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1943



# PROGRAM

## International summer online-school MODERN TRENDS IN STEM EDUCATION

Timing of the school: July 27-31, 2020.

Platform Ciscowebexmeeting:

[https://meetingsemea14.webex.com/meet/gauhar\\_omashova](https://meetingsemea14.webex.com/meet/gauhar_omashova)



+77475643621



www.ukgu.kz



gauhar\_omashova@mail.ru

## July, 27, Monday

Time (Moscow time)	Topic of lecture, practical, laboratory lesson	Full name, speaker position, University (country)
<b>10.00-10.15</b>	Welcoming address	Aigul Iskakova, Vice-rector for Strategic development and Internationalization, M.Auezov South Kazakhstan University, Kazakhstan
<b>10.15-11.00</b>	“Need for STEM” in Russia	Maxim Bondarev, PhD, Head of the Department of Primary Education, Southern Federal University, Russian Federation
<b>11.15-12.00</b>	”Applying STEM Instructional Strategies in the Classroom”:  1.“Learning-by-Design Pedagogy” by Cope and Kalantzis	Mr Jonas Bäckelin, Linköping University, Sweden
<b>12.15-13.00</b>	2. Application of a design element in the classroom with "Guest Speaking Session"	Mr Jonas Bäckelin, Linköping University, Sweden
<b>13.15-14.00</b>	3.future exploration of “Educational Data Mining”	Mr Jonas Bäckelin, Linköping University, Sweden
<b>14.00-14.15</b>	Question-and-answer	

July, 28 Tuesday

Time (Moscow time)	Topic of lecture, practical, laboratory lesson	Full name, speaker position, University (country)
10.00-10.45	Methods and practical examples for teaching STEM - Problem based learning, Inquiry based learning and Phenomenon based learning	Topias Ikävälko, Science education specialist and PhD Student, University of Helsinki, Finland
11.00-11.45	Lean technologies in STEM education	Maxim Velichko, Associate Professor at the Department of Informatics, Natural Sciences and Teaching Methods Belgorod State University, Russian Federation
12.00-12.45	What is the point of STEM?	Svetlana Konyushenko, professor, Institute of Education, Immanuel Kant Baltic Federal University, Kaliningrad, Russian Federation
13.00-13.45	Experience of STEM learning in Kazakhstan	Balgyn Akhmetova, PhD student, L.N. Gumilyov Eurasian National University, Kazakhstan
13.45-14.00	Question-and-answer	

**July 29, Wednesday**

<b>Time (Moscow time)</b>	<b>Topic of lecture, practical, laboratory lesson</b>	<b>Full name, speaker position, University (country)</b>
<b>10.00-10.45</b>	Online platforms and project for STEM education	Gaukhar Omashova, associate professor of the Department for Physics, M.Auezov South Kazakhstan University, Kazakhstan
<b>11.00-11.45</b>	Training laboratory class in physics using online educational resources	Polat Saidakhmetov, Head of the Department for Physics, M.Auezov South Kazakhstan University, Kazakhstan
<b>12.00-12.45</b>	Cognitive technology in training STEM teacher	Svetlana Konyushenko, professor, Institute of Education, Immanuel Kant Baltic Federal University, Kaliningrad, Russian Federation
<b>13.00-13.45</b>	Basics of robotics in STEM	Maxim Velichko, Associate Professor at the Department of Informatics, Natural Sciences and Teaching Methods  Belgorod State University, Russian Federation
<b>13.45-14.00</b>	Question-and-answer	

## July, 30 , Thursday

<b>Time (Moscow time)</b>	<b>Topic of lecture, practical, laboratory lesson</b>	<b>Full name, speaker position, University (country)</b>
<b>10.00-14.00</b>	STEM-Hackathon: teamwork on a project case	Maxim Bondarev, PhD, Head of the Department of Primary Education, Southern Federal University, Russian Federation; Elizaveta Mukhanova, PhD, Southern Federal University, Russian Federation
<b>14.00-14.15</b>	Question-and-answer	

## July, 31, Friday

<b>Time (Moscow time)</b>	<b>Topic of lecture, practical, laboratory lesson</b>	<b>Full name, speaker position, University (country)</b>
<b>10.00-14.00</b>	STEM-Hackathon: teamwork on a project case	Maxim Bondarev, PhD, Head of the Department of Primary Education, Southern Federal University, Russian Federation; Elizaveta Mukhanova, PhD, Southern Federal University, Russian Federation
<b>14.00-16.00</b>	Presentation of project case solutions	Maxim Bondarev, PhD, Head of the Department of Primary Education, Southern Federal University, Russian Federation; Elizaveta Mukhanova, PhD, Southern Federal University, Russian Federation
<b>13.45-14.00</b>	Question-and-answer	