

Assoc. Prof. TAHİR KEMAL ERDEM

Personal Information

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Education Information

Doctorate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Civil Engineering, Turkey
2000 - 2005

Post Graduate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Civil Engineering,
Turkey 1998 - 2000

Under Graduate, Middle East Technical University, Faculty Of Engineering, Department Of Civil Engineering, Turkey 1994
- 1998

Foreign Languages

English, C2 Mastery

Dissertations

Doctorate, Investigation on the pozzolanic property of perlite for use in producing blended cements, Middle East
Technical University, Graduate School Of Natural And Applied Sciences, Civil Engineering, 2005

Post Graduate, Effects of delay period and maximum temperature period on compressive strength of steam cured
concrete, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Civil Engineering, 2000

Research Areas

Building materials

Academic Titles / Tasks

Associate Professor, Marmara University, Faculty Of Engineering, Civil Engineering, 2021 - Continues

Associate Professor, Izmir Institute Of Technology, Faculty Of Engineering, Department Of Civil Engineering, 2014 - 2021

Assistant Professor, Izmir Institute Of Technology, Faculty Of Engineering, Department Of Civil Engineering, 2008 - 2014

Lecturer PhD, Middle East Technical University, Faculty Of Engineering, Department Of Civil Engineering, 2005 - 2006

Research Assistant, Middle East Technical University, Faculty Of Engineering, Department Of Civil Engineering, 1998 -
2005

Professional Experience

Deputy Head of Department, Izmir Institute Of Technology, Faculty Of Engineering, Department Of Civil Engineering,
2017 - 2020

Courses

Materials of Construction, Under Graduate, 2012 - 2013, 2013 - 2014, 2014 - 2015, 2015 - 2016, 2016 - 2017, 2017 - 2018, 2018 - 2019, 2019 - 2020, 2020 - 2021, 2021 - 2022

Construction Materials Design, Under Graduate, 2015 - 2016, 2016 - 2017, 2017 - 2018, 2018 - 2019, 2019 - 2020, 2021 - 2022

Materials Science, Under Graduate, 2012 - 2013, 2013 - 2014, 2014 - 2015, 2015 - 2016, 2016 - 2017, 2017 - 2018, 2018 - 2019, 2019 - 2020, 2020 - 2021, 2021 - 2022

Concrete Technology, Under Graduate, 2013 - 2014, 2014 - 2015, 2015 - 2016, 2016 - 2017, 2017 - 2018, 2018 - 2019, 2019 - 2020

Materials Science, Under Graduate, 2005 - 2006

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

- I. **Effects of Mixture Design Parameters on the Mechanical Behavior of High-Performance Fiber-Reinforced Concretes**
Erdem T. K. , Demirhan S., Yildirim G., Banyhussan Q. S. , Sahin O., Balav M. H. , ŞAHMARAN M.
JOURNAL OF MATERIALS IN CIVIL ENGINEERING, vol.32, no.12, 2020 (Journal Indexed in SCI)
- II. **Generalized Regression Neural Network and Empirical Models to Predict the Strength of Gypsum Pastes Containing Fly Ash and Blast Furnace Slag**
Erdem T. K. , Cengiz O., Tayfur G.
ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, vol.45, no.5, pp.3671-3681, 2020 (Journal Indexed in SCI)
- III. **A new method to quantify the robustness of self-consolidating grouts**
Erdem T. K. , Bilgic E., Civas Z. K.
CONSTRUCTION AND BUILDING MATERIALS, vol.229, 2019 (Journal Indexed in SCI)
- IV. **Influence of thixotropy determined by different test methods on formwork pressure of self-consolidating concrete**
Tuyan M., Ahari R. S. , Erdem T. K. , Cakir O. A. , RAMYAR K.
CONSTRUCTION AND BUILDING MATERIALS, vol.173, pp.189-200, 2018 (Journal Indexed in SCI)
- V. **Time-dependent rheological characteristics of self-consolidating concrete containing various mineral admixtures**
Ahari R. S. , Erdem T. K. , RAMYAR K.
CONSTRUCTION AND BUILDING MATERIALS, vol.88, pp.134-142, 2015 (Journal Indexed in SCI)
- VI. **Thixotropy and structural breakdown properties of self consolidating concrete containing various supplementary cementitious materials**
Ahari R. S. , Erdem T. K. , RAMYAR K.
CEMENT & CONCRETE COMPOSITES, vol.59, pp.26-37, 2015 (Journal Indexed in SCI)
- VII. **High-early-strength ductile cementitious composites with characteristics of low early-age shrinkage for repair of infrastructures**
Sahmaran M., Al-Emam M., Yildirim G., Simsek Y. E. , Erdem T. K. , Lachemi M.
MATERIALS AND STRUCTURES, vol.48, no.5, pp.1389-1403, 2015 (Journal Indexed in SCI)
- VIII. **Permeability properties of self-consolidating concrete containing various supplementary cementitious materials**
Ahari R. S. , Erdem T. K. , RAMYAR K.
CONSTRUCTION AND BUILDING MATERIALS, vol.79, pp.326-336, 2015 (Journal Indexed in SCI)
- IX. **Effect of various supplementary cementitious materials on rheological properties of self-consolidating concrete**
Ahari R. S. , Erdem T. K. , RAMYAR K.
CONSTRUCTION AND BUILDING MATERIALS, vol.75, pp.89-98, 2015 (Journal Indexed in SCI)
- X. **Strength Prediction of High-Strength Concrete by Fuzzy Logic and Artificial Neural Networks**

