

Özkan Şengül, PhD, Associate Professor

Address: Istanbul Technical University (ITU)
Civil Engineering Faculty
Division of Construction Materials
80626 Maslak-Istanbul, Turkey

Tel : (+90) 212 – 285 37 56

Fax : (+90) 212 – 285 65 87

ACADEMIC EXPERIENCE:

- 2012 – ... : Associate Professor, ITU Civil Engineering Faculty
2008 - 2012 : Assistant Professor, ITU Civil Engineering Faculty
1998 – 2008 : Research and Teaching Assistant, ITU Civil Engineering Faculty
2003 – 2005 : Research Fellow, N.T.N.U. Department of Structural Engineering

PUBLICATIONS:

Book:

1. Tasdemir, M.A., Sengul, O., Samhal, E. and Yerlikaya, M., “*Industrial Concrete Floors*”, Turkish Chamber of Civil Engineers Istanbul Branch, ISBN: 9944-89-117-7, April 2006, 450 p. (in Turkish).

Papers in Refereed Journals:

2. Şengül, Ö., “*Klor İyonu Etkisindeki Betonarme Yapı Elemanlarının Dayanıklılığı İçin Olasılığa Dayalı Tasarım*”, Teknik Dergi, Cilt 22, Sayı 2, Nisan 2011, s. 5409 – 5423.
(* “*Probabilistic Design for the Durability of Reinforced Concrete Structural Elements Exposed to Chloride Containing Environments*” Technical Journal - Digest 2011, Turkish Chamber of Civil Engineers, Vol.22, December 2011, pp. 1461-1475.
3. Yildirim, H. and Sengul, O., “*Modulus of Elasticity of Substandard and Normal Concretes*”, Journal of Construction and Building Materials, Vol. 25, No. 4, April 2011, pp. 1645 – 1652.
4. Sengul, O., Azizi, S., Karaosmanoglu, F. and Tasdemir, M.A, “*Effect of Expanded Perlite on the Mechanical Properties and Thermal Conductivity of Lightweight Concrete*”, Journal of Energy and Buildings, Vol. 43, No. 2-3, February/March 2011, pp. 671 – 676.
5. Yildirim, H., Ilica, T. and Sengul, O., “*Effect of Cement Type on the Resistance of Concrete against Chloride Penetration*” Journal of Construction and Building Materials, Vol. 25, No. 3, March 2011, pp. 1282 – 1288.
6. Sengul, O., and Tasdemir, M.A, “*Compressive Strength and Rapid Chloride Permeability of Concretes with Ground Fly Ash and Slag*” Journal of Materials in Civil Engineering, Vol 21, No. 9, September 2009, pp. 494-501.
7. Sengul, O. and Gjörv, O.E., “*Effect of Embedded Steel on Electrical Resistivity Measurements on Concrete Structures*”, ACI Materials Journal, Vol. 106, No.1 January/February 2009, pp. 11-18.

8. Sengul, O. and Gjorv, O.E., “*Electrical Resistivity Measurements for Quality Control during Concrete Construction*”, ACI Materials Journal, Vol. 105, No.6 November/December 2008, pp. 541-547.
9. Sengul, O., Tasdemir, C., and Tasdemir, M.A., “*Mechanical Properties and Rapid Chloride Permeabilities of Concretes with Ground Fly Ash*”, ACI Materials Journal, Vol. 102, No.6 November/December 2005, pp. 414-421.
10. Sengul, O., Tasdemir, C., and Tasdemir, M.A., “*Influence of Aggregate Type on the Mechanical Behaviour of Normal and High Strength Concretes*”, ACI Materials Journal, Vol. 99, No.6, November/December 2002, pp. 528-533.

