# Prof. KAĞAN TUNCAY

Office Phone: <u>+90 +90 312 210 2444</u> Email: tuncay@metu.edu.tr Web: https://avesis.metu.edu.tr/tuncay International Researcher IDs ScholarID: RfnGbrIAAAAJ ORCID: 0000-0002-4523-2388 Publons / Web Of Science ResearcherID: B-2674-2008 ScopusID: 6603690701 Yoksis Researcher ID: 14311



# **Education Information**

- I. Doctorate, Texas A&M University, Civil Engineering, United States Of America 2010 2014
- II. Postgraduate, Middle East Technical University, Faculty of Engineering, Department of Engineering Sciences, Turkey 1991 - 1993
- III. Undergraduate, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, Turkey 1987 - 1991

#### Dissertations

- I. Doctorate, Wave propagation in single- and double-porosity deformable porous media saturated by multiphase fluids, Texas A&M University, Civil Engineering, 1995
- II. Postgraduate, Improved transmitting boundaries by the use of the residual variable method, Orta Doğu Teknik Üniversitesi, Faculty of Engineering, Department of Engineering Sciences, 1993

## **Research Areas**

Mechanical, Structure

## Academic Titles / Tasks

- I. Professor, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 2014 -Continues
- II. Professor, Atilim University, Faculty Of Engineering, Department Of Civil Engineering, 2013 2014
- III. Professor, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 2009 2013
- IV. Associate Professor, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 2007 - 2009
- V. Associate Professor, Indiana University Bloomington, Arts And Sciences, Chemistry, 2002 2007
- VI. Assistant Professor, Universiteit Utrecht, Earth Sciences, Hydrogeology, 2002 2002
- VII. Assistant Professor, Indiana University Bloomington, Arts And Sciences, Chemistry, 2001 2001
- VIII. Research Assistant, Indiana University Bloomington, Arts And Sciences, Chemistry, 1996 2001
  - IX. Assistant Professor, Izmir Institute Of Technology, Faculty Of Engineering, Department Of Civil Engineering, 1995 -1996

- X. Research Assistant, Texas A&M University, Engineering, Civil Engineering, 1993 1995
- XI. Research Assistant, Middle East Technical University, Faculty of Engineering, Department of Engineering Sciences, 1992 - 1993

## Academic and Administrative Experience

- I. Member of the Senate, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 2022 Continues
- II. Fakülte Kurulu Üyesi, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 2018 Continues
- III. Middle East Technical University, Odtu Kuzey Kıbrıs Kampusu (Kktc-Güzelyurt), İnşaat Mühendisliği Bölümü, 2007 -2009

# **Advising Theses**

- I. TUNCAY K., A lattice modelling framework with applications on reinforced concrete and autoclaved aerated concrete masonry infill walls, Doctorate, B.BESTAMİ(Student), 2022
- II. TUNCAY K., Equivalent elastic properties of lattices using non-uniformly distributed point cloud, Postgraduate, E.EGE(Student), 2022
- III. TUNCAY K., Numerical modelling of reinforced concrete pressure tunnels using the overlapping lattice method, Postgraduate, G.Işık(Student), 2019
- IV. TUNCAY K., TÜYDEŞ YAMAN H., DETECTING QUEUE LENGTH ON URBAN ARTERIALS USING FLOATING CAR DATA (FCD), Doctorate, O.ALTINTAŞI(Student), 2018
- V. TUNCAY K., Explicit nonlinear analysis for quasi-static behavior of frame structures with pid control and mass scaling, Postgraduate, K.KOCAMAZ(Student), 2018
- VI. BİNİCİ B., TUNCAY K., Overlapping lattice modeling for concrete fracture simulations using sequentially linear analysis, Postgraduate, B.BESTAMİ(Student), 2017

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

 Maximum Drift Demands of Earthquake Damaged Reinforced Concrete Columns Based on Residual Flexure Cracks

