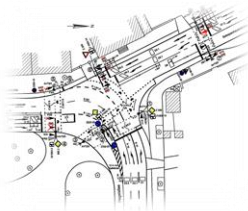




**ESKİŞEHİR OSMANGAZI UNIVERSITY, FACULTY OF ENGINEERING AND  
ARCHITECTURE, DEPARTMENT OF CIVIL ENGINEERING,  
“TRANSPORTATION DIVISION”**

As academic staff of transportation division, we carry out the following studies and research activities professionally:

- Road superstructure,
- Road and pavement design,
- Transportation planning,
- Traffic management applications and studies,
- Traffic simulation,
- Intelligent transportation system,
- Accident analysis,
- Public transportation systems,
- Railway and highway planning,
- Pedestrian and bicycle studies,
- Feasibility studies.



The transportation laboratory in our university is capable of performing various bitumen, aggregate and mixture design and tests. The laboratory is one of the advanced laboratories in Turkey. Some scientific research projects related to the road superstructure carried out in the transportation laboratory by our academic staff as follows:

- Determination of Asphalt Concrete Skid Resistance and Friction Properties
- Evaluation of the Modified with the Environmental Waste Road Surface Coating in the Context of Relation between Aggregate and Bitumen
- Investigation and Modeling of Bleeding and Deformation Problems in Bituminous Hot Mix Asphalt in the Context of Bitumen Grain Distribution and Traffic Loads
- Effects of Waste Tire Properties on Hot Mix Asphalt Properties

Some projects carried out by our academic team about transportation planning, traffic simulation and feasibility studies requested by public and private institutions are as follows:

- Transportation Master Plan for Eskisehir Metropolitan Municipality
- Eskisehir ESTRAM Tram Project Feasibility Study
- ESTRAM Eskisehir Technical University Campus Tram Line Feasibility Study
- ESTRAM New City Hospital Tram Line Feasibility Study
- ESTRAM Opera and New Police Department Building Tram Line Feasibility Study
- Eskisehir ESPARK Shopping Centre Traffic Effect and Parking Area Evaluation Project Feasibility Study
- Eskisehir Odunpazarı-Çankaya Cable Car System Feasibility Study
- Feasibility Study for ESTRAM New Trams and Extension of Existing Trams
- Eskisehir High Speed Station Feasibility Study
- Eskisehir Cable Car System Feasibility Study
- Provincial Traffic Safety Perception Evaluation
- Thermal Tourism Development in Eskisehir Metropolitan Municipality
- Determination of Transportation Price for minibuses in Eskisehir Metropolitan Municipality
- Investigation of Existing Transportation System of the Project of 12 New Districts Joining to Eskisehir Metropolitan Municipality Borders

## **MEMBERS OF TRANSPORTATION DIVISION**



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Some photos from working environment and equipment in the transportation laboratory are as follows:



Test and Experiments Performed in Transportation Research Laboratory at the Department of Civil Engineering, Eskisehir Osmangazi University are given in the table below:

	<b>Test and Experiment Name</b>
<b>Aggregate</b>	Sieve Analysis of Fine and Coarse Aggregates
	Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
	Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate
	Flat and Elongated Particles in Coarse Aggregate
	Test for the Surface Frictional Properties
	Relative Density (Specific Gravity) and Absorption of Coarse Aggregate Test
	Sand Cone Test
	Sand Equivalent Test
	Methylene Blue Test
	Test for Resistance of Coarse Aggregate to Degradation by Abrasion in the Micro-Deval Apparatus
	Polished Stone Value / Resistance to Polishing Test
<b>Bitumen</b>	Penetration of Bituminous Materials Test
	Softening Point of Bitumen (Ring-and-Ball Apparatus) Test
	Test for Ductility of Asphalt Materials
	Test for the Effect of Heat and Air on Asphalt Materials (Thin Film Oven Test and Rotational TFOT)
	Test for Density of Semi-Solid Asphalt Binder (Pycnometer Method)
	Test for Elastic Recovery of Asphalt Materials
	Determination of complex shear modulus and phase angle - Dynamic Shear Rheometer (DSR)
	Test for Flash and Fire Points by Cleveland Open Cup Tester
	Test for Saybolt Viscosity
	Determination of binder aggregate adhesivity by the Vialit plate shock test method
<b>Design Sample</b>	Resistance of Plastic Flow of Bituminous Mixtures Using Marshall Apparatus
	Determination of void characteristics of bituminous specimens
	Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyrotory Compactor
	Static Creep Test
	Dynamic Creep Test
	Centrifuge Extraction Test
	Soxhlet Extraction Test
	Asphalt Concrete Skid Resistance and Friction Properties Test
	Nuclear Density Measurement Test

