THE MOTTO OF THE SCHOOL: "FROM MISSION IDEA TO NANO SATELLITE PROJECT"

ECTS credits: 5.0

SAMARA UNIVERSITY

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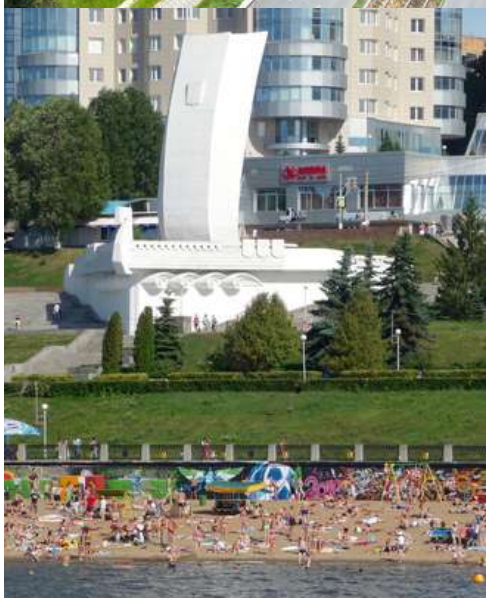

BRIEF DESCRIPTION

Attending the School participants have an opportunity to share there challenging ideas of new space missions with russians and people from other countries and establish inter university cooperation. Discussing the results of realized space projects, visiting lectures and seminars given by leading scientists and experts in the field of space technologies and space experiments. According to the concept of competitive activity participants included in one of the teams working on nano satellite projects with regard to their interests and background.

AIMS

The overall aims of the School is to involve young people into the development of micro/nanosatellites and implementation of experiments in space, to provide new fundamental knowledge and skills in applied technologies.

Costs & Discounts:

320 Euro (Aprox. US$356) - until March 17, 2020
400 Euro (Aprox. US$444) - until May 01, 2020
500 Euro (Aprox. US$555) - until May 31st 2020

Registration fee and migration support: US$325

Costs include: Accommodation in university hostel, three meals a day, transfer from the airport (on the day of arrival).

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PRE EDUCATION PROCESS

Registration : Deadline - February 10th 2020

Distant education stage at homeland

Duration: February 21 - March 6.

At this stage, under the guidance of Professor Ivan Timbai, applicants should study lecture materials and do assignments and tests on-line. During distance stage, participants will gain basic knowledge in the field of space flight mechanics and dynamics.According to the results of assignments and tests, participants for the full-time stage (in Samara) will be selected.

Entrance requirements:

. Intermediate English

. To aprove the 'Distant education stage'

Main goals and topics of the School program:

. Lessons learned for nano satellites missions

. Attitude control technologies for nano satellite

. Advanced space navigation technologies

. Discussion of new nanos atellites missions

. Project work on nano satellites mission analysis

. Problems of nano satellites piggyback launch

. Establishing cooperation between universities in the field of space technologies and experiments in space.

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Courses:

. Introduction to the nano satellite design
. Design of electronic subsystems for nano satellites
. The space environment and its impact on a spacecraft
. MatLab for mission analysis
. Mission analysis: space flight mechanics
. Features of the nano satellite dynamics in LEO
. The problems of nano satellite cluster launching and the deployers for nano satellites separation
. Space navigation
. Methods and algorithms for nano satellite attitude determination & control
. Tests of nano satellites; facilities, types and programs of tests
. Aviation engines history center / Nano satellite testing center
. Introduction to the software development for nano satellite micro controllers
. Operating of nano satellites and the ground operating center
. Software development for microcontrollers
. Innovation education programs in space technologies of Samara University

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