- Tayfur G., Erdem T. K., Kirca O.
 JOURNAL OF MATERIALS IN CIVIL ENGINEERING, vol.26, no.11, 2014 (Journal Indexed in SCI)
- XI. **Specimen size effect on the residual properties of engineered cementitious composites subjected to high temperatures**
 Erdem T. K.
 CEMENT & CONCRETE COMPOSITES, vol.45, pp.1-8, 2014 (Journal Indexed in SCI)
- XII. **Effect of Sustained Flexural Loading on Self-Healing of Engineered Cementitious Composites**
 Ozbay E., Sahmaran M., Yucel H. E., Erdem T. K., Lachemi M., Li V. C.
 JOURNAL OF ADVANCED CONCRETE TECHNOLOGY, vol.11, no.5, pp.167-179, 2013 (Journal Indexed in SCI)
- XIII. **Improving the workability and rheological properties of Engineered Cementitious Composites using factorial experimental design**
 Sahmaran M., Bilici Z., Ozbay E., Erdem T. K., Yucel H. E., Lachemi M.
 COMPOSITES PART B-ENGINEERING, vol.45, no.1, pp.356-368, 2013 (Journal Indexed in SCI)
- XIV. **Self-healing capability of cementitious composites incorporating different supplementary cementitious materials**
 Sahmaran M., Yildirim G., Erdem T. K.
 CEMENT & CONCRETE COMPOSITES, vol.35, no.1, pp.89-101, 2013 (Journal Indexed in SCI)
- XV. **Use of spent foundry sand and fly ash for the development of green self-consolidating concrete**
 Sahmaran M., Lachemi M., Erdem T. K., Yucel H. E.
 MATERIALS AND STRUCTURES, vol.44, no.7, pp.1193-1204, 2011 (Journal Indexed in SCI)
- XVI. **Experimental and modeling study of strength of high strength concrete containing binary and ternary binders**
 Erdem T. K., Tayfur G., Kirca O.
 CEMENT WAPNO BETON, vol.16, no.4, pp.224-238, 2011 (Journal Indexed in SCI)
- XVII. **Cement Based Strain Sensor: A Step to Smart Concrete**
 Teomete E., Erdem T. K.
 CEMENT WAPNO BETON, vol.16, no.2, pp.78-92, 2011 (Journal Indexed in SCI)
- XVIII. **Correlating Rheology of Self-Consolidating Concrete to Corresponding Concrete-Equivalent Mortar**
 Erdem T. K., Khayat K. H., Yahia A.
 ACI MATERIALS JOURNAL, vol.106, no.2, pp.154-160, 2009 (Journal Indexed in SCI)
- XIX. **Use of binary and ternary blends in high strength concrete**
 Erdem T. K., Kirca O.
 CONSTRUCTION AND BUILDING MATERIALS, vol.22, no.7, pp.1477-1483, 2008 (Journal Indexed in SCI)
- XX. **Evaluation of natural zeolite as a viscosity-modifying agent for cement-based grouts**
 Sahmaran M., ÖZKAN N., KESKİN S., Uzal B., YAMAN İ. Ö., Erdem T. K.
 CEMENT AND CONCRETE RESEARCH, vol.38, no.7, pp.930-937, 2008 (Journal Indexed in SCI)
- XXI. **Sulfate resistance of plain and blended cements exposed to wetting-drying and heating-cooling environments**
 Sahmaran M., Erdem T. K., YAMAN İ. Ö.
 CONSTRUCTION AND BUILDING MATERIALS, vol.21, no.8, pp.1771-1778, 2007 (Journal Indexed in SCI)
- XXII. **Use of perlite as a pozzolanic addition in producing blended cements**
 Erdem T. K., Meral C., Tokyay M., Erdogan T. Y.
 CEMENT & CONCRETE COMPOSITES, vol.29, no.1, pp.13-21, 2007 (Journal Indexed in SCI)
- XXIII. **Setting time: An important criterion to determine the length of the delay period before steam curing of concrete**
 Erdem T. K., Turanli L., Erdogan T.
 CEMENT AND CONCRETE RESEARCH, vol.33, no.5, pp.741-745, 2003 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **Beton Tasarım Parametrelerinin Kendiliğinden Yerleşen Betonun İşlenebilirlik ve Reoloji Özelliklerine Etkisi Deneysel ve İstatistiksel Yaklaşım**
TUYAN M., ANDIÇ ÇAKIR Ö., ERDEM T. K. , Ahari R. S. , RAMYAR K.