## **BRIEF INFORMATION FOR MEMBERS OF TRANSPORTATION DIVISION**

### **Prof. Dr. Murat KARACASU**

He graduated from Eskisehir Osmangazi University Civil Engineering Department in 1994. He received his MSc. degree from Eskisehir Osmangazi University Civil Engineering Department Transportation Division in 1996 and Ph.D. from Istanbul Technical University Civil Engineering Department Transportation Engineering Division in 2003. He is now the head of the Transportation Division of Civil Engineering Department in Eskisehir Osmangazi University. He has knowledge and studies in different branches of transportation technologies such as transportation policy, transportation materials, transportation planning, traffic and highway engineering. He has been participated in many master's and doctoral thesis as a supervisor. He carried out many projects about transportation in Turkey such as Eskisehir Transportation Master Plan (EUAP 2035), Eskisehir Provincial Traffic Safety Perception Evaluation Project, Feasibility Study for ESTRAM Tramline Project, Feasibility Study for High Speed Train Station in Eskisehir, Feasibility Study for Eskisehir Cable Car System, Consultancy for Anadolu University National Rail System Research and Test Center, Feasibility Study for Eskisehir ESPARK Shopping Centre Traffic Effect and Parking Area Evaluation Project, etc.

### **Asst. Prof. Dr. Şafak BİLGİÇ**

He graduated from Anadolu University Civil Engineering Department in 1994. He received his MSc. degree from Eskisehir Osmangazi University Civil Engineering Department Transportation Division in 1996 and Ph.D. from Istanbul Technical University Civil Engineering Department Transportation Engineering Division in 2002. He has knowledge and studies in different branches of transportation technologies such as transportation economy, transportation policy, transportation planning, traffic and railroad engineering. He has been participated in many master's and doctoral thesis as a supervisor. He carried out many projects about transportation in Turkey such as Eskisehir Transportation Master Plan (EUAP 2035), Feasibility Study for ESTRAM Tramline Project, Feasibility Study for High Speed Train Station in Eskisehir, Feasibility Study for Eskisehir Cable Car System, Consultancy for Anadolu University National Rail System Research and Test Center, Feasibility Study for Eskisehir ESPARK Shopping Centre Traffic Effect and Parking Area Evaluation Project, etc.

**Res. Asst. Dr. Abdulkadir ÖZDEN**

He graduated from Atatürk University Civil Engineering Department in 2005. He received his MCE. degree in 2010 and Ph.D. in 2017 from University of Delaware Civil & Environmental Engineering Department Transportation Engineering Division. He has knowledge and studies in different branches of transportation technologies such as transportation planning, traffic engineering, data analyzing and expert systems in transportation, etc. He took part in traffic data collecting and analyzing in Delaware State project.

**Res. Asst. Dr. Çağdaş KARA**

He graduated from Eskisehir Osmangazi University Civil Engineering Department in 2009. He received his MSc. degree from Eskisehir Osmangazi University Civil Engineering Department Transportation Division in 2012 and he is continuing his Ph.D. studies in Eskisehir Osmangazi University Civil Engineering Department Transportation Division. He has knowledge and studies in different branches of transportation technologies such as traffic engineering, transportation planning, data mining and analyzing, etc. He took part in some projects as a researcher such as Eskisehir Transportation Master Plan (EUAP 2035), Feasibility Study for Eskisehir ESPARK Shopping Centre Traffic Effect and Parking Area Evaluation Project, Feasibility Study for ESTRAM Tramline Project.

**Res. Asst. Kadir Berkhan AKALIN**

He graduated from Eskisehir Osmangazi University Civil Engineering Department in 2013. He received his MSc. degree from Eskisehir Osmangazi University Rail Systems Department Rail System Track Engineering Division in 2016 and he is continuing his Ph.D. studies in Eskisehir Osmangazi University Civil Engineering Department Transportation Division. He has knowledge and studies in different branches of transportation technologies such as transportation planning, traffic engineering, railway engineering, data analyzing, accident analysis, etc. He took part in some projects as a researcher such as Eskisehir Transportation Master Plan (EUAP 2035), Eskisehir Provincial Traffic Safety Perception Evaluation Project, Feasibility Study for Eskisehir ESPARK Shopping Centre Traffic Effect and Parking Area Evaluation Project, Feasibility Study for ESTRAM Tramline Project.