

Assoc. Prof. Orhan CANPOLAT

Personal Information

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Post Address: Yıldız Teknik Üniversitesi İnşaat Fakültesi İnşaat Mühendisliği Bölümü Davutpaşa Kampüsü 34210 Esenler-İstanbul

Education Information

Post Doctorate, University Of Wisconsin-Milwaukee, Civil & Environmental Engineering, United States Of America 2003 - 2010

Doctorate, Sakarya Üniversitesi, Fen Bilimleri Enstitüsü, İnşaat Mühendisliği, Turkey 1996 - 2002

Post Graduate, Celal Bayar Üniversitesi, Fen Bilimleri Enstitüsü, İnşaat Mühendisliği, Turkey 1994 - 1996

Under Graduate, Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, İnşaat Mühendisliği, Turkey 1989 - 1994

Foreign Languages

English, C1 Advanced

Certificates, Courses and Trainings

Education Management and Planning, DERGİPARK ULAKBİM Dergi Sistemleri (UDS) Eğitim Seminerleri, TÜBİTAK/ULAKBİM, 2018

Research Areas

Civil Engineering, Structure, Building materials, Materials in Civil Engineering, Concrete Technology, Building Components and Materials, Composite materials, Engineering and Technology

Academic Titles / Tasks

Associate Professor, Yıldız Teknik Üniversitesi, Faculty of Construction, İnşaat Mühendisliği, 2015 - Continues

Assistant Professor, Yıldız Teknik Üniversitesi, Faculty of Construction, İnşaat Mühendisliği, 2011 - 2015

Research Assistant PhD, University Of Wisconsin-Milwaukee, Civil & Environmental Engineering, Uwm Center For By-Products Utilization, 2003 - 2010

Research Assistant, Manisa Celal Bayar University, Faculty Of Engineering, Department Of Civil Engineering, 1994 - 2006

Professional Experience

Uygulama ve Araştırma Merkezi Yönetim Kurulu Üyesi, Yıldız Technical University, Rectorate, Rectorate, 2017 - Continues

Mevlana Exchange Program Coordinator, Yıldız Teknik Üniversitesi, İnşaat Mühendisliği Bölümü, 2013 - Continues

Mevlana Exchange Program Coordinator, Yıldız Teknik Üniversitesi, Eğitim Öğretim Rektör Yardımcılığı, 2017 - 2017

Courses

Malzeme Bilimi, Under Graduate, 2017 - 2018
Sürdürülebilir Yapı Teknolojileri, Doctorate, 2017 - 2018
Yapı Malzemeleri, Under Graduate, 2017 - 2018
Sürdürülebilir Yapı Malzemeleri, Under Graduate, 2017 - 2018
Malzeme Bilimi ve Mühendisliği, Under Graduate, 2014 - 2015

Advising Theses

Canpolat O., Investigation of The Adhesive Properties of Geopolymer Concrete Produced By Using Recycling Aggregates, Doctorate, I.ALI(Student), Continues
CANPOLAT O., Kırmızı Çamur ve Metakaolin Tabanlı Geopolimer Harçların Mekanik ve Durabilite Özelliklerinin İncelenmesi, Doctorate, Q.CHAKKOR(Student), Continues
CANPOLAT O., Farklı Tür Mineral Katkıların Uçucu Kül Tabanlı Geopolimer Harçların Mekanik ve Durabilite Özelliklerine Etkisi, Doctorate, Y.Tammam(Student), Continues
Canpolat O., Mechanical Properties and Structural Analysis of Fly Ash Based Geopolymer Concrete with Fiber Additive, Post Graduate, A.MEKONNEN(Student), Continues
Canpolat O., Performance of Different Aggregates within Fly Ash Based Geopolymer Concrete: Structural Analysis and Experimental Investigation, Post Graduate, A.MOHAMED(Student), Continues
Yılmaz K., Canpolat O., Sentetik liflerle güçlendirilmiş bor atığı katkılı metakaolin tabanlı geopolimer kompozitlerin yüksek sıcaklık davranışı ve mekanik özellikleri, Doctorate, A.ÇELİK(Student), 2019
Canpolat O., Mineral Katkılar İçeren Beton Yol Karışımlarının Mekanik ve Durabilite Özelliklerinin İncelenmesi, Post Graduate, F.ACİKÖK(Student), 2019
Canpolat O., Kolemanit Atığı ve Silis Dumanı Katkılı Metakaolin Tabanlı Geopolimer Harcın Mekanik ve Durabilite Özelliklerinin İncelenmesi, Doctorate, Y.AYGÖRMEZ(Student), 2018
Canpolat O., Investigation of Metakaolin-Based Geopolymers Mortar Production and Application in Construction, Post Graduate, N.ALİ(Student), 2018
Canpolat O., Investigation of waste products of boron and metakaolin utilizes in portland cement mortar, Post Graduate, M.MUSHUROV(Student), 2018
Canpolat O., Farklı Agregalara Sahip Lifsiz ve Çelik Fiber Takviyeli Harçların Aşınma Direnci ve Mukavemet Özellikleri, Post Graduate, M.KARAGÖZ(Student), 2018
Canpolat O., Engineering properties and microstructural analysis of a new developed geopolymer mortar, Doctorate, M.MOHAMMAD(Student), 2018