Çimento ve Beton Dünyası, vol.20, pp.32-52, 2015 (National Non-Refereed Journal)
- II. **Buhar Kürünün Erken Yaşlarda Betonun Basınç Dayanımındaki Yeri**
Şahin M., ERDEM T. K. , Kırcı Ö.
Beton-Prefabrikasyon, vol.65, no.66, pp.5-10, 2003 (National Non-Refereed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **Prediction of the Strength of Gypsum Pastes Containing Ground Granulated Blast Furnace Slag**
Cengiz O., ERDEM T. K. , TAYFUR G.
13th International Congress on Advances in Civil Engineering, İzmir, Turkey, 12 - 14 September 2018
- II. **Effects of Fly Ash Aggregate on the Rheology and Compressive Strength of Self-Consolidating Concrete**
Bilgiç E., Karahan S. M. , ERSÖZ H. Y. , ERDEM T. K.
13th International Congress on Advances in Civil Engineering, İzmir, Turkey, 12 - 14 September 2018
- III. **Mechanical Properties of Single and Hybrid Fiber Reinforced Concretes Containing Fly Ash and Blast Furnace Slag**
ERDEM T. K. , Gülen Şahin F., Karimzade N. A. , Yıldırım T., Türkyener C.
13th INTERNATIONAL CONGRESS ON ADVANCES IN CIVIL ENGINEERING, İzmir, Turkey, 12 - 14 September 2018
- IV. **Prediction of the Strength of Gypsum Pastes Containing Fly Ash**
Cengiz O., ERDEM T. K. , TAYFUR G.
13th International Congress on Advances in Civil Engineering, İzmir, Turkey, 12 - 14 September 2018
- V. **A Preliminary Research on the Early Age Properties of Fiber Reinforced Concrete with Lightweight Expanded Clay Aggregate**
ERDEM T. K. , Bilgiç E., Öztürk S.
13th International Congress on Advances in Civil Engineering, İzmir, Turkey, 12 - 14 September 2018
- VI. **Development of a Proper Mix-Design for Impact Loading of Deflection Hardening Hybrid Fiber Reinforced Concrete. , Dresden, germany, 18-20 September 2017, 284-291.**
Alami M. M. , ERDEM T. K. , YARDIMCI M. Y. , AYDIN S.
4th International Conference on Strain-Hardening Cement-Based Composites (SHCC4), Dresden, Germany, 18 - 20 September 2017, pp.284291
- VII. **An Investigation on the Factors Affecting the Range of Superplasticizers for Workable Self-Consolidating Grouts**
ERDEM T. K. , Bilgiç E., Kanpara Z.
2nd International Conference on Civil and Environmental Engineering (Cappadocia-2017), Nevşehir, Turkey, 8 - 10 May 2017, pp.1667-1675
- VIII. **Effect of Steel and PVA Fiber Volume Fraction on the Deflection Hardening Behavior of Hybrid Fiber Reinforced Concrete**
Alami M. M. , ERDEM T. K.
2nd International Conference on Civil and Environmental Engineering (Cappadocia-2017), Nevşehir, Turkey, 8 - 10 May 2017
- IX. **Effects of Thixotropy Formwork Type and Release Agent on Self Consolidating Concrete Surface Defects**
ERSÖZ H. Y. , ERDEM T. K. , TOPAL A., GÜMÜŞTEKİN Ş., Ahari R. S. , TUYAN M.
ACE 2016, 12th International Congress on Advances in Civil Engineering, İstanbul, Turkey, 21 - 23 September 2016, pp.1-8
- X. **Development of a New Test Method to Evaluate Dynamic Stability of Self Consolidating Concrete**
Alami M. M. , ERDEM T. K. , Khayat K. K.

8th International RILEM Symposium on Self-Compacting Concrete Location: Washington, DC, United States Of America, 15 - 18 May 2016, vol.100, pp.113-122

XI. Effect of ground perlite incorporation on the performance of blended cements

Erdem T. K. , Meral C., Tokyay M., Erdogan T. Y.

International Conference on Sustainable Construction Materials and Technologies, Coventry, England, 11 - 13 June 2007, pp.279-285

Citations

Total Citations (WOS):782

h-index (WOS):16