Papers in International Conferences:

11. Sengul, O. and Ilica, T., “*Use of Waterproofing Admixtures for Increasing Concrete Durability*”, The Seventh International Conference on concrete under Severe Conditions, Environment and Loading, 23-25 September 2013, Nanjing, Vol.1., pp. 777-787.
12. Sengul, O., Aldanmaz, B.A. and Tasdemir, M.A., “*Conventional and HPSFRCCs as Repair and Strengthening Materials*”, The Second International Conference on Smart Monitoring, Assessment and Rehabilitation of Civil Structures - SMAR 2013, Istanbul, September 9-11, 2013, Proceedings CD-ROM, 8 p.
13. Yildirim, H., and Sengul, O. “*Elastic Properties of Self-Compacting Concrete*”, 7th International RILEM Conference on Self/Compacting Concrete, Paris, September 2-4, 2013, Proceedings CD-ROM, 8 p.
14. Sengul, O., Sengul, C., Keskin, G., Akkaya, Y., Tasdemir, C. and Tasdemir, M.A., “*Fracture and Microstructural Studies on Normal and High Strength Concretes with Different Types of Aggregates*”, VIII International Conference on Fracture Mechanics of Concrete and Concrete Structures, FraMCoS-8, J.G.M. Van Mier, G. Ruiz, C. Andrade, R.C. Yu and X.X. Zhang (Eds), Toledo – Spain, March 10-14, 2013, Proceedings CD-ROM, 12 p.
15. Yildirim, H., Kocabiyik, L., Guner, P. and Sengul, O. “*Influence of Fillers on the Properties of Self-Compacting Concrete*” Twelfth International Conference on Recent Advances in Concrete Technology and Sustainability Issues, Prague, October 28-31, 2012, Proceedings CD-ROM, 8 p.
16. Aral, M, Sengul, O., Tasdemir, C. and Tasdemir, M.A., *Fracture Studies on Concretes with Hybrid Steel Fibers*, 8th Symposium on Fibre Reinforced Concrete - BEFIB2012, Joaquim Barros et al. (Eds), Guimarães, September 19-21, 2012, Proceedings CD-ROM, 12 p.
17. Sengul, O. and Turkoglu, A. “*Use of a Natural Pozzolan for Improving Concrete Properties*”, The International Conference on Advances in Construction Materials through Science and Engineering, 5-7 September 2011, Hong Kong, Proceedings CD-ROM, 7 pp.
18. Sengul, O. “*Factors Affecting the Electrical Resistivity of Concrete*”, International Symposium on Nondestructive Testing of Materials and Structures NDTMS-2011, 15-18 May 2011, Istanbul, Turkey, 6 pp.
19. Yildirim, H., Tezel, O., Sengul, O. and Guner, P. “*Influence of Different Fiber Types on the Properties of Self-Compacting Concrete*” Design, Production and Placement of Self-Compacting Concrete SCC2010, Montreal, Canada, September 26-29, 2010, Proceedings CD-ROM, pp. 1333-1340.

