

## Asst. Prof. Serhan ULUKAYA

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: ABA-1599-2020

ScopusID: 57190251670

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### Education Information

Doctorate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, İnşaat Mühendisliği Abd, Turkey  
2008 - 2016

Postgraduate, Istanbul Technical University, Fen Bilimleri Enstitüsü, İnşaat Mühendisliği Abd, Turkey 2006 - 2008

Undergraduate, Yildiz Technical University, Faculty Of Civil Engineering, Civil Engineering Department, Turkey 2001 -  
2005

### Foreign Languages

English, B2 Upper Intermediate

### Dissertations

Doctorate, Tarihi Kireç Harcı Özelliklerine Uygun Yeni Malzemelerin Üretimi ve Sayısal Analiz İçin Malzeme Parametrelerinin Belirlenmesi, Yıldız Teknik Üniversitesi, Graduate School of Natural and Applied Sciences, İnşaat Mühendisliği Abd, 2016

Postgraduate, Kendiliğinden Yerleşen Betonlarda Rötire ve Rötire Çatlaklarının İncelenmesi, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, İnşaat Mühendisliği Abd, 2008

### Research Areas

Civil Engineering, Building materials, Materials in Civil Engineering, Concrete Technology, Engineering and Technology

### Academic Titles / Tasks

Assistant Professor, Yildiz Technical University, Faculty Of Civil Engineering, Civil Engineering Department, 2019 -  
Continues

Research Assistant, Yildiz Technical University, Faculty Of Civil Engineering, Civil Engineering Department, 2010 - 2014

## Courses

### Doctorate

Testing and Measurement Technics in Materials, Doctorate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020

### Postgraduate

Özel Betonlar, Postgraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023, 2021 - 2022

Seminar, Postgraduate, 2019 - 2020

### Undergraduate

Investigation and Strengthening of Reinforced Concrete Buildings, Undergraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023, 2021 - 2022

Construction Materials, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020

Materials Science, Undergraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020

Materials Science and Engineering, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020

Graduation Thesis, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021

## Supervised Theses

Ulukaya S., Kazeinin Hidrolik Kireç Harçlarının Taze ve Sertleşmiş Haldeki Özelliklerine Etkisi, Postgraduate, A.İNAN(Student), 2024

Ulukaya S., Effects of various curing conditions on compressive strength and microstructure of mgo-based systems, Postgraduate, K.TAJ(Student), 2022

Ulukaya S., Magnezyum oksit ve metakaolin ikameli sodyum karbonat ile aktive edilen çürüflü harçların mekanik ve durabilite özellikleri, Postgraduate, M.ABOLFATHI(Student), 2021

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

- I. **Experimental and Numerical Investigation on Strengthening Techniques for Double-Wythe Stone Masonry Walls**  
Doran B., Hothot Y. M., Dinç Şengönül B., Karşoğlu M., Ulukaya S., Yüzer N.  
TURKISH JOURNAL OF CIVIL ENGINEERING, vol.36, no.4, pp.1-34, 2025 (SCI-Expanded)
- II. **Behavior of grout injected solid stone masonry walls under in-plane loading**  
Dinç Şengönül B., Yüzer N., Şengönül C., Ulukaya S., Oktay D., Ündül Ö.  
Structures, vol.58, pp.1-18, 2023 (SCI-Expanded)
- III. **Influence of carbonation curing and nano-silica incorporation on compressive strength and micro-structural development of binary RMC-based systems**  
Taj K., Akturk B., ULUKAYA S.  
Journal of Building Engineering, vol.66, 2023 (SCI-Expanded)
- IV. **Hydration kinetics and performance of sodium carbonate-activated slag-based systems containing reactive MgO and metakaolin under carbonation**  
Akturk B., Abolfathi M., ULUKAYA S., Kizilkanat A. B., Hooper T. J., Gu L., Yang E., Unluer C.  
Cement and Concrete Composites, vol.132, 2022 (SCI-Expanded)
- V. **Experimental Investigation of CFRP Strengthened Unreinforced Masonry Walls with Openings**  
Doran B., Ulukaya S., Ünsal Aslan Z., Karşoğlu M., Yüzer N.  
INTERNATIONAL JOURNAL OF ARCHITECTURAL HERITAGE, vol.16, no.12, pp.1907-1920, 2022 (SCI-Expanded)
- VI. **Numerical Modeling of Traditional Masonry Walls Strengthened with Grout Injection**  
DORAN B., YÜZER N., AKTAN S., OKTAY D., ULUKAYA S.  
INTERNATIONAL JOURNAL OF ARCHITECTURAL HERITAGE, vol.14, no.10, pp.1517-1532, 2020 (SCI-Expanded)
- VII. **Performance Evaluation of Lime-Based Grout Used for Consolidation of Brick Masonry Walls**