 AYDIN B. B., BİNİCİ B., AKTAŞ S. S., Hendriks M. A. N., TUNCAY K.
 Bulletin of Earthquake Engineering, vol.22, no.8, pp.4055-4081, 2024 (SCI-Expanded)

 Computational Modelling of Damage Progression in Unreinforced Masonry Walls via DEM Pulatsu B., TUNCAY K.
 TURKish Journal of Civil Engineering, vol.35, no.3, pp.125-147, 2024 (SCI-Expanded)
 A modified applied element model for the simulation of plain concrete behaviour Soysal B. F., Arıcı Y., Tuncay K.
 MAGAZINE OF CONCRETE RESEARCH, vol.75, no.7, pp.325-338, 2023 (SCI-Expanded)
 Analysis and prediction of masonry wallette strength under combined compression-bending via stochastic computational modelling Gonen S., Pulatsu B., Lourenço P. B., Lemos J. V., TUNCAY K., Erduran E.

Engineering Structures, vol.278, 2023 (SCI-Expanded)

V. Probabilistic approach to assess URM walls with openings using discrete rigid block analysis (D-RBA)

Pulatsu B., Gonen S., Parisi F., Erdogmus E., TUNCAY K., Funari M. F., Lourenco P. B.

JOURNAL OF BUILDING ENGINEERING, vol.61, 2022 (SCI-Expanded)

- VI. Identifying buildings with high collapse risk based on samos earthquake damage inventory in Izmir BİNİCİ B., YAKUT A., CANBAY E., Akpinar U., TUNCAY K.
   BULLETIN OF EARTHQUAKE ENGINEERING, vol.20, no.14, pp.7853-7872, 2022 (SCI-Expanded)
   VII. A METHOD TO ESTIMATE TRAFFIC DENETRATION PATES OF COMMERCIAL FLOATING CAR DATA
- VII. A METHOD TO ESTIMATE TRAFFIC PENETRATION RATES OF COMMERCIAL FLOATING CAR DATA USING SPEED INFORMATION Altintasi O., TÜYDES YAMAN H., TUNCAY K.

Transport, vol.37, no.3, pp.161-176, 2022 (SCI-Expanded)

- VIII. Lattice modeling and testing of aerated autoclaved concrete infilled frames AYDIN B. B., BİNİCİ B., Hendriks M. A. N., TUNCAY K.
   ENGINEERING STRUCTURES, vol.251, 2022 (SCI-Expanded)
  - IX. Numerical modeling of the tension stiffening in reinforced concrete members via discontinuum models

Pulatsu B., Erdogmus E., Lourenco P. B., Lemos J., TUNCAY K. COMPUTATIONAL PARTICLE MECHANICS, vol.8, no.3, pp.423-436, 2021 (SCI-Expanded)

- X. Lattice simulation of concrete compressive behaviour as indirect tension failure AYDIN B. B., BİNİCİ B., TUNCAY K.
   MAGAZINE OF CONCRETE RESEARCH, vol.73, no.8, pp.394-409, 2021 (SCI-Expanded)
- XI. An approximate procedure for estimating the member demands in mid-rise reinforced concrete buildings

Akpinar U., BİNİCİ B., YAKUT A., TUNCAY K.

Bulletin of Earthquake Engineering, vol.18, no.15, pp.6715-6734, 2020 (SCI-Expanded)

XII. Simulation of the in-plane structural behavior of unreinforced masonry walls and buildings using DEM

Pulatsu B., Erdogmus E., Lourenço P. B., Lemos J. V., TUNCAY K.

Structures, vol.27, pp.2274-2287, 2020 (SCI-Expanded)

# XIII. Transmission dynamics of Covid-19 in Italy, Germany and Turkey considering social distancing, testing and quarantine

GÜL S., TUNCAY K., BİNİCİ B., AYDIN B. B.