20. Arskog, V., Sengul, O., and Gjrv, O.E. “*Durability of Silica Fume Concrete in Aursundet Bridge*”, Sixth International Conference on Concrete under Severe Conditions - Environment and Loading, Castro-Borges, P., Moreno, E.I., Sakai, K., Gjrv, O.E. and Banthia, N. (eds.), Yucatan, Mexico, 7-9 June 2010, CRC Press, Taylor & Francis, pp. 759-765.
21. Yldırım, H., Yilmaz, O., and Sengul, O. “*Effects of Mineral Admixtures on Compressive Strength and Rapid Chloride Permeability of Mortars*” 3rd fib International Congress, Washington, May 29-June 2, 2010, Proceedings CD-ROM, 8 p.
22. Sengul, O. and Gjrv, O.E., “*Effect of Blast Furnace Slag on the Strength Development of Concrete*”, 3rd fib International Congress, Washington, May 29-June 2, 2010, Proceedings CD-ROM, 8 p.
23. Yldırım, H., Oktar, O.N., Akkaya, Y., Sengul, O., and Tasdemir, M.A., “*Combined Approach Based on the Mechanical Behavior and Microstructural Examinations for the Fracture of Concrete*”, 7th International Conference on Fracture Mechanics of Concrete and Concrete Structures, 23-28 May 2010, Jeju, Korea, Proceedings CD-ROM, 8 pp.
24. Sengul, O., Gjrv, O.E. and Tasdemir, M.A., “*Effect Supplementary Cementing Materials for Increased Durability of Concrete Structures in Severe Environments*”, 2nd International RILEM Workshop on Concrete Durability and Service Life Planning – ConcreteLife’09, 7-9 September 2009, Haifa, Israel, pp. 547-555.
25. Sengul, O. and Gjrv, O.E., “*Effect of Binder System on the Resistance of Concrete against Chloride Penetration*”, 8th International Symposium on Utilization of High-Strength and High-Performance Concrete, 27-29 October 2008, Tokyo, Japan, Vol. 1., pp.330-335.
26. Aral, M., Sengul, O., and Tasdemir, C., “*Mechanical Behavior of Cement Based Composites with Hybrid Fibers*” International Ready Mixed Concrete Congress, Istanbul, Turkey, 19 – 21 June 2008, pp. 290 – 300 (in Turkish with English abstract).
27. Sengul, O. and Tasdemir, M.A., “*Effects of Ternary Blended Binders on Chloride Diffusivity of Concrete*”, 11th International Conference on Durability of Building Materials and Components, Istanbul, Turkey, 11 – 14 May 2008, pp. 247 – 254.
28. Ilıca, T., Yldırım, H. and Sengul, O. “*Effect of Cement Type on the Resistance of Concrete against Rapid Chloride Permeability*”, 11th International Conference on Durability of Building Materials and Components, Istanbul, Turkey, 11 – 14 May 2008, pp. 481 – 488.
29. Sengul, O. and Gjrv, O.E., “*Use of Blast Furnace Slag for Increased Concrete Sustainability*”, International Conference on Sustainability in the Cement and Concrete Industry, ed. by S. Jacobsen, P. Jhren and K.O. Kjellsen, Norwegian Concrete Association, Lillehammer, Norway, ISBN 978-82-8208-001-9, 16 – 19 September 2007, pp. 248 – 256.
30. Sengul, O. and Gjrv, O.E., “*Chloride penetration into a 20 year old north sea concrete platform*”, Fifth International Conference on Concrete under Severe Conditions - Environment and Loading, Toutlemonde, F., Sakai K., Gjrv, O.E. and Banthia, N. (eds.), Tours, France, ISSN 1628-4704, Vol.1, 4-6 June 2007, pp. 107 – 116.
31. Sengul, O. and Gjrv, O.E., “*Electrical resistivity measurements for quality control of concrete durability*”, Fifth International Conference on Concrete under Severe Conditions - Environment and Loading, Toutlemonde, F., Sakai K., Gjrv, O.E. and Banthia, N. (eds.), Tours, France, ISSN 1628-4704, Vol.1, 4-6 June 2007, pp. 871 – 880.