Gokyigit-Arpaci E. Y., OKTAY D., YÜZER N., ULUKAYA S., Eksi-Akbulut D.

JOURNAL OF MATERIALS IN CIVIL ENGINEERING, vol.31, no.6, 2019 (SCI-Expanded)

- VIII. **The effect of mortar type and joint thickness on mechanical properties of conventional masonry walls**  
Zengin B., Toydemir B., Ulukaya S., Oktay D., Yüzer N., Koçak A.  
STRUCTURAL ENGINEERING AND MECHANICS, vol.67, pp.579-585, 2018 (SCI-Expanded)
- IX. **Investigation of existing damage mechanism and retrofitting of Skeuophylakion under seismic loads**  
KOCATURK T., ERDOĞAN Y. S., DEMİR C., GOKCE A., ULUKAYA S., YÜZER N.  
ENGINEERING STRUCTURES, vol.137, pp.125-144, 2017 (SCI-Expanded)
- X. **Material Characterization of Byzantine Period Brick Masonry Walls Revealed in Istanbul (Turkey)**  
ULUKAYA S., YORUC A. B., YÜZER N., OKTAY D.  
PERIODICA POLYTECHNICA-CIVIL ENGINEERING, vol.61, no.2, pp.209-215, 2017 (SCI-Expanded)
- XI. **In-Plane Shear Behavior of Traditional Masonry Walls**  
DORAN B., KÖKSAL H. O., AKTAN S., ULUKAYA S., OKTAY D., YÜZER N.  
INTERNATIONAL JOURNAL OF ARCHITECTURAL HERITAGE, vol.11, no.2, pp.278-291, 2017 (SCI-Expanded)
- XII. **Assessment of Pozzolanicity of Clay Bricks Fired at Different Temperatures for Use in Repair Mortar**  
ULUKAYA S., YÜZER N.  
JOURNAL OF MATERIALS IN CIVIL ENGINEERING, vol.28, no.8, 2016 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Arıtılmış Atık Suyun Çimento Esaslı Sistemlerde Karma Suyu Olarak Kullanılmasının Araştırılması**  
Ulukaya S.  
International journal of advances in engineering and pure sciences (Online), vol.36, no.4, pp.312-319, 2024 (Peer-Reviewed Journal)
- II. **Effects of Reactive MgO and Metakaolin on Compressive Strength and Chloride Migration Coefficient of Sodium Carbonate Activated Slag Mortars**  
Abolfathi M., Ulukaya S., Aktürk B.  
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES, vol.41, no.1, pp.17-25, 2023 (ESCI)
- III. **Fresh state properties and compressive strength development of reactive MgO-based systems**  
Taj K., Akturk B., ULUKAYA S.  
Materials Today: Proceedings, vol.65, pp.1064-1069, 2022 (Scopus)
- IV. **Uçucu Kül Katkılı Kendiliğinden Yerleşen Betonda Rötire ve Rötire Çatlaklarının İncelenmesi**  
ULUKAYA S., AKKAYA Y.  
Hazır Beton Dergisi, vol.92, pp.64-71, 2009 (Peer-Reviewed Journal)

## Books

- I. **Investigation of Pozzolanicity in Waste Excavation Soils From Cappadocia and Prospective Industrial Applications of Waste Earth: Pozzolanicity in Cappadocia Waste Soils and Industrial Uses**  
ÖZATA Ş., ULUKAYA S., YÜZER N.  
in: Tools, Techniques, and Advancements in Engineering Materials Science, GAMBHIR VICTOR, KUMAR AJAY, KUMAR PARVEEN, SEBAEY TAMEER ALİ, Editor, IGI Global Scientific Publishing, pp.115-156, 2025

## Papers Published in Refereed Scientific Meetings

- I. **Tarihi Yapıların Onarım Harçlarında Kazeinin Kullanımı**  
İnan A., Ulukaya S.

