

Prof. MUSTAFA ŞAHMARAN

Personal Information

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Education Information

Doctorate, Middle East Technical University, Faculty Of Engineering, İnşaat Mühendisliği, Turkey 2002 - 2005

Foreign Languages

English, C1 Advanced

Research Areas

Civil Engineering, Building materials, Materials in Civil Engineering, Concrete Technology, Building Components and Materials, Composite materials, Material Mechanics, Applications of Insulation Materials, Engineering and Technology

Academic Titles / Tasks

Professor, Hacettepe University, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü, 2017 - Continues

Professor, Gazi University, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü, 2017 - 2017

Associate Professor, Gazi University, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü, 2013 - 2017

Associate Professor, Gaziantep University, Faculty Of Engineering, İnşaat Mühendisliği Bölümü (İngilizce), 2010 - 2013

Assistant Professor, Gaziantep University, Faculty Of Engineering, İnşaat Mühendisliği Bölümü (İngilizce), 2007 - 2010

Expert, University of Michigan, Mühendislik Fakültesi, İnşaat Ve Çevre Mühendisliği, 2006 - 2007

Research Assistant, Middle East Technical University, Faculty Of Engineering, Department Of Civil Engineering, 2002 - 2006

Research Assistant, Gaziantep University, Faculty Of Engineering, İnşaat Mühendisliği Bölümü (İngilizce), 1999 - 2002

Academic and Administrative Experience

Gaziantep Üniversitesi, Mühendislik Fakültesi, 2012 - 2013

Gaziantep Üniversitesi, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü (İngilizce), 2009 - 2013

Gaziantep Üniversitesi, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü (İngilizce), 2009 - 2013

Advising Theses

ŞAHMARAN M., YÜKSEK KARBONDİOKSİT KONSANTRASYONLU ORTAMLARDA ÇİMENTO BAĞLAYICILI

KOMPOZİTLERDE HASARLARIN KENDİLİĞİNDEN İYİLEŞMESİ, Postgraduate, A.HAMIDZADEH(Student), 2018

ŞAHMARAN M., ÇEVİRİSEL EĞİLME YÜKLEMELERİ ALTINDA ÇİMENTO BAĞLAYICILI KOMPOZİTLERİN KENDİLİĞİNDEN ALGILAMA KABİLİYETİNİN DEĞERLENDİRİLMESİ, Postgraduate, O.ÖCAL(Student), 2018

ŞAHMARAN M., Naylon esaslı liflerin çimento bağlayıcılı kompozitlerin özellikleri üzerine etkileri, Doctorate, F.EMAMI(Student), 2017

ŞAHMARAN M., Nano malzemeler ile modifiye edilmiş yüksek performanslı hibrid lif donatılı betonlar, Doctorate, S.DEMİRHAN(Student), 2017

ŞAHMARAN M., Riskli yapıların tespit edilmesine ilişkin esaslar ile birinci ve ikinci aşama değerlendirme yöntemlerinin karşılaştırılması, Postgraduate, E.BAHŞI(Student), 2017

ŞAHMARAN M., Türkiye Afet Müdahale Hizmetleri Yönetmeliği çerçevesinde acil yıkım uygulama rehberinin geliştirilmesi, Postgraduate, H.ÖZKILIÇ(Student), 2017

ŞAHMARAN M., Kendiliğinden algılama kabiliyetine sahip çimento bağlayıcılı kompozitlerin büyük ölçekli yapısal kırış elemanlarda performansları, Doctorate, M.HAROON(Student), 2017

ŞAHMARAN M., Özellikleri nano boyutta modifiye edilmiş yüksek hacimde uçucu kül içeren tasarlanmış çimento bağlayıcılı kompozitler, Postgraduate, Ü.EROL(Student), 2017

ŞAHMARAN M., The effect of nanosilica on the properties of pumice incorporated blended cements, Postgraduate, B.DÜNDAR(Student), 2016

ŞAHMARAN M., Multifunctional cementitious composites for damage- resistant highway structures, Doctorate, A.MAJEED(Student), 2016

ŞAHMARAN M., Türkiye inşaat yıkıntı atık yönetim sisteminin geliştirilmesi, Postgraduate, Ü.POYRAZ(Student), 2016

ŞAHMARAN M., Sürdürülebilir altyapılar için yeni nesil akıllı çimento bağlayıcılı kompozit malzemelerin geliştirilmesi, Doctorate, G.YILDIRIM(Student), 2016

ŞAHMARAN M., Nano malzemelerin çimento bağlayıcılı kompozitlerin mekanik özellikleri üzerine etkileri, Postgraduate, M.HATAM(Student), 2016

ŞAHMARAN M., Performance-based design of high performance fiber reinforced cementitious composites for repair of rigid pavement and other infrastructure, Doctorate, M.KASSIM(Student), 2016

ŞAHMARAN M., Detecting damage and self-healing in cementitious composites using electrical methods for protection of critical infrastructures, Doctorate, Ü.GÜLSÜM(Student), 2016

ŞAHMARAN M., Effects of different types of carbon based materials on electrical properties of cementitious composites, Postgraduate, O.ÖZTÜRK(Student), 2015

ŞAHMARAN M., Mevcut yapıların risk durumunun belirlenmesi için 6306 sayılı kanun kapsamında yer alan hızlı değerlendirme tekniğinin uygulanması, Postgraduate, Z.TOZLU(Student), 2015