JOURNAL OF INFECTION IN DEVELOPING COUNTRIES, vol.14, no.7, pp.713-720, 2020 (SCI-Expanded)

XIV. Quality of floating car data (FCD) as a surrogate measure for urban arterial speed Altintasi O., Tüydeş Yaman H., Tuncay K.

CANADIAN JOURNAL OF CIVIL ENGINEERING, vol.46, pp.1187-1198, 2019 (SCI-Expanded)

# XV. Simulation of Reinforced Concrete Member Response Using Lattice Model Aydın B. B., Tuncay K., Binici B. JOURNAL OF STRUCTURAL ENGINEERING, vol.145, 2019 (SCI-Expanded)

- XVI. Overlapping Lattice Modeling for concrete fracture simulations using sequentially linear analysis Aydın B. B., Tuncay K., Binici B. STRUCTURAL CONCRETE, vol.19, pp.568-581, 2018 (SCI-Expanded)
- XVII. Near-Optimal Design of Scalable Energy Harvester for Underwater Pipeline Monitoring Applications With Consideration of Impact to Pipeline Performance Qureshi F. U., Muhtaroglu A., TUNCAY K.
   IEEE SENSORS JOURNAL, vol.17, no.7, pp.1981-1991, 2017 (SCI-Expanded)
- XVIII. Strength of various sands in triaxial and cyclic direct shear tests
   ÇABALAR A. F., Dulundu K., TUNCAY K.
   ENGINEERING GEOLOGY, vol.156, pp.92-102, 2013 (SCI-Expanded)
  - XIX. Field measurements and modeling of groundwater flow and biogeochemistry at Moses Hammock, a backbarrier island on the Georgia coast
     Porubsky W. P., Joye S. B., Moore W. S., TUNCAY K., Meile C.
     BIOGEOCHEMISTRY, vol.104, pp.69-90, 2011 (SCI-Expanded)
  - XX. Modeling biogeochemical dynamics in porous media: Practical considerations of pore scale