32. Hamalı, Y., Sengul, O., Koç, İ., Tarhan, M., Erenoglu, T. and Tasdemir, M.A., “*Mechanical and Permeability Properties of Concretes with Metakaolin and Silica Fume*”, TCMA 3rd International Symposium, Sustainability in Cement and Concrete, Istanbul, 21-23 May 2007, pp 409 – 419.
33. Alici, C., Dogan, U.A., Sengul, O. and Tasdemir, C., “*Effects of Crushed Limestone Sand and Curing Conditions on the Properties of Concrete*”, Seventh International Congress on Advances in Civil Engineering, 11-13 October 2006, Istanbul, Turkey, 10 p.
34. Sengul, O., Capar, A. and Gjörv, O.E., “*Durability Analysis of Concrete Structures by use of a Probability Based Software*”, Seventh International Congress on Advances in Civil Engineering, 11-13 October 2006, Istanbul, Turkey, Proceedings CD-ROM, 8 p.
35. Sengul, O. and Gjörv, O.E., “*Effect of Blast Furnace Slag on Chloride Penetration into Concrete Bridges*”, Third International Conference on Bridge Maintenance, Safety and Management, P.S.J. Cruz, D.M. Frangopol and L.C. Neves (eds.), 16-19 July 2006, Porto, Portugal, Proceedings CD-ROM, 8 p.
36. Arskog, A., Sengul, O., Dahl, R., and Gjörv, O.E. “*Chloride Penetration into Silica Fume Concrete after 10 Years of Exposure in Aursundet Bridge*”, Third International Conference on Bridge Maintenance, Safety and Management, P.S.J. Cruz, D.M. Frangopol and L.C. Neves (eds.), 16-19 July 2006, Porto, Portugal, Proceedings CD-ROM, 7 p.
37. Arskog, A., Sengul, O. and Gjörv, O.E., “*Performance Based Quality Control for Concrete Durability*”, International RILEM Workshop on Performance Based Evaluation and Indicators for Concrete Durability, 19-21 March 2006, Madrid, Spain, 5 p.
38. Arskog, A., Gjörv, O.E., Sengul, O., and Dahl, R., “*Chloride Penetration into Silica Fume Concrete after 10 Years of Exposure in Aursundet Bridge*”, XIX Symposium on Nordic Concrete Research, 13-15 June 2005, Sandefjord, Norway, pp.97-99.
39. Sengul, O., and Gjörv, O.E., “*Effect of Binder System on the Resistance of Concrete against Chloride Penetration*”, XIX Symposium on Nordic Concrete Research, 13-15 June 2005, Sandefjord, Norway, pp.127-129.
40. Sengul, O.; Bayramov, F.; Tasdemir, M.A.; Sonmez, R. and Yuceer, Z., “*Optimum Design of Concrete against Rapid Chloride Permeability*”, ICCP 04, 9th International Corrosion Symposium and Exhibition, 22-25 September 2004, Ankara, Turkey, Vol. 2, pp. 548-555.
41. Dogan U.A. and Sengul, O., “*Mechanical Properties and Durability of Polymer Modified Concretes*”, 11th International Congress on Polymers in Concrete, 2-4 June 2004, Berlin, Germany, pp. 175 – 182.
42. Sengul, O.; Tasdemir, C.; Yuceer, Z.; Erbaydar, M.; and Tasdemir, M.A., “*Mechanical Behavior of High Strength Concretes with High-Volume Fly Ash*”, 6th International Symposium on HSC-HPC, Konig, G., et.al (eds), 16-20 June 2002, Leipzig, Germany, Vol.2, pp.1407-1420.
43. Sengul, O.; Tasdemir, C.; Tasdemir, M.A.; Hacıkamiloglu, M.; Ozbek, E.; and Altay, B., “*Effects of Aggregate Type on Mechanical Properties of Normal and High Strength Concrete*”, Second International Symposium on Cement and Concrete Technology in the 2000 s, 6-10 September 2000, Istanbul, Turkey, Vol. 2, pp. 40-49.

Papers in National Conferences:

44. Taşdemir, M.A. ve Şengül, Ö. “Normal veya Lifli Beton Karışımının Performansa Dayalı Tasarımı”, 3. Yapı Denetimi Sempozyumu, TMMOB İnşaat Mühendisleri Odası, 5-6 Ekim 2013, Diyarbakır, s. 1 – 16 (çağrılı bildiri).

