

## CONTACT INFORMATION

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Programme coordinator: Natalia Telyatnikova

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## MOSCOW STATE UNIVERSITY OF RAILWAY ENGINEERING OF EMPEROR NIKOLAI II

INSTITUTE OF THE TRACK, CONSTRUCTION AND STRUCTURE

## TRANSPORT ENGINEERING SUMMER SCHOOL

Russia Moscow

**Dates: 16th August 2017 - 28th August 2017**

The School provides the opportunity to attend intensive academic program with lectures, company visits and workshops from Russian and International experts.

### LEARNING OBJECTIVES

The course aims to introduce students and researchers to the wide range of technical subjects and information when studying transport and infrastructure engineering at university, as well as the challenges facing the modern engineer.

### COMPETENCE DEVELOPMENT

By the end of the course, students will:

- **Have an understanding of the fundamentals of transport engineering** of Bridges and Railway Construction;
- **Understand how these knowledge are used to comprehend the world of construction infrastructure objects;**
- **Have a basic understanding of BIM methodology** of modern applications in infrastructure projects.

Transport engineers plan, design and operate the large public and private infrastructure systems that connect our physical world.

**There is a need to broad range of continually evolving, large-scale transport infrastructure, including roads, railway, bridges and tunnels.**

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Transport engineers quantify and optimize the mobility infrastructure networks to meet travel and freight demands, while ensuring safety, equity and sustainability, at minimal levels of congestion and cost.

**Transport engineering** has always been **one of the essential civil engineering disciplines, impacting roadways, bridges, transit stations, and other.** Transport engineering has now developed into a multidisciplinary field spanning economics, politics, sociology and psychology, in addition to its core mathematical, engineering and computational principles.

**PROGRAMME**

<p style="text-align: center;"><b>TRANSPORT ENGINEERING. ROADS, RAILWAYS, TUNNELS AND BRIDGES</b></p>	<p style="text-align: center;"><b>ICT IN CONSTRUCTION</b></p>	<p style="text-align: center;"><b>BUILDING INFORMATION MODELING (BUILDINGS AND INFRASTRUCTURE)</b></p>
<ul style="list-style-type: none"> <li>- <b>Bridges Structural design.</b> Steel bridges, Truss design.</li> <li>- <b>Subgrade of Railways.</b> Requirements, Constructions and Analysis».</li> <li>- <b>Reliability of building structures</b></li> <li>- <b>Comparing Russian (SP) and European (Eurocode) design standards</b></li> <li>- <b>Earthquake Engineering:</b> Theory and Implementation for Transport Infrastructures</li> <li>- <b>Mechanics of Materials</b> (Resistance of Materials)</li> <li>- <b>Application of Innovative Materials for the Structural Elements of Bridges;</b></li> <li>- <b>Experimental Investigation of Structural Elements of Reinforced Concrete Bridges;</b></li> <li>- <b>Bridges on Hi-speed Railways</b></li> </ul>	<ul style="list-style-type: none"> <li>- <b>Design of Bridges Using Finite Element Analysis</b> Software;</li> <li>- <b>Analysis of Rational Combined Parameters</b> for Design of Pedestrian Bridges;</li> <li>- <b>Application programming in Autocad;</b></li> <li>- <b>Computational Mechanics;</b></li> <li>- <b>Numerical programming methods</b></li> </ul>	<ul style="list-style-type: none"> <li>- <b>An Introduction to Building Information Modeling;</b></li> <li>- <b>BIM Technology;</b></li> <li>- <b>BIM Process, Adoption and Integration;</b></li> <li>- <b>BIM for Infrastructure;</b></li> <li>- <b>BIM –Decisions for Infrastructure Design and Exploitation.</b></li> </ul>

## ADMISSION- AND LANGUAGE REQUIREMENTS

Our summer school is focused on **Bachelor's in their second to last or last year, Master's and Phd students and researchers** in, but is also **open for anyone with broad interests and an inquisitive mind.**

**Courses in Transport Engineering Summer School are in English** and partly in Russian (translation provided). Therefore, is a **great opportunity to practice your English language skills!**

Nevertheless we expect you to have a **good command of the English language.** These language requirements are your own responsibility and will enable you to follow the course lectures, write papers and participate actively in the discussions. Therefore applicants do not need to prove the suggested language skills in the registration process.

## DEADLINES

DEADLINE FOR APPLICATIONS	NOTIFICATION DATE	BEGINNING OF SUMMER SCHOOL
<b>Deadline for applications:</b> <b>12th June 2017</b>	<b>Notification date:</b> <b>15th June 2017</b>	<b>Arrival date:</b> <b>16<sup>th</sup> August 2017</b>  <b>Beginning of Summer School:</b> <b>17th August 2017</b>  <b>End Date –</b> <b>28th August 2017</b>

**COST OF PARTICIPATION is 600 EURO (payment in Russian rubles on current currency rate)**

**Our fee is an all-in package consisting the following components:**

- Course participation
- Course materials
- Coffee/tea
- Cultural Events and Company visits

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A stay at the dorm at Moscow State University of Railway Engineering is not included, but we can offer you the dormitory room for extra price (around 70 Euro for study period).

For those not comfortable sleeping in the dormitory room, we offer different accommodations for additional costs –please contact us and we will offer you the best solution.

**TRANSPORT ENGINEERING SUMMER SCHOOL REGISTRATION IS OPEN AND WE WILL HAPPY TO SEE YOU IN MOSCOW!**

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