Designed Lessons

Canpolat O., Sustainable Construction Technologies, Doctorate, 2012 - 2013
Canpolat O., Sustainable Construction Materials, Under Graduate, 2011 - 2012

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- **Assessment of geopolymer composites durability at one year age**
AYGÖRMEZ Y., CANPOLAT O., Al-mashhadani M. M.
Journal of Building Engineering, vol.32, no.101453, 2020 (Journal Indexed in SCI Expanded)
- **Evaluation of the 12–24 mm basalt fibers and boron waste on reinforced metakaolin-based geopolymer**
Ali N., Canpolat O., Aygörmez Y., Al-Mashhadani M. M.
Construction and Building Materials, vol.251, 2020 (Journal Indexed in SCI Expanded)
- **Elevated temperature, freezing-thawing and wetting-drying effects on polypropylene fiber reinforced metakaolin based geopolymer composites**
Aygörmez Y., Canpolat O., Al-Mashhadani M. M. , Uysal M.
CONSTRUCTION AND BUILDING MATERIALS, vol.235, 2020 (Journal Indexed in SCI)
- **Influence of wetting-drying curing system on the performance of fiber reinforced metakaolin-based**

geopolymer composites

Arslan A. A. , Uysal M., Yılmaz A. O. , Al-Mashhadani M. M. , Canpolat O., Sahin F., Aygörmez Y.
CONSTRUCTION AND BUILDING MATERIALS, vol.225, pp.909-926, 2019 (Journal Indexed in SCI)

- **High-temperature behavior and mechanical characteristics of boron waste additive metakaolin based geopolymer composites reinforced with synthetic fibers**

Celik A., Yılmaz K., Canpolat O., Al-Mashhadani M. M. , Aygörmez Y., Uysal M.
CONSTRUCTION AND BUILDING MATERIALS, vol.187, pp.1190-1203, 2018 (Journal Indexed in SCI)

- **Effect of using colemanite waste and silica fume as partial replacement on the performance of metakaolin-based geopolymer mortars**

Uysal M., Al-Mashhadani M. M. , Aygörmez Y., Canpolat O.
CONSTRUCTION AND BUILDING MATERIALS, vol.176, pp.271-282, 2018 (Journal Indexed in SCI)

- **Mechanical and microstructural characterization of fiber reinforced fly ash based geopolymer composites**

Al-Mashhadani M. M. , Canpolat O., Aygörmez Y., Uysal M., Erdem S.
CONSTRUCTION AND BUILDING MATERIALS, vol.167, pp.505-513, 2018 (Journal Indexed in SCI)

- **Effect of curing: conditions on strength and durability of high-performance concrete**

Canpolat F., Naik T. R.
SCIENTIA IRANICA, vol.24, pp.576-583, 2017 (Journal Indexed in SCI)

- **Special issue on sustainable construction materials**

Ganjian E., Canpolat F., Claisse P., Naik T.
Journal of Materials in Civil Engineering, vol.27, 2015 (Journal Indexed in SCI)

- **Energy savings and environmental benefits of fly ash utilization as partial cement replacement in concrete**

Canpolat F.
Energy Education Science and Technology Part A: Energy Science and Research, vol.30, pp.51-60, 2012 (Journal Indexed in SCI Expanded)

- **Effects of Fly Ash and Foundry Sand on Performance of Architectural Precast Concrete**

Naik T. R. , Kraus R. N. , Ramme B. W. , Canpolat F.
JOURNAL OF MATERIALS IN CIVIL ENGINEERING, vol.24, pp.851-859, 2012 (Journal Indexed in SCI)

- **Development of high-strength, economical self-consolidating concrete**

Naik T. R. , Kumar R., Ramme B. W. , Canpolat F.
CONSTRUCTION AND BUILDING MATERIALS, vol.30, pp.463-469, 2012 (Journal Indexed in SCI)