	variability, reaction networks, and microbial population dynamics in a sandy aquifer
	King E. L., TUNCAY K., Ortoleva P., Meile C.
	JOURNAL OF CONTAMINANT HYDROLOGY, vol.112, pp.130-140, 2010 (SCI-Expanded)
XXI.	In Silico Geobacter sulfurreducens Metabolism and Its Representation in Reactive Transport Models
	King E. L., TUNCAY K., Ortoleva P., Meile C.
	APPLIED AND ENVIRONMENTAL MICROBIOLOGY, vol.75, no.1, pp.83-92, 2009 (SCI-Expanded)
XXII.	Flow and nutrient dynamics in a subterranean estuary (Waquoit Bay, MA, USA): Field data and
	reactive transport modeling
	Spiteri C., Slomp C. P., Charette M. A., TUNCAY K., Meile C.
	GEOCHIMICA ET COSMOCHIMICA ACTA, vol.72, no.14, pp.3398-3412, 2008 (SCI-Expanded)
XXIII.	Modeling biogeochemical processes in subterranean estuaries: Effect of flow dynamics and redox
	conditions on submarine groundwater discharge of nutrients
	Spiteri C., Slomp C. P., TUNCAY K., Meile C.
	WATER RESOURCES RESEARCH, vol.44, no.2, 2008 (SCI-Expanded)
XXIV.	Chromosome segregation in Escherichia coli division: A free energy-driven string model
	Fan J., Tuncay K., Ortoleva P. J.
	COMPUTATIONAL BIOLOGY AND CHEMISTRY, vol.31, no.4, pp.257-264, 2007 (SCI-Expanded)
XXV.	Closure to "landfill settlement with decomposition and gas generation" by Ertan Durmusoglu, M.
	Yavuz Corapcioglu, and Kagan Tuncay
	Durmusoglu E., Corapcioglu M. Y., Tuncay K.
	JOURNAL OF ENVIRONMENTAL ENGINEERING-ASCE, vol.133, no.7, pp.785, 2007 (SCI-Expanded)
XXVI.	Cancer onset and progression: A genome-wide, nonlinear dynamical systems perspective on
	onconetworks
	Qu K., Haidar A. A., Fan J., Ensman L., Tuncay K., Jolly M., Ortoleva P.
	JOURNAL OF THEORETICAL BIOLOGY, vol.246, no.2, pp.234-244, 2007 (SCI-Expanded)
XXVII.	Transcriptional regulatory network discovery via multiple method integration: application to e. coli
	KI2
	Sun J., Tuncay K., Haidar A. A., Ensman L., Stanley F., Trelinski M., Ortoleva P.
	ALGORITHMS FOR MOLECULAR BIOLOGY, vol.2, 2007 (SCI-Expanded)
XXVIII.	Transcriptional regulatory network refinement and quantification through kinetic modeling, gene
	expression microarray data and information theory
	Sayyed-Ahmad A., Tuncay K., Ortoleva P. J.
VVIV	BMC BIOINFORMATICS, vol.8, 2007 (SCI-Expanded)
XXIX.	Time domain Gauss-Newton seismic waveform inversion in elastic media
	Sheen D., Tuncay K., Baag C., Ortoleva P. J. GEOPHYSICAL JOURNAL INTERNATIONAL, vol.167, no.3, pp.1373-1384, 2006 (SCI-Expanded)
XXX.	Parallel implementation of a velocity-stress staggered-grid finite-difference method for 2-D
ΛΛΛ.	poroelastic wave propagation
	Sheen D., Tuncay K., Baag C., Ortoleva P. J.
	COMPUTERS & GEOSCIENCES, vol.32, no.8, pp.1182-1191, 2006 (SCI-Expanded)
XXXI.	Modeling of settlement in saturated and unsaturated municipal landfills
	Durmusoglu E., Corapcioglu M., Tuncay K.
	International Journal of Geomechanics, vol.6, no.4, pp.269-278, 2006 (SCI-Expanded)
XXXII.	GCLgrid: A three-dimensional geographical curvilinear grid library for computational seismology
AAAAA	Fan C., Pavlis G., Tuncay K.
	COMPUTERS & GEOSCIENCES, vol.32, no.3, pp.371-381, 2006 (SCI-Expanded)
XXXIII.	Scale dependence of reaction rates in porous media
	Meile C., Tuncay K.
	ADVANCES IN WATER RESOURCES, vol.29, no.1, pp.62-71, 2006 (SCI-Expanded)
XXXIV.	Landfill settlement with decomposition and gas generation
	Durmusoglu E., Corapcioglu M., Tuncay K.