11. Uluslararası Mühendislik ve Teknoloji Yönetimi Kongresi, İstanbul, Turkey, 16 - 17 March 2024, pp.56-62
- II. **The Impact of Additives and Curing Conditions on the Mechanical Strength and Microstructural Development of MgO Based Systems**  
Taj K., Aktürk B., ULUKAYA S.  
International Symposium of the International Federation for Structural Concrete, fib Symposium 2023, İstanbul, Turkey, 5 - 07 June 2023, vol.349 LNCE, pp.286-297
- III. **Fresh State Properties and Compressive Strength Development of Reactive MgO-Based Systems**  
Taj K., Aktürk B., Ulukaya S.  
International Conference on Advances in Construction Materials and Structures (ICCMS 2021), 14 - 19 December 2021, pp.1-11
- IV. **Nonlinear Behaviour of Two-Whyte Stone Walls**  
Dinç Şengönül B., Hothot Y. M., Doran B., Yüzer N., Ulukaya S., Oktay D.  
12th INTERNATIONAL CONFERENCE ON STRUCTURAL ANALYSIS OF HISTORICAL CONSTRUCTIONS SAHC2020, Barcelona, Spain, 29 September - 01 October 2021, pp.2136-2145
- V. **Sodyum Karbonatla Aktive Edilmiş Cüruf Esaslı Sistemlerde Bağlayıcı Türünün ve Isıl Kürün Erken Yaş Dayanımına Etkisi**  
Abolfathi M., Ulukaya S., Kızılkanaat A. B., Aktürk B.  
7th International Congress on Engineering, Architecture and Design, İstanbul, Turkey, 21 May - 22 July 2021, pp.121-128
- VI. **Investigation Of Mechanical Properties Of Two-Wyhte Stone Masonry Walls Consolidated With Grout**  
Şengönül C., Yüzer N., Dinç Şengönül B., Oktay D., Ulukaya S.  
INTERNATIONAL AEGEAN SYMPOSIUMS ON INNOVATION TECHNOLOGIES & ENGINEERING-II, İzmir, Turkey, 18 - 19 September 2020, pp.53-54
- VII. **Alkali Activation and Pozzolanic Activity of Waste Material Excavated from Rock-Cut Buildings of Cappadocia**  
Özata Ş., Yüzer N., Ulukaya S., Aktürk B., Kızılkanaat A. B.  
10th International Concrete Congress, Bursa, Turkey, 2 - 04 May 2019, pp.42-50
- VIII. **Pozzolanicity Evaluation of Rock-Cut Building's Waste Material in Cappadocia Region**  
Bek V., Yüzer N., Ulukaya S., Özata Ş.  
13th International Congress on Advances in Civil Engineering, İzmir, Turkey, 12 - 14 September 2018, pp.100-107
- IX. **Yüksek Fırın Cürufu Esaslı Harçların Sıva Olarak Tarihi Yapılarda Kullanılabilirliğinin Araştırılması**  
Aktürk B., Ulukaya S., Kızılkanaat A. B., Yüzer N.  
Uluslararası Katılımlı 6. Tarihi Yapıların Korunması ve Güçlendirilmesi Sempozyumu, Trabzon, Turkey, 2 - 04 November 2017, pp.559-568
- X. **Tarihi Yapılarda Taşıyıcı Tuğla Duvarın Elastisite Modülünün Deneysel ve Matematiksel Model ile Belirlenmesi**  
Ulukaya S., Yüzer N.  
Uluslararası Katılımlı 6. Tarihi Yapıların Korunması ve Güçlendirilmesi Sempozyumu, Trabzon, Turkey, 2 - 04 November 2017, pp.533-542
- XI. **Determination of Mechanical Properties of Blend Bricks Used In Historical Structures**  
Zengin B., Toydemir B., Ulukaya S., Oktay D., Yüzer N., Koçak A.  
3rd International Conference on Protection Of Historical Constructions, Lisbon, Portugal, 12 - 15 July 2017, pp.185-186
- XII. **INVESTIGATION OF MASONRY WALLS ON A COMPRESSIBLE SOIL BY MODEL TESTS (In Turkish)**  
Berilgen M. M., Coşandal A., Ulukaya S., Oktay D., Berilgen S. A., Yüzer N.  
Zemin Mekaniği ve Geoteknik Mühendisliği 16. Ulusal Kongresi (ZM-16), Erzurum, Turkey, 13 - 14 October 2016, vol.2, pp.595-604
- XIII. **Experimental Study on the Mechanical Properties of Lime-Based Mortars Produced for Consolidation**  
Ulukaya S., Oktay D., Yüzer N.  
4th Historic Mortars Conference (HMC 2016), Athens, Greece, 10 - 12 October 2016, pp.307-314