- **Special section on sustainable construction materials**

Naik T. R. , Ganjian E., Canpolat F., Claisse P.
Journal of Materials in Civil Engineering, vol.23, pp.729, 2011 (Journal Indexed in SCI)

- **A reply to the discussion by H. Un of the paper "Use of zeolite, coal bottom ash and fly ash as replacement materials in cement production" [Cem. Concr. Res. 34 (5) (2004) 731-735]**

Canpolat F., Yurdusev M. A. , Yılmaz K., Köse M. M. , Sumer M.
CEMENT AND CONCRETE RESEARCH, vol.35, pp.1022-1023, 2005 (Journal Indexed in SCI)

- **Use of zeolite, coal bottom ash and fly ash as replacement materials in cement production**

Canpolat F., Yılmaz K., Kose M., Sumer M., Yurdusev M.
Cement and Concrete Research, vol.34, pp.731-735, 2004 (Journal Indexed in SCI Expanded)

Articles Published in Other Journals

- **Effect of Fly Ash and Ground Granulated Blast Furnace Slag on The Strength of Concrete Pavement**

ACIKÖK F., CANPOLAT O., UYSAL M., AYGÖRMEZ Y., ŞAHİN F.
Journal of Sustainable Construction Materials and Technologies, vol.3, pp.278-285, 2018 (Refereed Journals of Other Institutions)

- **Abrasion Resistance and Strength Properties of Non-Fibrous and Steel Fiber Reinforced Mortars With Different Aggregates**

Almashhadani M. M. , Canpolat O., Karagöz M., Aygörmez Y., Uysal M.
Journal of Sustainable Construction Materials and Technologies, vol.3, pp.221-229, 2018 (Refereed Journals of Other Institutions)

Other Institutions)

- **Investigation of Waste Products of Boron and Metakaolin Utilizes**

Mushurov M., Canpolat O., Uysal M., Almashhadani M. M. , Aygörmez Y.

Journal of Sustainable Construction Materials and Technologies, vol.3, pp.212-220, 2018 (Refereed Journals of Other Institutions)

- **Effect of Using Colemanite and Basalt Fiber on the Mechanical Properties of Metakaolin-Based Geopolymer Mortars**

Nawar A., Canpolat O., Almashhadani M. M. , Aygörmez Y., Uysal M.

Journal of Sustainable Construction Materials and Technologies, vol.3, pp.235-241, 2018 (Refereed Journals of Other Institutions)

- **Etkin Vibrasyonun Beton Kalitesinin Olusumundaki Önemi**

Yılmaz K., Canpolat F.

Osmangazi Üniversitesi Mühendislik-Mimarlık Fakültesi Dergisi, vol.16, pp.11-24, 2002 (Other Refereed National Journals)

- **Doğal zeolit ve uçucu kül katkılı ve katkısız harçların sülfat dayanıklılığı**

YILMAZ K., CANPOLAT F.

Osmangazi Üniversitesi Mühendislik-Mimarlık Fakültesi Dergisi, vol.15, pp.1-10, 2002 (Other Refereed National Journals)

Book & Book Chapters

- **Special Technical Proceedings: Second International Conference on Sustainable Construction Materials and Technologies**

Ganjian E., CANPOLAT F., Naik T.

Coventry University, 2010

- **Proceedings of Honoree Sessions: Second International Conference on Sustainable Construction Materials and Technologies**

CANPOLAT F., Claisse P., Ganjian E.

Coventry University Naik, T. R., Canpolat, F., Claisse, P., Ganjian, E.,, 2010

Refereed Congress / Symposium Publications in Proceedings

- **Uçucu Kül ve Öğütülmüş Yüksek Fırın Cürufunun Beton Yol Karışımlarının Basınç Dayanımı ve Durabilitesine Olan Etkilerinin Araştırılması**

ACIKÖK F., CANPOLAT O., UYSAL M., AYGÖRMEZ Y.

1. Beton Yollar Kongresi ve Sergisi, Ankara, Turkey, 13 - 14 Kasım 2019, pp.275-285

- **Fly Ash Based Geopolymer Composites Partially Replaced With Silica Fume: An Experimental Investigation**

Al-Mashhadani M. O. M. , Canpolat O., Aygörmez Y., Uysal M., Şahin F.

Fifth International Conference on Sustainable Construction Materials and Technologies, London, United Kingdom, 14 - 17 Temmuz 2019, pp.74-82

- **Using Different Types Of Aggregates Including Waste Concrete In The Production Of Geopolymer Mortars**

Canpolat O., Şahin F., Uysal M., Al-Mashhadani M. O. M. , Aygörmez Y.