	JOURNAL OF ENVIRONMENTAL ENGINEERING, vol.131, no.9, pp.1311-1321, 2005 (SCI-Expanded)
XXXV.	Solute-specific pore water irrigation: Implications for chemical cycling in early diagenesis
	Meile C., Berg P., Van Cappellen P., Tuncay K.
	JOURNAL OF MARINE RESEARCH, vol.63, no.3, pp.601-621, 2005 (SCI-Expanded)
XXXVI.	Efficient solution technique for solving the Poisson-Boltzmann equation
	Sayyed-Ahmad A., Tuncay K., Ortoleva P.
	JOURNAL OF COMPUTATIONAL CHEMISTRY, vol.25, no.8, pp.1068-1074, 2004 (SCI-Expanded)
XXXVII.	Quantitative basin modeling: present state and future developments towards predictability
	Tuncay K., Ortoleva P.
	GEOFLUIDS, vol.4, no.1, pp.23-39, 2004 (SCI-Expanded)
XXXVIII.	Classical density functional theory of orientational order at interfaces: Application to water
	Jaqaman K., Tuncay K., Ortoleva P.
	JOURNAL OF CHEMICAL PHYSICS, vol.120, no.2, pp.926-938, 2004 (SCI-Expanded)
XXXIX.	Estimating tectonic history through basin simulation-enhanced seismic inversion: geoinfomatics for
	sedimentary basins
	Tandon K., Tuncay K., Hubbard K., Comer J., Ortoleva P.
	GEOPHYSICAL JOURNAL INTERNATIONAL, vol.156, no.1, pp.129-139, 2004 (SCI-Expanded)
XL.	Toward automated cell model development through information theory
	Sayyed-Ahmad A., Tuncay K., Ortoleva P.
*** *	JOURNAL OF PHYSICAL CHEMISTRY A, vol.107, no.49, pp.10554-10565, 2003 (SCI-Expanded)
XLI.	Explicit representation of spatial heterogeneity in reactive transport models: application to
	bioirrigated sediments
	Meile C., Tuncay K., Van Cappellen P.
XLII.	JOURNAL OF GEOCHEMICAL EXPLORATION, pp.231-234, 2003 (SCI-Expanded) Interplay of gouge, fluid pressure and porosity in fault zones
ALII.	Tuncay K., Ozkan G., Ortoleva P.
	JOURNAL OF GEOCHEMICAL EXPLORATION, pp.191-195, 2003 (SCI-Expanded)
XLIII.	The Karyote® Physico-Chemical Genomic, Proteomic, Metabolic Cell Modeling System
	Ortoleva P., Berry E., Brun Y., Fan J., Fontus M., Hubbard K., Jaqaman K., Jarymowycz L., Navid A., Sayyed-Ahmad A.,
	et al.
	OMICS A Journal of Integrative Biology, vol.7, no.3, pp.269-283, 2003 (SCI-Expanded)
XLIV.	Pits, outgrowths, and inclusions as coated grain kinetic instabilities
	Tuncay K., Puckett J., Al-Shaeib Z., Ortoleva P.
	GEOCHIMICA ET COSMOCHIMICA ACTA, vol.66, no.22, pp.3901-3912, 2002 (SCI-Expanded)
XLV.	Failure, memory, and cyclic fault movement
	Tuncay K., Khalil A., Ortoleva P.
	BULLETIN OF THE SEISMOLOGICAL SOCIETY OF AMERICA, vol.91, no.3, pp.538-552, 2001 (SCI-Expanded)
XLVI.	Salt tectonics as a self-organizing process: A reaction, transport, and mechanics model
	Tuncay K., Ortoleva P.
	JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH, vol.106, pp.803-817, 2001 (SCI-Expanded)
XLVII.	Sedimentary basin deformation: an incremental stress approach
	Tuncay K., Park A., Ortoleva P.
	TECTONOPHYSICS, vol.323, pp.77-104, 2000 (SCI-Expanded)
XLVIII.	A forward model of three-dimensional fracture orientation and characteristics