45. Taşdemir, M.A., Şengül, Ö. ve Şengül, C., “Çelik Tel Donatılı Betonların Mekanik Davranışı”, Beton 2013, Türkiye Hazır Beton Birliği, 21-24 Şubat 2013, İstanbul, s. 1 – 28 (çağrılı bildiri).
46. Taşdemir, C. ve Şengül, Ö., “*Hafif Betonların Fiziksel ve Mekanik Özellikleri*”, Beton 2013, Türkiye Hazır Beton Birliği, 21-24 Şubat 2013, İstanbul, s. 29 – 51 (çağrılı bildiri).
47. Şengül, Ö., Şengül, C., Taşdemir, C., Gökalp, İ., ve Derin, E., “*Farklı Mineralojik Kökene Sahip Agregaların İçeren Betonların Mekanik Davranışı*”, Beton 2013, Türkiye Hazır Beton Birliği, 21-24 Şubat 2013, İstanbul, s. 281 - 292.
48. Karpuzcu, M., Şengül, Ö., Taşdemir, M.A., Erkan, O. ve Delipınar, Ş., “*Ferrokrom Cürüflerinin Asfalt Üretiminde Agregalar Olarak Kullanımı*”, 1. Ulusal Geri Kazanım Kongre ve Sergisi, Uşak Üniversitesi Mühendislik Fakültesi, Uşak, 2-4 Mayıs 2012, s. 251- 258.
49. Şahin, Y. ve Şengül, Ö., “*Mineral Katkıların Hamur ve Harçların Reolojik Özelliklerine Etkisi*”, 8. Ulusal Beton Kongresi, TMMOB İnşaat Mühendisleri Odası İstanbul ve İzmir Şubeleri, İzmir, 5-7 Ekim 2011, s.363-373.
50. Ilıca, T. ve Şengül, Ö., “*Farklı Geçirimsizlik Katkıları ile Üretilen Betonların Özellikleri*”, 8. Ulusal Beton Kongresi, TMMOB İnşaat Mühendisleri Odası İstanbul ve İzmir Şubeleri, İzmir, 5-7 Ekim 2011, s.551-560.
51. Sengul, O., Tasdemir, M.A., Koc, I., Tarhan, M. and Erenoglu, T., “*Mechanical Properties, Durability and Design of Concretes Containing Natural and Industrial Mineral Admixtures*”, 7th National Congress on Concrete, The Chamber of Turkish Civil Engineers Istanbul Branch, Istanbul, 28-30 November 2007, pp.291-300 (In Turkish).
52. Kadioğlu, T., Sengul, C., Sengul, O., Akkaya, Y. and Tasdemir, M.A., “*Effects of Shrinkage Reducing Admixtures on the Properties of Concrete*”, 2nd Symposium on Chemical Admixtures in Structures, The Chambers of Turkish Civil Engineers and Chemical Engineers Ankara Branches, 12-13 April 2007, Ankara, pp. 121 – 130 (In Turkish).
53. Alici, C. Dogan, U.A., Sengul, O. and Tasdemir, C. “*Effect of Crushed Sand Content on the Strength and Chloride Permeability of Fly Ash Concretes*” 4th National Symposium on Crushed Stone, The Chamber of Turkish Mining Engineers Istanbul Branch, Istanbul, 1-2 December 2006, pp. 203-210 (in Turkish with English abstract).
54. Sengul, O., Tasdemir, M.A. and Yuceer, Z., “*Optimization of Fly Ash and Slag Concretes Against Chloride Permeability*”, 6th National Congress on Concrete, The Chamber of Turkish Civil Engineers Istanbul Branch, Istanbul, 16-18 November 2005, pp.181-190. (In Turkish with English abstract).
55. Sengul, O., and Gjörv, O.E., “*Effect of Blast Furnace Slag on the Chloride Diffusivity of Concrete*”, 6th National Congress on Concrete, The Chamber of Turkish Civil Engineers Istanbul Branch, Istanbul, 16-18 November 2005, pp. 239-248. (In Turkish with English abstract).
56. Tasdemir, C., Sengul, O., Kara, G., Aslan, M. and Ertugrul, C., “*Properties of Imprinted Concretes*”, Concrete 2004, Turkish Ready Mixed Concrete Association, 10-12 June 2004, Istanbul, pp. 520 - 531. (in Turkish with English abstract) (*).
57. Sengul, O., Tasdemir, C., Koroç, S. and Sonmez, R., “*Effect of Aggregate on the Freezing - Thawing Resistance of Concrete*”, 3rd National Symposium on Crushed Stone, The Chamber of Turkish Mining Engineers Istanbul Branch, Istanbul, 3-4 December 2003, pp. 43-50 (in Turkish with English abstract).