ŞAHMARAN M., Çimento bağlayıcılı kompozitlerde kendiliğinden iyileşme kabiliyetinin tahribatsız test yöntemleri ile değerlendirilmesi, Postgraduate, B.TOLUNAY(Student), 2015

ŞAHMARAN M., INFLUENCE OF HYDRATED LIME ADDITION ON SELF-HEALING CAPABILITY OF HIGH VOLUME FLY ASH INCORPORATED CEMENTITIOUS COMPOSITES, Postgraduate, H.UNIS(Student), 2014

ŞAHMARAN M., EFFECT OF CHEMICAL ADDITION ON THE COMPRESSIVE STRENGTH OF SLAG-CEMENTS, Postgraduate, H.HAMA(Student), 2014

ŞAHMARAN M., Assessing the efficiency of pre-soaked expanded perlite usage incorporation on the self-healing ability of cementitious composites, Postgraduate, K.AHMED(Student), 2013

ŞAHMARAN M., Repeatability of self-healing in cementitious composites, Postgraduate, R.AZAD(Student), 2013

ŞAHMARAN M., Design of crack free, durable and ductile concrete for sustainable highway rigid pavement overlays, Doctorate, H.ERHAN(Student), 2013

ŞAHMARAN M., High early strength ductile cementitious composites with characteristics of low early age shrinkage, Postgraduate, Y.EMRE(Student), 2013

ŞAHMARAN M., Bond characteristics between high early strength engineered cementitious composites and substrates, Postgraduate, R.KHALİD(Student), 2013

ŞAHMARAN M., Ultra-thin engineered cementitious composites overlay systems for rehabilitation of rigid concrete pavements, Postgraduate, H.JASHAMİ(Student), 2012

ŞAHMARAN M., Dimensional stability of engineered cementitious composites, Doctorate, S.BAHADIR(Student), 2012

ŞAHMARAN M., Effect of internal curing caused by saturated lightweight aggregate on the properties of engineered

cementitious composites, Postgraduate, K.SULAIĖMAN(Student), 2012

ŞAHMARAN M., Effects of different mineral admixtures on the self-healing ability of engineered cementitious composites, Postgraduate, G.YILDIRIM(Student), 2012

ŞAHMARAN M., Rheological properties of engineered cementitious composites containing fly ash, Postgraduate, Z.BİLİCİ(Student), 2011

ŞAHMARAN M., Effect of aggregate size and amount on the mechanical properties of engineered cementitious composites incorporating fly ash and slag, Postgraduate, M.TURHAN(Student), 2011

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **High-conductivity cementitious composites suited for flooring applications: Effect of mixing methods and utilization rates of conductive materials**
ÇELİK D. N., Belendir U., Ardogan M. K., YILDIRIM G., ŞAHMARAN M.
Journal of Building Engineering, vol.87, 2024 (SCI-Expanded)
- II. **3D-printable construction and demolition waste-based geopolymer: Investigating the effects of additives on engineering properties**
İLCAN H., Külak A. Y., ŞAHMARAN M.
Journal of Building Engineering, vol.87, 2024 (SCI-Expanded)
- III. **A study on the influencing parameters in developing construction and demolition waste-based geopolymer concretes and their sustainability assessment**
Alhawati M., Yildirim G., Ashour A., Ozcelikci E., ALDEMİR A., ŞAHMARAN M.
Construction and Building Materials, vol.426, 2024 (SCI-Expanded)
- IV. **Optimizing mechanical performance of geopolymers produced from construction and demolition waste: A comparative study of materials from different origins**
KUL A., Ozcelikci E., ÖZEL B. F., İLCAN H., ŞAHİN O., Gunal M. F., YILDIRIM G., ŞAHMARAN M.
Construction and Building Materials, vol.426, 2024 (SCI-Expanded)
- V. **Comprehensive investigation of performance of construction and demolition waste based wood fiber reinforced geopolymer composites**
Ozcelikci E., ÖZDOĞRU E., Tuğluca M. S., İLCAN H., ŞAHMARAN M.
Journal of Building Engineering, vol.84, 2024 (SCI-Expanded)
- VI. **The role of supplementary cementitious materials and fiber reinforcements in enhancing the sulfate attack resistance of SCC/ECC composite systems**
Baloch W. L., Siad H., Lachemi M., ŞAHMARAN M.
Construction and Building Materials, vol.423, 2024 (SCI-Expanded)
- VII. **Interlayer mechanical performance of 3D-printed cementitious systems: A comprehensive study on operational and material parameters**
İLCAN H., Özkılıç H., Tuğluca M. S., ŞAHMARAN M.
Construction and Building Materials, vol.419, 2024 (SCI-Expanded)
- VIII. **Experimental investigation of the damage characteristics and seismic response of moment-resisting bolted column base joints for precast concrete frames**
AKDUMAN Ş., AKTEPE R., ALDEMİR A., ŞAHMARAN M.
Soil Dynamics and Earthquake Engineering, vol.177, 2024 (SCI-Expanded)
- IX. **Low-alkaline activated construction and demolition waste-based geopolymers**
İLCAN H., Demirbaş A. O., ULUGÖL H., ŞAHMARAN M.
Construction and Building Materials, vol.411, 2024 (SCI-Expanded)
- X. **Opportunities and challenges in constructing a demountable precast building using C&D waste-based geopolymer concrete: A case study in Türkiye**
AKDUMAN Ş., AKTEPE R., ALDEMİR A., Ozcelikci E., Alam B., ŞAHMARAN M.
Journal of Cleaner Production, vol.434, 2024 (SCI-Expanded)
- XI. **Fundamental period estimation of RC buildings by considering structural and non-structural damage**

distributions through neural network

Cinar O. F., ALDEMİR A., Zervent A., Yucel O. B., ERBERİK M. A., ANIL Ö., ŞAHMARAN M., KOÇKAR M. K., ASKAN GÜNDOĞAN A.