	Tuncay K., Park A., Ortoleva P.
	JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH, vol.105, pp.16719-16735, 2000 (SCI-Expanded)
XLIX.	A reaction-transport-mechanical approach to modeling the interrelationships among gas generation,
	overpressuring, and fracturing: Implications for the Upper Cretaceous natural gas reservoirs of the
	Piceance basin, Colorado Payne D., Tuncay K., Park A., Comer J., Ortoleva P.
	AAPG BULLETIN-AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS, vol.84, no.4, pp.545-565, 2000 (SCI-
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L.	Electrophoretic repair of impoundment leaks: Analysis and verification with experimental data
	Corapcioglu M., Kambham K., Tuncay K.
	ENVIRONMENTAL SCIENCE & TECHNOLOGY, vol.32, no.23, pp.3778-3784, 1998 (SCI-Expanded)
LI.	Self-weight subsidence of saturated soft porous media
	Tuncay K., Kambham K., Corapcioglu M.
	JOURNAL OF ENGINEERING MECHANICS-ASCE, vol.124, no.6, pp.630-638, 1998 (SCI-Expanded)
LII.	Wave propagation in poroelastic media saturated by two fluids
	Tuncay K., Corapcioglu M.
	JOURNAL OF APPLIED MECHANICS-TRANSACTIONS OF THE ASME, vol.64, no.2, pp.313-320, 1997 (SCI-Expanded)
LIII.	Dynamics of submerged shells of arbitrary geometry using improved transmitting boundaries
	Akkas N., Tuncay K.
	COMPUTERS & STRUCTURES, vol.63, no.4, pp.827-835, 1997 (SCI-Expanded)
LIV.	Body waves in poroelastic media saturated by two immiscible fluids
	Tuncay K., Corapcioglu M.
	JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH, vol.101, pp.25149-25159, 1996 (SCI-Expanded)
LV.	Consolidation of elastic porous media saturated by two immiscible fluids
	Tuncay K., Corapcioglu M.
	JOURNAL OF ENGINEERING MECHANICS, vol.122, no.11, pp.1077-1085, 1996 (SCI-Expanded)
LVI.	Wave propagation in fractured porous media
	Tuncay K., Corapcioglu M.
	TRANSPORT IN POROUS MEDIA, vol.23, no.3, pp.237-258, 1996 (SCI-Expanded)
LVII.	Body waves in fractured porous media saturated by two immiscible Newtonian fluids
	Tuncay K., Corapcioglu M.
	TRANSPORT IN POROUS MEDIA, vol.23, no.3, pp.259-273, 1996 (SCI-Expanded)
LVIII.	Oil mound spreading and migration with ambient groundwater flow in coarse porous media
	Corapcioglu M., Tuncay K., Ceylan B.
	WATER RESOURCES RESEARCH, vol.32, no.5, pp.1299-1308, 1996 (SCI-Expanded)
LIX.	Effective stress principle for saturated fractured porous media
	Tuncay K., Corapcioglu M.
	WATER RESOURCES RESEARCH, vol.31, no.12, pp.3103-3106, 1995 (SCI-Expanded)
LX.	A SEMIANALYTICAL ANALYSIS OF COMPRESSIBLE ELECTROPHORETIC CAKE FORMATION
	KAMBHAM K., TUNCAY K., CORAPCIOGLU M.
	WATER RESOURCES RESEARCH, vol.31, no.5, pp.1421-1428, 1995 (SCI-Expanded)
LXI.	ANALYTICAL EXPRESSIONS TO ESTIMATE THE FREE PRODUCT RECOVERY IN OIL-CONTAMINATED
	AQUIFERS
	CORAPCIOGLU M., TUNCAY K., LINGAM R., KAMBHAM K.
	WATER RESOURCES RESEARCH, vol.30, no.12, pp.3301-3311, 1994 (SCI-Expanded)