- XIV. **Constitutive Modeling of Unreinforced Masonry Walls**  
Aktan S., Doran B., Köksal H. O., Yüzer N., Ulukaya S., Oktay D., Akbaş B.  
ACM 2015-International Conference on Advances in Applied and Computational Mechanics, İzmir, Turkey, 5 - 07 August 2015, pp.10-16
- XV. **Rheological properties of hydraulic grouts used in consolidation of brick masonry walls**  
OKTAY D., YÜZER N., Ulukaya S.  
REHAB 2015, 2nd International Conference on Preservation, Maintenance and Rehabilitation of Historical Buildings and Structures, Porto, Portugal, 22 July 2015, pp.861-868
- XVI. **Mechanical behavior of two-wythebrick masonry walls injected with hydraulic lime grout**  
YÜZER N., Oktay D., Ulukaya S., Gökyiğit-Arpacı E. Y.  
REHAB 2015 - 2nd International Conference on Preservation, Maintenance and Rehabilitation of Historical Buildings and Structures, 01 July 2015, pp.879-888
- XVII. **Influence of Firing Temperature on the Pozzolanic Activity of Calcined Clay Bricks**  
Ulukaya S., Yüzer N., Gökçe H.  
PROHITECH 2014 - 2nd International Conference on Protection of Historical Constructions, Antalya, Turkey, 7 - 09 May 2014, pp.617-622
- XVIII. **Kireç Harçlarının Tanımlanmasında Uygulanan Deney Yöntemlerinin Bizans, Selçuklu ve Osmanlı Yapı Örneklerinde İrdelenmesi**  
Ulukaya S., Yüzer N., Hazar A. B.  
4. Tarihi Yapıların Güçlendirilmesi ve Geleceğe Güvenle Devredilmesi Sempozyumu, İMO, İstanbul, Turkey, 27 - 29 November 2013, pp.289-300
- XIX. **Kendiliğinden Yerleşen Betonda Su-Bağlayıcı Oranının ve Agregası Maksimum Dane Boyutunun Mekanik ve Reolojik Özelliklere Etkisi**  
Kabay N., Kızılkıran A. B., Ulukaya S.  
İnşaat Mühendisliğinde 100.Yıl Teknik Kongre ve Sergisi, İstanbul, Turkey, 24 November 2012, pp.106-107
- XX. **Tarihi Kireç Harçlarının Tanımlanmasında Uygulanan Deney Yöntemlerinin İrdelenmesi**  
Ulukaya S., Yüzer N., Selçuk M. E., Yıldırım M.  
İnşaat Mühendisliğinde 100.Yıl Teknik Kongre ve Sergisi, İstanbul, Turkey, 22 - 24 November 2012, pp.84-85
- XXI. **Tarihi Yapılarda Özgün Malzeme Özelliklerinin Belirlenmesi: Koca Ragıp Paşa Kütüphanesi Örneği**  
Ulukaya S., Yüzer N., Hazar A. B.  
6. Ulusal Yapı Malzemesi Kongresi, TMMOB Mimarlar Odası İstanbul Büyükkent Şubesi, İstanbul, Turkey, 7 - 09 November 2012, pp.73-82
- XXII. **The Effect of Corrosion on the Steel Bars Embedded in Polymer Modified Concrete**  
Akoz F., YÜZER N., BASCAVUSOĞLU E., ULUKAYA S.  
7th Asian Symposium on Polymers in Concrete (ASPIC 2012), İstanbul, Turkey, 3 - 05 October 2012, pp.617-624
- XXIII. **Tarihi Yapılarda Özgün Malzeme Özelliklerinin Belirlenmesi : Üsküdar'da Apsidal Yapı Kalıntısı Örneği**  
Yüzer N., Ulukaya S., Hazar A. B.  
Tarihi Yapıları Koruma ve Onarım Sempozyumu (TAYKON 2011), İstanbul, Turkey, 26 - 29 October 2011, pp.500-509
- XXIV. **Research on Shrinkage and Shrinkage Induced Cracking in Self Compacting Concrete Made With Fly Ash**  
Ulukaya S., Akkaya Y.  
THHB International Ready Mixed Concrete Congress, İstanbul, Turkey, 19 - 21 June 2008, pp.301-311