Fifth International Conference on Sustainable Construction Materials and Technologies, London, United Kingdom, 14 - 17 Temmuz 2019, pp.66-73

- **Sulfate Resistance Of Sustainable Geopolymer Mortars**

Aygörmez Y., Canpolat O., Al-Mashhadani M. O. M. , Uysal M., Şahin F.

Fifth International Conference on Sustainable Construction Materials and Technologies, London, United Kingdom, 14 - 17 Temmuz 2019, pp.56-65

- **Experimental Investigation of Engineering Properties of Metakaolin Based Geopolymer Mortars with Different Filling Materials**

Kabirova A., Uysal M., Canpolat O., Şahin F., Aygörmez Y., Al-Mashhadani M., Pul S.

4th Eurasian Conference on Civil and Environmental Engineering (ECOCEE), İstanbul, Turkey, 17 - 18 Haziran 2019, pp.918-929

- **The investigation of mechanical and durability properties of red mud-metakaolin based geopolymers mortars with different filling materials**

Chakkor O., Tammam Y., Altan M. F. , Uysal M., Canpolat O., Aygörmez Y., Al-Mashhadani M.

4th Eurasian Conference on Civil and Environmental Engineering (ECOCEE), İstanbul, Turkey, 17 - 18 Haziran 2019, pp.875

- **Mechanical and Durability Properties of Fly Ash Based Geopolymers Mortars with Different Filling Materials**

Tammam Y., Chakkor O., Uysal M., Canpolat O., Aygörmez Y., Al-Mashhadani M., Sahin F.

4th Eurasian Conference on Civil and Environmental Engineering (ECOCEE), İstanbul, Turkey, 17 - 18 Haziran 2019, pp.866-874

- **Compressive and flexural strength behaviors of metakaolin based geopolymer mortars manufactured by different procedures**

AYGÖRMEZ Y., CANPOLAT O., Al-Mashhadani M., UYSAL M.

4th International Conference on Green Design and Manufacture 2018, IConGDM 2018, Ho Chi Minh, Vietnam, 29 - 30 Nisan 2018, vol.2030

- **Experimental notes on the factors affecting the strength behavior of fly ash based geopolymer composites**

CANPOLAT O., AYGÖRMEZ Y., Al-mashhadani M. M. , Uysal M.

4th International Conference on Green Design and Manufacture 2018, IConGDM 2018, Ho Chi Minh, Vietnam, 29 - 30 Nisan 2018, vol.2030

- **Sustainability And High Performance Of Concrete-A Review**

NAIK T., CANPOLAT F., MORICONI G.

First International Workshop on Durability and Sustainability of Concrete Structures, Bologna, Italy, 1 - 03 Ekim 2015, pp.43

- **Development and demonstration of high-carbon CCPs and FGD by-products in permeable roadway base construction**

Canpolat F., Kraus R. N.

Third International Conference on Sustainable Construction Materials and Technologies was held on 19-21 August 2013 at the Kyoto Research Park, Kyoto, Japan with the University of Kyoto, Kyoto, Japan, 18 Ağustos 2013, pp.1-10

- **CO2 sequestration in foamed controlled low strength materials**

NAİK T. R. , KRAUS R. K. , CANPOLAT F.

Third International Conference on Sustainable Construction Materials and Technologies-SCMT3., Kyoto, Japan, 18 Ağustos 2013

Supported Projects

CANPOLAT O., Project Supported by Other Official Institutions, Geopolimer Betonların Mekanik Özelliklerinin Doğrusal Olmayan Davranışa Etkileri, 2019 - Continues

CANPOLAT O., Mashhadani M., ARSLAN A. A. , UYSAL M., AYGÖRMEZ Y., KABİROVA A., Project Supported by Higher Education Institutions, BOR ATIK ÜRÜNLERİNİN GEOPOLİMER BETON ÜRETİMİNDE KULLANILABİLİRLİĞİNİN ARAŞTIRILMASI, 2017 - 2019

CANPOLAT O., AYGÖRMEZ Y., Project Supported by Higher Education Institutions, KOLEMANİT ATIĞI VE SİLİS DUMANI KATKILI METAKAOLİN TABANLI GEOPOLİMER HARCIN MEKANİK VE DURABİLİTE ÖZELLİKLERİNİN İNCELENMESİ, 2016 - 2019