Neural Computing and Applications, vol.36, no.3, pp.1329-1350, 2024 (SCI-Expanded)

- XII. **Structural performance of construction and demolition waste-based geopolymer concrete columns under combined axial and lateral cyclic loading**
AKDUMAN Ş., AKTEPE R., ALDEMİR A., Ozcelikci E., YILDIRIM G., ŞAHMARAN M., Ashour A.
Engineering Structures, vol.297, 2023 (SCI-Expanded)
- XIII. **Advancements in cleaner production of one-part geopolymers: A comprehensive review of mechanical properties, durability, and microstructure**
Zareechian M., Siad H., Lachemi M., ŞAHMARAN M.
Construction and Building Materials, vol.409, 2023 (SCI-Expanded)
- XIV. **Buildability analysis on effect of structural design in 3D concrete printing (3DCP): An experimental and numerical study**
Khan S. A., İLCAN H., Aminipour E., ŞAHİN O., Al Rashid A., ŞAHMARAN M., Koç M.
Case Studies in Construction Materials, vol.19, 2023 (SCI-Expanded)
- XV. **Effect of severe sulfate exposure on the bonding behavior of hybrid engineered composite systems**
Baloch W. L., Siad H., Lachemi M., ŞAHMARAN M.
Journal of Building Engineering, vol.79, 2023 (SCI-Expanded)
- XVI. **Impact of supplementary cementitious materials and fibers in ECC on the fire resistance of hot-jointed SCC/ECC composites**
Baloch W. L., Siad H., Lachemi M., ŞAHMARAN M.
Magazine of Concrete Research, vol.76, no.7, pp.330-349, 2023 (SCI-Expanded)
- XVII. **Self-healing capability of engineered cementitious composites with calcium aluminate cement**
Zokaei S., Siad H., Lachemi M., Mahmoodi O., ŞAHMARAN M.
Construction and Building Materials, vol.403, 2023 (SCI-Expanded)
- XVIII. **Characterization and life cycle assessment of geopolymer mortars with masonry units and recycled concrete aggregates assorted from construction and demolition waste**
KUL A., Ozel B. F., Ozcelikci E., Gunal M. F., ULUGÖL H., YILDIRIM G., ŞAHMARAN M.
Journal of Building Engineering, vol.78, 2023 (SCI-Expanded)
- XIX. **Effects of mono and binary recycled aggregates on the rheological properties of geopolymer mortars synthesized with construction and demolition waste-based binders**
Mahmoodi O., Siad H., Lachemi M., ŞAHMARAN M.
Journal of Building Engineering, vol.77, 2023 (SCI-Expanded)
- XX. **Comparison of thermal conductivity and electrical resistivity of carbon-based cementitious composites**
Acikök F., Genç A., Sahin O., Bayer I. R., Ardoa M. K., ŞAHMARAN M.
Magazine of Concrete Research, vol.76, no.4, pp.176-187, 2023 (SCI-Expanded)
- XXI. **Effect of duration and type of grinding on the particle size distribution and microstructure of natural pumice with low pozzolanic reactivity**
Taj K., İLCAN H., Teksin E., Argin G., Ardoğa M. K., UZAL B., ŞAHMARAN M.
Powder Technology, vol.428, 2023 (SCI-Expanded)
- XXII. **Characterization and standardization of different-origin end-of-life building materials toward assessment of circularity performance**
Ozcelikci E., YILDIRIM G., Siad H., Lachemi M., ŞAHMARAN M.
Magazine of Concrete Research, vol.76, no.2, pp.93-107, 2023 (SCI-Expanded)
- XXIII. **Fully demountable column base connections for reinforced CDW-based geopolymer concrete members**
AKTEPE R., AKDUMAN Ş., ALDEMİR A., Ozcelikci E., YILDIRIM G., ŞAHMARAN M., Ashour A.
Engineering Structures, vol.290, 2023 (SCI-Expanded)
- XXIV. **Effect of industrial waste-based precursors on the fresh, hardened and environmental performance**

of construction and demolition wastes-based geopolymers

İLCAN H., ŞAHİN O., Unsal Z., Ozcelikci E., KUL A., Çağatay Demiral N., YEMİŞCİ ÖZKAN M., ŞAHMARAN M.
Construction and Building Materials, vol.394, 2023 (SCI-Expanded)

