aktaş C. B.
RESOURCES CONSERVATION AND RECYCLING, vol.118, pp.13-26, 2017 (SCI-Expanded)
- XII. **Vulnerability of coastal Connecticut to sea level rise: land inundation and impacts to residential property**
Andreucci R., Aktaş C. B.
CIVIL ENGINEERING AND ENVIRONMENTAL SYSTEMS, vol.34, no.2, pp.89-103, 2017 (SCI-Expanded)
- XIII. **Economic feasibility of campus-wide photovoltaic systems in New England**
Lee J., Chang B., Aktaş C. B., Gorthala R.
RENEWABLE ENERGY, vol.99, pp.452-464, 2016 (SCI-Expanded)
- XIV. **Developing a university-wide course on sustainability: a critical evaluation of planning and implementation**
Aktaş C. B., Whelan R., Stoffer H., Todd E., Kern C. L.
JOURNAL OF CLEANER PRODUCTION, vol.106, pp.216-221, 2015 (SCI-Expanded)
- XV. **Reflections on interdisciplinary sustainability research with undergraduate students**
Aktaş C. B.
INTERNATIONAL JOURNAL OF SUSTAINABILITY IN HIGHER EDUCATION, vol.16, no.3, pp.354-366, 2015 (SSCI)
- XVI. **Online Teaching of Engineering Statistics: A Comparative Case Study**
Aktaş C. B., Omurtag Y.
INTERNATIONAL JOURNAL OF ENGINEERING EDUCATION, vol.29, no.2, pp.504-509, 2013 (SCI-Expanded)
- XVII. **Impact of lifetime on US residential building LCA results**
Aktaş C. B., Bilec M. M.
INTERNATIONAL JOURNAL OF LIFE CYCLE ASSESSMENT, vol.17, no.3, pp.337-349, 2012 (SCI-Expanded)
- XVIII. **Service life prediction of residential interior finishes for life cycle assessment**
Aktaş C. B., Bilec M. M.

INTERNATIONAL JOURNAL OF LIFE CYCLE ASSESSMENT, vol.17, no.3, pp.362-371, 2012 (SCI-Expanded)

- XIX. **CRITICAL SUCCESS FACTORS TO LIMIT CONSTRUCTABILITY ISSUES ON A NET-ZERO ENERGY HOME**
Aktaş C. B., Ryan K. C., Sweriduk M. E., Bilec M. M.
JOURNAL OF GREEN BUILDING, vol.7, no.4, pp.100-115, 2012 (AHCI)

Articles Published in Other Journals

- I. **A review of international eco-industrial parks for implementation success in the United States**
Perrucci D. V., Aktaş C. B., Sorrentino J., Akanbi H., Curabba J.
City and Environment Interactions, vol.16, 2022 (ESCI)
- II. **Ulusal enerji tüketiminin değerlendirilmesi ve istatistiksel tahmini**
Aktaş C. B.
Bitlis Eren Üniversitesi Fen Bilimleri Dergisi, vol.8, no.4, pp.1422-1431, 2019
- III. **Yol Üstyapısı Yaşam Döngüsü Değerlendirmeleri: Beton Yol Örneği**
Aktaş C. B., Yaman İ. Ö.
İstanbul Bülten, vol.153, pp.5-10, 2019
- IV. **Türk Konut Stoğu Özellikleri: Kullanılan Modellerin Standartlaştırılmasına Yönelik Bir Çalışma**
Aktaş C. B.
Sanat Yazıları, vol.40, pp.15-27, 2019
- V. **Global Cement Production: Outlook on Energy Consumption and Greenhouse Gas Emissions**
Aktaş C. B., Yaman İ. Ö.
Cement and Concrete World, vol.119, pp.56-68, 2016
- VI. **Life Cycle Assessment: the Method and its Development**
Aktaş C. B., Yaman İ. Ö.
Cement and Concrete World, vol.110, pp.31-39, 2014

Books & Book Chapters

- I. **İnşaat Sektöründe Sürdürülebilirlik: Gereksinimler ve Çözüm Önerileri**
Aktaş C. B.
in: İnşaat Sektöründe Sürdürülebilirlik: Gereksinimler ve Çözüm Önerileri, , Editor, 2023
- II. **Handbook of Sustainability Science in the Future**
Aktaş C. B. (Member Of Editors Board)
Springer, London/Berlin , London, 2022
- III. **Fostering Circular Economy in Urban Areas**
Aktaş K. O., Aktaş C. B.
in: Sustainable Development Goals, Climate Change, and Digitalization Challenges in Planning, RA Castanho, Editor,
Routledge, London/New York, Pennsylvania, pp.165-178, 2022
- IV. **Importance of Building Energy Efficiency Towards National and Regional Energy Targets**
Aktaş C. B.
in: Towards a Sustainable Future - Life Cycle Management Challenges and Prospects, Zbigniew Stanislaw
Klos,Joanna Kalkowska,Jędrzej Kasprzak, Editor, Springer Nature, New York, pp.155-163, 2022
- V. **Dematerialization: Needs and Challenges**
Aktaş C. B.
in: Handbook of Sustainability Science in the Future, WL Filho,AM Azul,F Doni,AL Salvia, Editor, Springer Nature,
New York, pp.1-13, 2022