# Articles Published in Other Journals

 I. Sensitivity analysis for piezoelectric energy harvester and bluff body design toward underwater pipeline monitoring Qureshi F. U. Q., Muhtaroglu A., Tuncay K.

Journal of Energy Systems, vol.1, no.1, pp.10-20, 2017 (Scopus)

- II. Transcriptional regulatory networks via gene ontology and expression data Tuncay K., Ensman L., Sun J., Haidar A. A., Stanley F., Trelinski M., Ortoleva P. In Silico Biology, vol.7, no.1, pp.21-34, 2007 (Scopus)
- III. Efficient finite difference calculation of partial derivative seismic wavefield using reciprocity and

#### convolution

Sheen D., Tuncay K., Baag C., Ortoleva P. J.
SEG Technical Program Expanded Abstracts, vol.23, no.1, pp.1850-1853, 2004 (Scopus)
IV. Wave propagation in poroelastic media: A velocity-stress staggered-grid finite-difference method with perfectly matched layers

- Sheen D., Tuncay K., Baag C., Ortoleva P. J.
  SEG Technical Program Expanded Abstracts, vol.22, no.1, pp.2295-2298, 2003 (Scopus)
  V. Chapter 5 Propagation of waves in porous media
- Corapcioglu M. Y., Tuncay K. Advances in Porous Media, vol.3, pp.361-440, 1996 (Scopus)

# **Books & Book Chapters**

 I. Monitoring Urban Traffic from Floating Car Data (FCD): Using Speed or a Los-Based State Measure ALTINTAȘI O., TÜYDEŞ YAMAN H., TUNCAY K.
 in: Directions of Development of Transport Networks and Traffic Engineering, Macioszek E., Sierpiński G., Editor, Springer, Cham, pp.163-173, 2019

# Refereed Congress / Symposium Publications in Proceedings

I. Macro-Block and DEM-Based Probabilistic Analysis to Predict In-Plane Structural Behavior of URM **Pier-Spandrel Systems** Pulatsu B., Gonen S., Lourenço P. B., TUNCAY K. Proceedings of the Annual Conference of the Canadian Society of Civil Engineering 2022, Whistler, Canada, 25 - 28 May 2022, vol.348 LNCE, pp.209-222 **II. SHALLOW FOUNDATION ANALYSIS BY SMOOTHED PARTICLE HYDRODYNAMICS METHOD** Emren V., Tuncay K. 14th INTERNATIONAL CONGRESS ON ADVANCES IN CIVIL ENGINEERING, İstanbul, Turkey, 6 September - 08 October 2021, vol 1, pp.471-478 III. Prediction of Nonlinear Drift Demands for Buildings with Recurrent Neural Networks Kocamaz K., Binici B., Tuncay K. 14th INTERNATIONAL CONGRESS ON ADVANCES IN CIVIL ENGINEERING, 6 - 08 September 2021, vol.1, pp.1287-1294 IV. On Strategies Improving Accuracy of Speed Prediction from Floating Car Data (FCD) Tüydeş Yaman H., Kocamaz K., Tuncay K., Çınar B. https://ace2020.org/en/, İstanbul, Turkey, 6 - 08 September 2021, vol.1, pp.1425-1432 V. Strut and Tie Topology for Reinforced Concrete Elements Işıklı Y., Binici B., Tuncay K. 14th INTERNATIONAL CONGRESS ON ADVANCES IN CIVIL ENGINEERING, İstanbul, Turkey, 6 - 08 September 2021, vol.1, pp.1111-1116 VI. Seismic Assessment of Mid-Rise Reinforced Concrete Buildings by Using a Modified Stiffness Approach BİNİCİ B., AKPINAR U., YAKUT A., TUNCAY K. Australian Earthquake Engineering Society Conference 2019, 29 November - 01 December 2019 VII. LATTICE APPROACH FOR NONLINEAR ANALYSIS FOR REINFORCED CONCRETE FRAMES AYDIN B. B., TUNCAY K., BİNİCİ B. 5th INTERNATIONAL CONFERENCE ON EARTHQUAKE ENGINEERING AND SEISMOLOGY, 8 - 11 November 2019 VIII. A two-step procedure for seismic assessment of mid-rise reinforced cocnrete buildings

Uğur A., BİNİCİ B., YAKUT A., TUNCAY K., Cenikli S.

5th International Conference on Earthquake Engineering and Seismology, 8 - 11 October 2019

IX. ANALYSES OF DAM – RESERVOIR SYSTEMS USING THE COUPLED MODIFIED APPLIED – FINITE ELEMENT METHODS

Soysal B. F., Tuncay K., Arıcı Y.

5. International Conference on Earthquake Engineering and Seismology, Ankara, Turkey, 8 - 11 October 2019

X. EVALUATING QUALITY AND PENETRATION RATE RELATION FOR COMMERCIALLY AVAILABLE FLOATING CAR DATA (FCD)

ALTINTAŞI O., TÜYDEŞ YAMAN H., TUNCAY K.