58. Sengul, O., Tasdemir, M.A. and Sonmez, R., “*Chloride Permeability of Normal- and High-Strength High Volume Fly Ash Concretes*”, 5th National Congress on Concrete, The Chamber of Turkish Civil Engineers Istanbul Branch, Istanbul, 1-3 October 2003, pp. 75-85 (in Turkish with English abstract) (*).
59. Sengul, O. and Dogan, U. A., “*Mechanical Properties and Durability of Polymer Modified Concretes*”, 5th National Congress on Concrete, The Chamber of Turkish Civil Engineers Istanbul Branch, Istanbul, 1-3 October 2003, pp.163-174 (in Turkish with English abstract).
60. Sengul, O., Tasdemir, M.A., Yuceer, Z. and Erenoglu, T., “*Effects of Fly Ash and Ground Granulated Blast Furnace Slag on the Compressive Strength and Chloride Permeability of Concrete*”, 5th National Congress on Concrete, The Chamber of Turkish Civil Engineers Istanbul Branch, Istanbul, 1-3 October 2003, pp. 483-492 (in Turkish with English abstract).
61. Sengul, O., Tasdemir, C., Koruç, S. and Yuceer, Z., “*Effects of Aggregate Type on Abrasion Resistance of Normal and High Strength Concrete*”, 5th National Congress on Concrete, The Chamber of Turkish Civil Engineers Istanbul Branch, Istanbul, 1-3 October 2003, pp.525-534 (in Turkish with English abstract).
62. Sengul, O.; Tasdemir, C.; Kılıc, T.; and Kuser, U., “*Effects of Freeze-Thaw and Heat on the Mechanical Properties of Tile Adhesives*”, Building Materials National Congress, The Turkish Institute of Architects, Istanbul, 9-13 September 2002, Vol. 2, pp.546-558. (in Turkish).
63. Ozyurt, N.; Tasdemir, C.; Ilki, A.; Sengul, O.; and Tasdemir, M.A., “*Mechanical Behavior of High Strength Cement Based Composites*” XIth National Mechanics Congress, 6-10 September, 1999, Bolu, pp. 687-696. (in Turkish with English abstract).

Papers in National Journals:

64. Şengül, Ö., “*Beton Özelliklerinin İyileştirilmesi için Mineral Katkı Kullanımı*”, Hazır Beton Dergisi, Yıl: 18, Sayı: 104, Mart/Nisan 2011, s.74-81.
65. Sengul, O., Tasdemir, M.A. and Gjörv, O.E., “*Effect of pozzolanic materials on the mechanical properties and durability of concrete*”, ITU Journal/d, Vol. 6, No. 1, 53-64, February 2007 (in Turkish with extended English abstract).
66. Sengul, O., “*Effects of Aggregate on Mechanical Properties of High Strength Concrete*”, Ready Mixed Concrete, Ready Mixed Concrete Association of Turkey, Vol.8, No: 44, 2001, pp.75-80 (in Turkish with English abstract).

Other Publications

67. Türkeri, A.N. and Şengül, Ö. (Editors), Proceedings of the 11th International Conference on Durability of Building Materials and Components, 4 vols., ISBN: 978-975-561-325-3, Istanbul, 2008.
68. Özkul, M.H., Atahan, H.N., Doğan, Ü.A., Pekmezci, B.Y. ve Şengül, Ö., Proceedings of the 7th Asian Symposium on Polymers in Concrete – ASPIC 2012, ISBN: 978-975-561-427-4, Istanbul, 2012.