Refereed Congress / Symposium Publications in Proceedings

- I. **Genleştirilmiř Kil Agregalı Hafif Betonun Mekanik Özelliklerinin Meta-Analiz ile İncelenmesi**
Uslu I., Aktař C. B., Yaman I. Ö.
Türkiye İnřaat Mühendislięi 18. Teknik Kongre ve Sergisi, İstanbul, Turkey, 7 - 09 November 2022, pp.1-6
- II. **Genleştirilmiř Kil Agregalı Tařıyıcı Hafif Betonun Mekanik Özelliklerinin İncelenmesi : Bir Meta-Analiz Çalışması**
Uslu İ., Aktař C. B., Yaman İ. Ö.
İZÜ FEN VE MÜHENDİSLİK BİLİMLERİ LİSANSÜSTÜ ÖĞRENCİ KONGRESİ, İstanbul, Turkey, 4 - 05 June 2022
- III. **The Importance of Virtual Reality and Augmented Reality for the AEC Industry**
Beral H., Aktař C. B.
4th International Conference on Contemporary Architecture and Urbanism, Antalya, Turkey, 20 - 21 May 2020, pp.92
- IV. **Patterns in the Development of Drones in the Construction Industry and Forecasts Regarding Turkey**
Al-Zariqi A., Farag K., Güryuva B., Aktař C. B.
4th International Conference on Contemporary Architecture and Urbanism, Antalya, Turkey, 20 - 21 May 2020, pp.92
- V. **Virtual Reality and Augmented Reality Integration into AEC Industry**
Beral H., Aktař C. B.
International Congress of Engineering and Natural Sciences (ICENSS), Ankara, Turkey, 7 - 09 May 2021, pp.1-6
- VI. **Quantifying Benefits of BIM for Quantity Takeoff: A Comparative Study**
Yörük K. B., Aktař C. B.
International Congress of Engineering and Natural Sciences (ICENSS), Ankara, Turkey, 7 - 09 May 2021, pp.1-6
- VII. **Trends in the Deployment of Drones in the Construction Industry**
Al-Zariqi A., Farag K., Güryuva B., Aktař C. B.
International Congress of Engineering and Natural Sciences (ICENSS), Ankara, Turkey, 7 - 09 May 2021, pp.1-6
- VIII. **Augmented Reality and Drone Usage in Construction Industry**
Dursun T., Aksu L., Ülkü B., Önal D., Aktař C. B.
International Congress of Engineering and Natural Sciences (ICENSS), Ankara, Turkey, 7 - 09 May 2021
- IX. **Yařam Döngüsü Deęerlendirmeleri – Yol Altyapısı Üzerine Örnekler**
Aktař C. B.
Ankara, Turkey
- X. **Presence of Sustainability in Preschool Curriculum**
Arda Ö., Aktař C. B.
7th International Conference on Sustainable Development, 4 - 05 September 2019
- XI. **Influence of Emotional Intelligence in Construction Management**
Uysal O., řen A. C., Güryuva B., Aktař C. B.
International Civil Engineering and Architecture Conference, 17 - 20 April 2019
- XII. **Turkey's Changing Infrastructure Need**
Altay A. E., řimřek Ç., Bingöl S. C., Aktař C. B.
International Civil Engineering and Architecture Conference, 17 - 20 April 2019
- XIII. **Role of Building Information Modeling in the Future of Construction Management**
Boyacılar M. T., Mısırlı T. E., Uslu İ., Aktař C. B.
International Civil Engineering and Architecture Conference, 17 - 20 April 2019
- XIV. **Risk Assessment Techniques Applicable in Construction Management**
řahin G., Aktař C. B.
International Civil Engineering and Architecture Conference, 17 - 20 April 2019
- XV. **Water Availability Projections for Ankara: Population Rise and Changing Precipitation Patterns**
Uslu İ., Aktař C. B.
International Civil Engineering and Architecture Conference, 17 - 20 April 2019
- XVI. **Analysis on the effects of exterior openings on residential building energy consumption in Northeast U.S. climate conditions**

Golbazi M., Aktaş C. B.

4th Biennial Residential Building Design and Construction Conference, 28 February - 01 March 2018

XVII. Economic evaluation of wind energy investment in Texas

Chang B., Starcher K., Aktaş C. B., Chen G., Egilmez G.

67th Annual Conference and Expo of the Institute of Industrial Engineers 2017, Pennsylvania, United States Of America, 20 - 23 May 2017, pp.1601-1606

XVIII. Assessing the Resilience of LEED Certified Green Buildings

Champagne C. L., Aktaş C. B.