## Supported Projects

AKCA A. H., ULUKAYA S., Project Supported by Higher Education Institutions, Karbonatlaşarak Sertleşmiş Magnezyum Esaslı Malzemenin Mekanik ve İç Yapı Özelliklerinin Sıcaklık İle Değişiminin Araştırılması, 2023 - Continues  
Canpolat O., Özkaya B., Yüzer N., Uysal M., Doğruöz Güngör N., Oktay D., Ulukaya S., Bakırman T., Özata Ş., Dinç Şengönül

B., et al, Project Supported by Higher Education Institutions, Investigation of Self-Healing Properties of Cement and Lime Based Mortars with Bacteria, 2023 - 2025

ULUKAYA S., Project Supported by Higher Education Institutions, Magnezyum Oksit ve Metakaolin İkameli Sodyum Karbonat ile Aktive Edilen Cürüflu Harçların Mekanik ve Durabilite Özellikleri, 2021 - 2022

Yüzer N., Özata Ş., Ulukaya S., Oktay D., Selçuk M. E., Ündül Ö., Berilgen M. M., Tuncer Ö. F., TUBITAK Project, Investigation of the Usability of Cappadocia Volcanic Tuff in Historical Masonry Buildings by Activating with Alkalis, 2018 - 2022

Yüzer N., Doran B., Coşandal A., Hazar A. B., Berilgen M. M., Büyükpınar Ç., TUBITAK Project, Determination of Original Brick Wall Material Properties of Historical Buildings and Investigation of Behavior Under Load Using Model ExperimentsT, 2012 - 2015

ULUKAYA S., Project Supported by Higher Education Institutions, Tarihi Yapıların Özgün Malzeme Özelliklerine Uygun Harç Üretimi, 2011 - 2015

## Peer Reviews in Scientific Publications

CLEAN TECHNOLOGIES AND ENVIRONMENTAL POLICY, Journal Indexed in SCI-E, January 2025

Journal of Sustainable Cement-Based Materials, Journal Indexed in SCI-E, October 2024

NANOTECHNOLOGY REVIEWS, SCI Journal, July 2023

ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, Journal Indexed in SCI-E, January 2023

ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, Journal Indexed in SCI-E, December 2021

CANADIAN JOURNAL OF CIVIL ENGINEERING, Journal Indexed in SCI-E, February 2021

ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, Journal Indexed in SCI-E, October 2020

Sigma Journal of Engineering and Natural Sciences , Journal Indexed in ESCI, January 2020

Sigma Journal of Engineering and Natural Sciences , Journal Indexed in ESCI, November 2019

STRUCTURAL CONCRETE, Journal Indexed in SCI-E, June 2019

Journal of Cultural Heritage, SCI Journal, February 2018

## Metrics

Publication: 41

Citation (WoS): 112

Citation (Scopus): 117

H-Index (WoS): 7

H-Index (Scopus): 7

## Awards

ULUKAYA S., Best Paper Award in New Materials and Products for the Rehabilitation of Historical Buildings and Structures, REHAB 2015, 2nd International Conference on Preservation, Maintenance and Rehabilitation of Historical Buildings and Structures, July 2015