- XXV. **Eco-hybrid cement-based building insulation materials as a circular economy solution to construction and demolition waste**
Özçelikci E., Oskay A., Bayer İ. R., ŞAHMARAN M.
Cement and Concrete Composites, vol.141, 2023 (SCI-Expanded)
- XXVI. **Extensive rheological evaluation of geopolymer mortars incorporating maximum amounts of recycled concrete as precursors and aggregates**
Mahmoodi O., Siad H., Lachemi M., Dadsetan S., ŞAHMARAN M.
Construction and Building Materials, vol.390, 2023 (SCI-Expanded)
- XXVII. **Effect of fire exposure on the bonding behavior of hybrid engineered composite systems**
Baloch W. L., Siad H., Lachemi M., ŞAHMARAN M.
Journal of Building Engineering, vol.71, 2023 (SCI-Expanded)
- XXVIII. **3D printing of circular materials: Comparative environmental analysis of materials and construction techniques**
Khan S. A., Jassim M., Ilcan H., ŞAHİN O., Bayer İ. R., ŞAHMARAN M., Koc M.
Case Studies in Construction Materials, vol.18, 2023 (SCI-Expanded)
- XXIX. **The effects of various operational- and materials-oriented parameters on the carbonation performance of low-quality recycled concrete aggregate**
Dündar B., Tuğluca M., İLCAN H., ŞAHİN O., ŞAHMARAN M.
Journal of Building Engineering, vol.68, 2023 (SCI-Expanded)
- XXX. **A comprehensive study on the compressive strength, durability-related parameters and microstructure of geopolymer mortars based on mixed construction and demolition waste**
Ozcelikci E., KUL A., Gunal M. F., ÖZEL B. F., YILDIRIM G., Ashour A., ŞAHMARAN M.
Journal of Cleaner Production, vol.396, 2023 (SCI-Expanded)
- XXXI. **Effect of high temperatures on hot-bonded SCC/ECC and SCC/UHPC composite systems**
Baloch W. L., Siad H., Lachemi M., ŞAHMARAN M.
Construction and Building Materials, vol.369, 2023 (SCI-Expanded)
- XXXII. **Construction and demolition waste-based self-healing geopolymer composites for the built environment: An environmental profile assessment and optimization**
Mir N., Khan S. A., KUL A., ŞAHİN O., Ozcelikci E., ŞAHMARAN M., Koc M.
Construction and Building Materials, vol.369, 2023 (SCI-Expanded)
- XXXIII. **Characterization of chemically treated waste wood fiber and its potential application in cementitious composites**
Tuğluca M., ÖZDOĞRU E., İLCAN H., Özçelikci E., ULUGÖL H., ŞAHMARAN M.
Cement and Concrete Composites, vol.137, 2023 (SCI-Expanded)
- XXXIV. **Rheological property and extrudability performance assessment of construction and demolition waste-based geopolymer mortars with varied testing protocols**
İLCAN H., ŞAHİN O., KUL A., Ozcelikci E., ŞAHMARAN M.
Cement and Concrete Composites, vol.136, 2023 (SCI-Expanded)
- XXXV. **Demountable reinforced concrete slabs using dry connections**
Almahmood H., Ashour A., Figueira D., Yildirim G., ALDEMİR A., ŞAHMARAN M.
Proceedings of the Institution of Civil Engineers: Structures and Buildings, 2023 (SCI-Expanded)
- XXXVI. **Rocket blast resistance of the fully demountable high performance FRC tongue and groove blocks**
Bozkurt H. B., Genç O. K., ANIL Ö., ŞAHMARAN M., Bayer İ. R.
Structural Concrete, 2023 (SCI-Expanded)
- XXXVII. **Multi-functional conductive cementitious composites including phase change materials (PCM) with snow/ice melting capability**
Acıkök F., Belendir U., Ardoğa M. K., ŞAHMARAN M.
International Journal of Pavement Engineering, vol.24, no.1, 2023 (SCI-Expanded)