International Conference on Sustainable Design, Engineering and Construction (ICSDEC), Arizona, United States Of America, 18 - 20 May 2016, vol.145, pp.380-387

XIX. Resilience of Rail Infrastructure in the US Northeast Corridor

Delgado D., Aktaş C. B.

International Conference on Sustainable Design, Engineering and Construction (ICSDEC), Arizona, United States Of America, 18 - 20 May 2016, vol.145, pp.356-363

XX. Analysis of Credits Earned by LEED Healthcare Certified Facilities

Golbazi M., Aktaş C. B.

International Conference on Sustainable Design, Engineering and Construction (ICSDEC), Arizona, United States Of America, 18 - 20 May 2016, vol.145, pp.203-210

XXI. Sustainable Temporary Housing: Global Trends and Outlook

Perrucci D. V., Vazquez B. A., Aktaş C. B.

International Conference on Sustainable Design, Engineering and Construction (ICSDEC), Arizona, United States Of America, 18 - 20 May 2016, vol.145, pp.327-332

XXII. Prospects for Meeting the Corporate Average Fuel Economy Standards in the US

Zielinski J., Andreucci R., Aktaş C. B.

International Conference on Sustainable Design, Engineering and Construction (ICSDEC), Arizona, United States Of America, 18 - 20 May 2016, vol.145, pp.460-467

XXIII. Quantifying Sustainable Improvements: Interactions of Energy Efficient Construction Techniques and Estimating Their Efficiency

Pustola K., Aktaş C. B.

Zone 1 Conference of the American-Society-for-Engineering-Education (ASEE Zone), Connecticut, United States Of America, 3 - 05 April 2014

XXIV. Strategies to Reduce Disparity between Design and Service Lifetimes of Building Products

Aktaş C. B., Bilec M.

4th International Conference On Sustainable Enterprises of the Future, 18 - 19 April 2012

XXV. Market and Environmental Analyses of Key Construction Commodities

Bilec M., Marriott J., Aktaş C. B., Padilla F., Snyder M.

Western Pennsylvania Transportation Research Forum of the International Bridge Conference, 01 June 2010

XXVI. Life Cycle Energy Consumption of Pultruded Flax Fiber Composites

Aktaş C. B., Bilec M. M., Marriott J., Landis A. E., Mutnuri B.

2010 IEEE International Symposium on Sustainable Systems and Technology, Darlington, England, 17 - 19 May 2010

XXVII. Determining the Thickness of Concrete Pavements using Impact-Echo Method

Aktaş C. B., Yaman İ. Ö.

8th International Congress on Advances in Civil Engineering, 01 September 2008

Activities in Scientific Journals

Çimento ve Beton Dünyası, First Editor, 2024 - Continues

Scientific Refereeing

ENVIRONMENTAL SCIENCE & TECHNOLOGY, April 2020

CRITICAL REVIEWS IN ENVIRONMENTAL SCIENCE AND TECHNOLOGY, March 2020

INTERNATIONAL JOURNAL OF SUSTAINABILITY IN HIGHER EDUCATION, January 2020

JOURNAL OF URBAN PLANNING AND DEVELOPMENT, February 2019

RESOURCES, CONSERVATION AND RECYCLING, January 2019

BUILDING AND ENVIRONMENT, January 2019

Tasks In Event Organizations

Aktaş C. B., 2. Ulusal Beton Yollar Kongre ve Sergisi, Scientific Congress, Ankara, Turkey, Kasım 2022

Aktaş C. B., 1. Beton Yollar Kongresi ve Sergisi, Scientific Congress, Ankara, Turkey, Kasım 2019

Aktaş C. B., 9th International Conference on Life Cycle Management, Scientific Congress, Poznan, Poland, Eylül 2019

Metrics

Publication: 57

Citation (WoS): 560

Citation (Scopus): 926

H-Index (WoS): 11

H-Index (Scopus): 13

Congress and Symposium Activities

ESG Türkiye Zirvesi, Attendee, Ankara, Turkey, 2022

International Workshop on Geothermal Energy for Sustainable Development, Attendee, Ankara, Turkey, 2021

Türkiye'de İklim Değişikliğine Uyum Eyleminin Güçlendirilmesi Projesi Kapasite Geliştirme Planı İstişare Toplantısı, Attendee, Ankara, Turkey, 2021

Ankara İli Yerel İklim Değişikliği Eylem Planı Paydaş Toplantısı, Attendee, Ankara, Turkey, 2020

Deprem Sivil İnisiyatif Toplantısı, Attendee, Ankara, Turkey, 2020

Zero Gravity Workshop, Attendee, Ankara, Turkey, 2019

Awards

Aktaş C. B., TEDU Engineering Faculty 2023 Excellence in Teaching Award, Ted Üniversitesi, July 2023

Aktaş C. B., Most Cited Paper Award 2019, Resources, Conservation And Recycling, January 2020