TRB 2019 Annual Meeting, Washington, Kiribati, 13 - 17 January 2019

- XI. Numerical Modeling of Reinforced Concrete Pressure Tunnels Using the Overlapping Lattice Method Işık G., Kalaycıoğlu M., Albostan U., CANBAY E., ARICI Y., BİNİCİ B., TUNCAY K.
   13th International Congress on Advances in Civil Engineering, İzmir, Turkey, 12 - 14 September 2018
- XII. Traffic Flow Characteristics of an Urban Arterial Based on Different Traffic Flow Models ALTINTAȘI O., TÜYDEŞ YAMAN H., TUNCAY K.

13th International Congress on Advances in Civil Engineering, İzmir, Turkey, 12 - 14 September 2018

XIII. Experimental Studies on Reinforced Concrete Pressure Tunnels
 Kalaycıoğlu M., Albostan U., Işık G., CANBAY E., ARICI Y., BİNİCİ B., TUNCAY K.
 13th International Congress on Advances in Civil Engineering, İzmir, Turkey, 12 - 14 September 2018

XIV. Overlapping Lattice Approach for Nonlinear Analysis of Reinforced Concrete Columns AYDIN B. B., TUNCAY K., BİNİCİ B.

13th International Congress on Advances in Civil Engineering, İzmir, Turkey, 12 - 14 September 2018

XV. Comparison of the Overlapping Lattice and the Finite Element Approaches for the Prediction of the Collapse State of Concrete Gravity Dams

Soysal Albostan B. F., Arıcı Y., Binici B., Tuncay K.

4th International Conference on Earthquake Engineering and Seismology, Eskişehir, Turkey, 11 - 13 October 2017, pp.1-8

- XVI. Explicit Dynamic Analysis of a Reinforced Concrete Frame up to Collapse KOCAMAZ K., TUNCAY K., BİNİCİ B.
  4th International Conference on Earthquake Engineering and Seismology, Eskişehir, Turkey, 11 October - 13 November 2017
- XVII. SIMULATION OF DAMAGE PROPAGATION ON MASSIVECONCRETE STRUCTURES, THE OVERLAPPING LATTICE MODEL VS. THE FINITE ELEMENT APPROACH SOYSAL B. F., ARICI Y., BİNİCİ B., TUNCAY K.

4th International Conference on Earthquake Engineering and Seismology, Eskişehir, Turkey, 11 - 13 October 2017

XVIII. COMPARISON OF THE OVERLAPPING LATTICE AND THEFINITE ELEMENT APPROACHES FOR THE PREDICTION OF THE COLLAPSE STATE OF CONCRETE GRAVITY DAMS SOYSAL B. F., ARICI Y., BİNİCİ B., TUNCAY K.

4th International Conference on Earthquake Engineering and Seismology, Eskişehir, Turkey, 11 - 13 October 2017

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# Supported Projects

- I. Binici B., Yakut A., Tuncay K., Canbay E., Project Supported by Other Official Institutions, Riskli Yapı Tespit Yönetmeliğinin Güncellenmesi, 2020 - 2022
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- III. TUNCAY K., TUBITAK Project, İç Basınçlı Beton Tünellerde Betonarme Kaplama Davranışının Yenilikçi Deneysel Ve Sayısal Yaklaşımlar Ile İrdelenerek Tasarım Aracı Oluşturulması, 2016 - 2019
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## **Contractual Researches**

- I. TUNCAY K., Çevre ve Şehircilik Bakanlığı ARGE Proj, 2016 2018
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## Activities in Scientific Journals

I. TEKNIK DERGI/TECHNICAL JOURNAL OF TURKISH CHAMBER OF CIVIL ENGINEERS, Assistant Editor/Section Editor, 2023 - Continues

## Metrics

Publication: 119 Citation (WoS): 1397 Citation (Scopus): 1692 H-Index (WoS): 19 H-Index (Scopus): 22

## **Coaching Duties**