- XXXVIII. **Mechanical anisotropy evaluation and bonding properties of 3D-printable construction and demolition waste-based geopolymer mortars**
Demiral N. C., Ekinici M. O., ŞAHİN O., İLCAN H., KUL A., YILDIRIM G., ŞAHMARAN M.
CEMENT & CONCRETE COMPOSITES, vol.134, 2022 (SCI-Expanded)
- XXXIX. **Development of ambient cured geopolymer binders based on brick waste and processed glass waste**
Dadsetan S., Siad H., Lachemi M., Mahmoodi O., ŞAHMARAN M.
ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH, vol.29, no.53, pp.80755-80774, 2022 (SCI-Expanded)
- XL. **Energy-environmental performance assessment and cleaner energy solutions for a novel Construction and Demolition Waste-based geopolymer binder production process**
Khan S. A., KUL A., ŞAHİN O., ŞAHMARAN M., Al-Ghamdi S. G., Koç M.
Energy Reports, vol.8, pp.14464-14475, 2022 (SCI-Expanded)
- XLI. **Sodium glass liquid from glass waste as a user-friendly hardener in structural geopolymer systems**
Dadsetan S., Siad H., Lachemi M., Mahmoodi O., ŞAHMARAN M.
CEMENT & CONCRETE COMPOSITES, vol.130, 2022 (SCI-Expanded)
- XLII. **Properties of geopolymers sourced from construction and demolition waste: A review**
Alhawati M., Ashour A., Yildirim G., ALDEMİR A., ŞAHMARAN M.
JOURNAL OF BUILDING ENGINEERING, vol.50, 2022 (SCI-Expanded)
- XLIII. **Rheological properties and compressive strength of construction and demolition waste-based geopolymer mortars for 3D-Printing**
İLCAN H., Sahin O., KUL A., YILDIRIM G., ŞAHMARAN M.
CONSTRUCTION AND BUILDING MATERIALS, vol.328, 2022 (SCI-Expanded)
- XLIV. **Shear behaviour of reinforced construction and demolition waste-based geopolymer concrete beams**
ALDEMİR A., AKDUMAN Ş., KOCAER Ö., AKTEPE R., ŞAHMARAN M., YILDIRIM G., Almahmood H., Ashour A.
JOURNAL OF BUILDING ENGINEERING, vol.47, 2022 (SCI-Expanded)
- XLV. **Optimized application of ternary brick, ceramic and concrete wastes in sustainable high strength geopolymers**
Mahmoodi O., Siad H., Lachemi M., Dadsetan S., ŞAHMARAN M.
JOURNAL OF CLEANER PRODUCTION, vol.338, 2022 (SCI-Expanded)
- XLVI. **Optimization and characterization of geopolymer binders from ceramic waste, glass waste and sodium glass liquid**
Dadsetan S., Siad H., Lachemi M., Mahmoodi O., ŞAHMARAN M.
JOURNAL OF CLEANER PRODUCTION, vol.342, 2022 (SCI-Expanded)
- XLVII. **Role of inclusion size distribution of titanium dioxide on the nitrogen oxides reduction capability and microstructural characteristics of cementitious systems**
Bahsi E., Sahin O., Ilcan H., UZAL B., Gunal M. F., YILDIRIM G., ŞAHMARAN M.
CONSTRUCTION AND BUILDING MATERIALS, vol.318, 2022 (SCI-Expanded)
- XLVIII. **The effect of chemical- versus microbial-induced calcium carbonate mineralization on the enhancement of fine recycled concrete aggregate: A comparative study**
Sönmez M., Ilcan H., Dundar B., Yildirim G., Erşan Y. Ç., Şahmaran M.
JOURNAL OF BUILDING ENGINEERING, vol.44, 2022 (SCI-Expanded)
- XLIX. **A review on the durability of concrete-to-concrete bond in recent rehabilitated structures**
Baloch W. L., Siad H., Lachemi M., ŞAHMARAN M.
JOURNAL OF BUILDING ENGINEERING, vol.44, 2021 (SCI-Expanded)
- L. **Demountable connections of reinforced concrete structures: Review and future developments**
Figueira D., Ashour A., YILDIRIM G., ALDEMİR A., ŞAHMARAN M.
STRUCTURES, vol.34, pp.3028-3039, 2021 (SCI-Expanded)
- LI. **Development of optimized binary ceramic tile and concrete wastes geopolymer binders for in-situ applications**
Mahmoodi O., Siad H., Lachemi M., Dadsetan S., ŞAHMARAN M.
JOURNAL OF BUILDING ENGINEERING, vol.43, 2021 (SCI-Expanded)
- LII. **Investigation of mechanical properties of high-performance hybrid fiber concretes adding**

nanomaterials using with coarse aggregate

Oksuzer N., ANIL Ö., ALDEMİR A., ŞAHMARAN M.

STRUCTURES, vol.33, pp.2893-2902, 2021 (SCI-Expanded)