CANPOLAT O., KARAGÖZ M., Project Supported by Higher Education Institutions, FARKLI AGREGALARA SAHİP LİFSİZ VE ÇELİK FİBER TAKVİYELİ HARÇLARIN AŞINMA DİRENCİ VE MUKAVEMET ÖZELLİKLERİ, 2016 - 2018

Canpolat O., Erasmus Project, Erasmus Teaching and Staff Training Mobility, 2013 - 2013

CANPOLAT O., Other Supported Projects, Use of FGD Products in Concrete, 2004 - 2007

CANPOLAT O., Other Supported Projects, CO2 Sequestration in Foamed Controlled Low Strength Materials, 2005 -

2006

CANPOLAT O., Other Supported Projects, Foamed Slurry Mixture Production and Testing, 2005 - 2006

CANPOLAT O., Other Supported Projects, Use of Fly Ash and Limestone Quarry By Products for Developing Economical Self Compacting Concrete, 2003 - 2006

CANPOLAT O., Other Supported Projects, Reducing Shrinkage Cracking of Structural Concrete Through the Use of Admixtures, 2003 - 2005

Activities in Scientific Journals

Journal of Sustainable Construction Materials and Technologies, First Editor, 2016 - Continues

Scientific Refereeing

Çevre Dostu Öngerilmeli Beton Travers ve Uygulamadaki Performansı Performansı-MTENG-2427, SCI Journal, September 2013

Geri dönüşümlü tuğlanın iri agrega olarak betonda kullanımı-MTENG-2384, SCI Journal, September 2013

Beton kurduğunda oluşan çatlaklara agreganın etkileri-M-2013-198.R1, SCI Journal, July 2013

Cam Elyaf ve Hava Sürükleyici Katkı ile Geliştirilmiş Kerpiç, National Scientific Refreed Journal, January 2013

ATIK DÖKÜM KUMUNUN GERİ KAZANIM UYGULAMALARI/SIGMA DERGİSİ/M.No. YTUJENS-2012-186, National Scientific Refreed Journal, March 2012

Determining aggregate reactivity in various alkaline solutions//Proceedings of ICE- Construction Materials/M. No. COMA-D-12-00005, SCI Journal, January 2012

Invited Congress and Symposium Activities

Third International Conference on Sustainable Construction Materials and Technologies (SCMT3), Kyoto, Japan, Session Moderator, Kyoto, Japan, 2013

Third International Conference on Sustainable Construction Materials and Technologies (SCMT3), Japan, Attendee, Kyoto, Japan, 2013

Second International Conference on Sustainable Construction Materials and Technologies (SCMT2), Italy, Attendee, Ancona, Italy, 2010

International Conference: Sustainable construction materials and 4 technologies, England, Attendee, Coventry, United Kingdom, 2007

Workshop on Recycling Opportunities for Fly Ash and other Coal Combustion Products in Concrete and Construction Materials, Indianapolis, IN, Center for By-Products Utilization, University of Wisconsin–Milwaukee, U.S.A., Attendee, Indiana, United States Of America, 2005

High-Performance Concrete and Concrete for Marine Environment” in honor of Dr. George Hoff at the Eighth CANMET/ACI International Conference on Fly Ash, Silica Fume, Slag, and Natural Pozzolans in Concrete, Las Vegas, USA, Attendee, Nevada, United States Of America, 2004

Recycling Opportunities for Fly Ash and other Coal Combustion Products in Concrete and Construction Materials Seminar, Center for By-Products Utilization, University of Wisconsin–Milwaukee, U.S.A., Attendee, Wisconsin, United States Of America, 2004

5th Annual Concrete Pavement Seminar, Marquette University, Transportation Research Center, Wisconsin, USA, Attendee, Wisconsin, United States Of America, 2004

Citations

Total Citations (WOS):221

h-index (WOS):5

Awards

Canpolat O., Aygörmez Y., Uysal M., ULUSLARARASI BİLİMSEL YAYIN TEŞVİK PROGRAMI, Tübitak Ulakbim Cabim, February 2020

Canpolat O., ULUSLARARASI BİLİMSEL YAYIN TEŞVİK PROGRAMI, Tübitak Ulakbim Cabim, September 2018

CANPOLAT O., ULUSLARARASI BİLİMSEL YAYIN TEŞVİK PROGRAMI, TÜBİTAK ULAKBİM CABİM, October 2012

CANPOLAT O., "UWM Author Recognition Certificate", UWM Authors Celebration, UWM Libraries and Graduate School, University of Wisconsin-Milwaukee, USA, September 2011