- LIII. **Self-monitoring of flexural fatigue damage in large-scale steel-reinforced cementitious composite beams**
Çelik D. N., YILDIRIM G., Al-Dahawi A., ULUGÖL H., Han B., ŞAHMARAN M.
Cement and Concrete Composites, vol.123, 2021 (SCI-Expanded)
- LIV. **Understanding the effect of nano/micro-structures on anti-impact of nano-boron nitride filled cementitious composites**
Wang J., Dong S., Li Z., ŞAHMARAN M., Ding S., Han B.
CONSTRUCTION AND BUILDING MATERIALS, vol.298, 2021 (SCI-Expanded)
- LV. **Experimental investigations on the structural behaviour of reinforced geopolymer beams produced from recycled construction materials**
AKDUMAN Ş., Kocaer O., ALDEMİR A., ŞAHMARAN M., YILDIRIM G., Almahmood H., Ashour A.
JOURNAL OF BUILDING ENGINEERING, vol.41, 2021 (SCI-Expanded)
- LVI. **Development and characterization of binary recycled ceramic tile and brick wastes-based geopolymers at ambient and high temperatures**
Mahmoodi O., Siad H., Lachemi M., Dadsetan S., ŞAHMARAN M.
CONSTRUCTION AND BUILDING MATERIALS, vol.301, 2021 (SCI-Expanded)
- LVII. **Construction and demolition waste-based geopolymers suited for use in 3-dimensional additive manufacturing**
Sahin O., Ilcan H., Atesli A. T., KUL A., YILDIRIM G., ŞAHMARAN M.
CEMENT & CONCRETE COMPOSITES, vol.121, 2021 (SCI-Expanded)
- LVIII. **Effects of self-healing on the microstructure, transport, and electrical properties of 100% construction- and demolition-waste-based geopolymer composites**
ULUGÖL H., Gunal M. F., YAMAN İ. Ö., YILDIRIM G., ŞAHMARAN M.
CEMENT & CONCRETE COMPOSITES, vol.121, 2021 (SCI-Expanded)
- LIX. **A case study for probabilistic seismic risk assessment of earthquake-prone old urban centers**
Altındal A., Karimzadeh S., ERBERİK M. A., ASKAN GÜNDOĞAN A., ANIL Ö., KOÇKAR M. K., ŞAHMARAN M.
INTERNATIONAL JOURNAL OF DISASTER RISK REDUCTION, vol.61, 2021 (SCI-Expanded)
- LX. **Synthesis and optimization of binary systems of brick and concrete wastes geopolymers at ambient environment**
Mahmoodi O., Siad H., Lachemi M., ŞAHMARAN M.
CONSTRUCTION AND BUILDING MATERIALS, vol.276, 2021 (SCI-Expanded)
- LXI. **Development of alkali-activated binders from recycled mixed masonry-originated waste**
Yildirim G., KUL A., Ozcelikci E., ŞAHMARAN M., ALDEMİR A., Figueira D., Ashour A.
JOURNAL OF BUILDING ENGINEERING, vol.33, 2021 (SCI-Expanded)
- LXII. **Evaluation of the tridymite formation as a technique for enhancing geopolymer binders based on glass waste**
Dadsetan S., Siad H., Lachemi M., ŞAHMARAN M.
JOURNAL OF CLEANER PRODUCTION, vol.278, 2021 (SCI-Expanded)
- LXIII. **Mechanical and microstructural characterization of geopolymers from assorted construction and demolition waste-based masonry and glass**
ULUGÖL H., KUL A., Yildirim G., ŞAHMARAN M., ALDEMİR A., Figueira D., Ashour A.
JOURNAL OF CLEANER PRODUCTION, vol.280, 2021 (SCI-Expanded)
- LXIV. **Influence of mixing methods on the NO_x reduction capability and electrical properties of photocatalytic cementitious systems**
Sahin O., Bay S., Ilcan H., Yildirim G., ŞAHMARAN M.
CEMENT & CONCRETE COMPOSITES, vol.115, 2021 (SCI-Expanded)
- LXV. **Extensive evaluation on the effect of glass powder on the rheology, strength, and microstructure of metakaolin-based geopolymer binders**

Dadsetan S., Siad H., Lachemi M., ŞAHMARAN M.

CONSTRUCTION AND BUILDING MATERIALS, vol.268, 2021 (SCI-Expanded)

- LXVI. **Effects of Mixture Design Parameters on the Mechanical Behavior of High-Performance Fiber-Reinforced Concretes**
ERDEM T. K., DEMİRHAN S., Yildirim G., Banyhussan Q. S., Sahin O., Balav M. H., ŞAHMARAN M.
JOURNAL OF MATERIALS IN CIVIL ENGINEERING, vol.32, no.12, 2020 (SCI-Expanded)
- LXVII. **Impact behaviour of nanomodified deflection-hardening fibre-reinforced concretes**
DEMİRHAN S., Yildirim G., Banyhussan Q. S., Koca K., ANIL Ö., Erdem R. T., ŞAHMARAN M.
MAGAZINE OF CONCRETE RESEARCH, vol.72, no.17, pp.865-887, 2020 (SCI-Expanded)
- LXVIII. **Rapid screening method for the determination of regional risk distribution of masonry structures**
ALDEMİR A., Guvenir E., ŞAHMARAN M.
STRUCTURAL SAFETY, vol.85, 2020 (SCI-Expanded)
- LXIX. **Rapid screening method for the determination of seismic vulnerability assessment of RC building stocks**
COŞKUN O., ALDEMİR A., ŞAHMARAN M.
BULLETIN OF EARTHQUAKE ENGINEERING, vol.18, no.4, pp.1401-1416, 2020 (SCI-Expanded)
- LXX. **Nano-tailored multi-functional cementitious composites**
Ozturk O., Yildirim G., Keskin U. S., Siad H., ŞAHMARAN M.
COMPOSITES PART B-ENGINEERING, vol.182, 2020 (SCI-Expanded)
- LXXI. **Self-sensing capability of Engineered Cementitious Composites: Effects of aging and loading conditions**
Yildirim G., Ozturk O., Al-Dahawi A., Ulu A. A., ŞAHMARAN M.
CONSTRUCTION AND BUILDING MATERIALS, vol.231, 2020 (SCI-Expanded)
- LXXII. **Construction and demolition waste in geopolymers concrete technology: a review**
Dadsetan S., Siad H., Lachemi M., ŞAHMARAN M.
MAGAZINE OF CONCRETE RESEARCH, vol.71, no.23, pp.1232-1252, 2019 (SCI-Expanded)
- LXXIII. **Effect of Rubber Aggregate and Binary Mineral Admixtures on Long-Term Properties of Structural Engineered Cementitious Composites**
Siad H., Lachemi M., Ismail M. K., Sherir M. A. A., ŞAHMARAN M., Hassan A. A. A.
JOURNAL OF MATERIALS IN CIVIL ENGINEERING, vol.31, no.11, 2019 (SCI-Expanded)
- LXXIV. **Performance of engineered cementitious composites under drop-weight impact: Effect of different mixture parameters**
Yildirim G., Khiavi F. E., ANIL Ö., Sahin O., ŞAHMARAN M., Tugrul Erdem R.
STRUCTURAL CONCRETE, 2019 (SCI-Expanded)
- LXXV. **Impact resistance of deflection-hardening fiber reinforced concretes with different mixture parameters**
Banyhussan Q. S., Yildirim G., ANIL Ö., Erdem R. T., Ashour A., ŞAHMARAN M.
STRUCTURAL CONCRETE, vol.20, no.3, pp.1036-1050, 2019 (SCI-Expanded)
- LXXVI. **Role of Nanosilica on the Early-Age Performance of Natural Pozzolan-Based Blended Cement**
Yildirim G., Dundar B., ALEESSA ALAM B., YAMAN İ. Ö., ŞAHMARAN M.
ACI MATERIALS JOURNAL, vol.115, no.6, pp.969-980, 2018 (SCI-Expanded)
- LXXVII. **Advanced engineered cementitious composites with combined self-sensing and self-healing functionalities**
Siad H., Lachemi M., ŞAHMARAN M., Mesbah H. A., Hossain K. A.
CONSTRUCTION AND BUILDING MATERIALS, vol.176, pp.313-322, 2018 (SCI-Expanded)
- LXXVIII. **Effects of sulphuric acid on mechanical and durability properties of ECC confined by FRP fabrics**
GÜLŞAN M. E., Mohammedameen A., ŞAHMARAN M., Nis A., Alzebaree R., ÇEVİK A.
ADVANCES IN CONCRETE CONSTRUCTION, vol.6, no.2, pp.199-220, 2018 (SCI-Expanded)
- LXXIX. **Piezoresistive behavior of CF- and CNT-based reinforced concrete beams subjected to static flexural loading: Shear failure investigation**
Yildirim G., Sarwary M. H., Al-Dahawi A., ÖZTÜRK O., ANIL Ö., ŞAHMARAN M.

CONSTRUCTION AND BUILDING MATERIALS, vol.168, pp.266-279, 2018 (SCI-Expanded)

LXXX. Self-healing performance of aged cementitious composites

Yildirim G., Khiavi A. H., YEŞİLMEN S., ŞAHMARAN M.

CEMENT & CONCRETE COMPOSITES, vol.87, pp.172-186, 2018 (SCI-Expanded)

LXXXI. Use of recycled glass powder to improve the performance properties of high volume fly ash-engineered cementitious composites

Siad H., Lachemi M., ŞAHMARAN M., Mesbah H. A., Hossain K. M. A.

CONSTRUCTION AND BUILDING MATERIALS, vol.163, pp.53-62, 2018 (SCI-Expanded)

Articles Published in Other Journals

I. The impact of nozzle diameter and printing speed on geopolymer-based 3D-Printed concrete structures: Numerical modeling and experimental validation

Khan S. A., İLCAN H., Imran R., Aminipour E., ŞAHİN O., Al Rashid A., ŞAHMARAN M., Koç M.

Results in Engineering, vol.21, 2024 (ESCI)

II. Tests of demountable reinforced concrete slabs

Almahmood H., Ashour A., Figueira D., Yıldırım G., Aldemir A., Sahmaran M.

Structures, vol.46, pp.1084-1104, 2022 (Scopus)

III. Life cycle assessment of construction and demolition waste-based geopolymers suited for use in 3-dimensional additive manufacturing

Mir N., Khan S. A., KUL A., ŞAHİN O., ŞAHMARAN M., Koc M.

Cleaner Engineering and Technology, vol.10, 2022 (Scopus)

IV. Life cycle assessment of binary recycled ceramic tile and recycled brick waste-based geopolymers

Mir N., Khan S. A., KUL A., ŞAHİN O., Lachemi M., ŞAHMARAN M., Koç M.

Cleaner Materials, vol.5, 2022 (Scopus)

V. Conceptual design of autonomous rapid printing system for emergency and humanitarian needs

Koç M., Khan S. A., İLCAN H., ŞAHMARAN M.

Materials Today: Proceedings, vol.70, pp.1-5, 2022 (Scopus)

VI. Construction and demolition waste-based geopolymers for built-environment: An environmental sustainability assessment

Mir N., Khan S., KUL A., ŞAHİN O., ŞAHMARAN M., Koç M.

Materials Today: Proceedings, vol.70, pp.358-362, 2022 (Scopus)

VII. FIELD APPLICATIONS FOR RISK ASSESSMENT METHODS OF URBAN TRANSFORMATION LAW NO. 6306: A CASE STUDY OF BEYOĞLU

ANIL Ö., ŞAHMARAN M., KOÇKAR M. K.

Disaster Science and Engineering, vol.4, no.2, pp.54-64, 2018 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

I. Development of Self-Energy Storing Engineered Cementitious Composites

Malantic R., Siad H., Lachemi M., ŞAHMARAN M.

Proceedings of the Annual Conference of the Canadian Society of Civil Engineering 2022, Whistler, Canada, 25 - 28 May 2022, vol.367, pp.907-922

II. Rheological Properties of Geopolymer Mortars Incorporating Construction and Demolition Wastes-Based Binders and Aggregates

Mahmoodi O., Siad H., Lachemi M., Dadsetan S., ŞAHMARAN M.

Proceedings of the Annual Conference of the Canadian Society of Civil Engineering 2022, Whistler, Canada, 25 - 28 May 2022, vol.359, pp.799-816

III. Demountable Reinforced Concrete Structures - A Way Forward to Minimize Energy and Waste in

Construction Industry

Ashour A., Figueira D., Almahmood H., Yildirim G., ALDEMİR A., ŞAHMARAN M.

International Symposium of the International Federation for Structural Concrete, fib Symposium 2023, İstanbul, Turkey, 5 - 07 June 2023, vol.349 LNCE, pp.72-80

- IV. **An Investigation into Durability Aspects of Geopolymer Concretes Based Fully on Construction and Demolition Waste**
Ozcelikci E., YILDIRIM G., Alhawati M., Ashour A., ŞAHMARAN M.
International Symposium of the International Federation for Structural Concrete, fib Symposium 2023, İstanbul, Turkey, 5 - 07 June 2023, vol.349 LNCE, pp.377-386
- V. **Mechanical Performance of the Composite Concrete System Under Fire Exposure**
Baloch W. L., Siad H., Lachemi M., ŞAHMARAN M.
Annual Conference of the Canadian Society of Civil Engineering, CSCE 2021, Virtual, Online, 26 - 29 May 2021, vol.248, pp.121-133
- VI. **Design of Sustainable High-Ductile Engineered Cementitious Composites with Limestone Calcined Clay Cement**
Zokaei S., Siad H., Lachemi M., Mahmoodi O., ŞAHMARAN M.
International Symposium of the International Federation for Structural Concrete, fib Symposium 2023, İstanbul, Turkey, 5 - 07 June 2023, vol.349 LNCE, pp.878-887
- VII. **Effects of Chemical Parameters on the Fresh State Properties of CDW-Based Geopolymer Systems**
Mahmoodi O., Siad H., Lachemi M., ŞAHMARAN M.
Annual Conference of the Canadian Society of Civil Engineering, CSCE 2021, Virtual, Online, 26 - 29 May 2021, vol.248, pp.107-120
- VIII. **Construction and demolition waste-based geopolymers for 3- dimensional additive manufacturing in the built environment: An Environmental sustainability assessment**
Mir N., Khan S. A., KUL A., ŞAHİN O., ŞAHMARAN M., KOÇ M.
International Conference of Additive Manufacturing for a Better World, Singapore, 23 August 2022
- IX. **Life Cycle Assessment of construction and demolition waste-based geopolymers suited for use in 3-dimensional additive manufacturing**
Mir N., Khan S., Al-Ghamdi S., KOÇ M., ŞAHİN O., ŞAHMARAN M., KUL A.
INTERNATIONAL CONFERENCE ON SUSTAINABLE ENERGY-WATER-ENVIRONMENT NEXUS IN DESERT CLIMATE 2021, Qatar, 22 - 25 November 2021
- X. **The buildability performance of construction demolition waste-based geopolymeric binder**
ŞAHİN O., KUL A., YILDIRIM G., ŞAHMARAN M.
International Conference on Cement - Based Materials Tailored for a Sustainable Future, İstanbul, Turkey, 27 May 2021, vol.1, pp.376-388
- XI. **Determination of Self-Healing Performance of Cementitious Composites Under Elevated CO₂ Concentration by Resonant Frequency and Crack Opening Measurements**
KESKİN S. B., Ozlem K. K., Yildirim G., ŞAHMARAN M., ANIL Ö.
3rd International Sustainable Buildings Symposium (ISBS), U ARAB EMIRATES, 15 - 17 March 2017, vol.7, pp.592-602
- XII. **Self-Sensing Behavior Under Monotonic and Cyclic Loadings of ECC Containing Electrically Conductive Carbon-Based Materials**
ŞAHMARAN M., Al-Dahawi A., Farzaneh V., Ocal O., Yildirim G.
3rd International Sustainable Buildings Symposium (ISBS), U ARAB EMIRATES, 15 - 17 March 2017, vol.7, pp.566-576
- XIII. **6306 Sayılı Kentsel Dönüşüm Yasası Risk Değerlendirme Tekniklerinin Saha Uygulaması: Beyoğlu Örneği**
ANIL Ö., ŞAHMARAN M., KOÇKAR M. K.
4.UDMSK, 4. Uluslararası Deprem Mühendisliği ve Sismoloji Konferansı, 11 - 13 October 2017

Supported Projects

ŞAHMARAN M., ALDEMİR A., Project Supported by Higher Education Institutions, Sürdürülebilir Kalkınma için Nano Malzemelerle İyileştirilmiş Ekonomik Şekil Değiştirme Sertleşmesi Davranışı Sergileyen Çimento Esaslı Kompozitler, 2018 - 2020

ŞAHMARAN M., TUBITAK Project, Geçek Zamanlı Yapısal/Malzeme Sağlık İzleme Uygulamaları için Çok Fonksiyonlu Çimento Bağlayıcı Kompozitler, 2014 - 2017

ŞAHMARAN M., TUBITAK Project, Kendiliğinden İyileşme Kabiliyetine Sahip Yeni Nesil Akıllı Çimento Bağlayıcı Kompozitler, 2013 - 2016

ŞAHMARAN M., TUBITAK Project, Beton Yapıların Hızlı Onarımı için Yüksek Performanslı Lif Donatılı Çimento Bağlayıcı Kompozitler, 2012 - 2013

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