



ALAR
Training Center



ONLINE SUMMER SCHOOL

COMPUTER MODELING AND SIMULATION FOR ENGINEERS

Aug 02 - 13, 2021

ARE YOU AN ENGINEER WHO WANTS TO GAIN
NEW SKILLS IN COMPUTER MODELING AND
SIMULATION? JOIN THIS SUMMER SCHOOL!

ECTS credits: 4.0



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St. Petersburg Polytechnic
University



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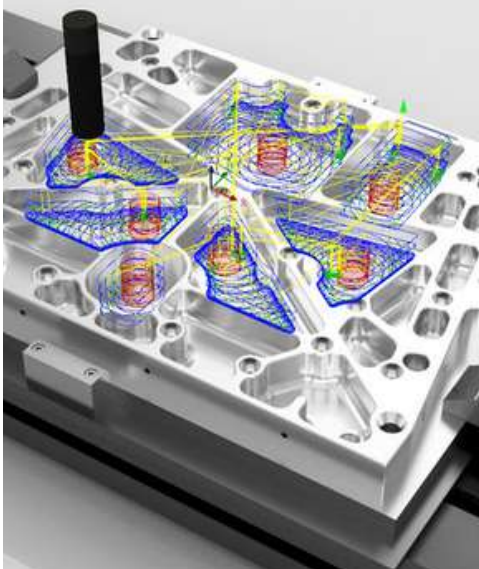
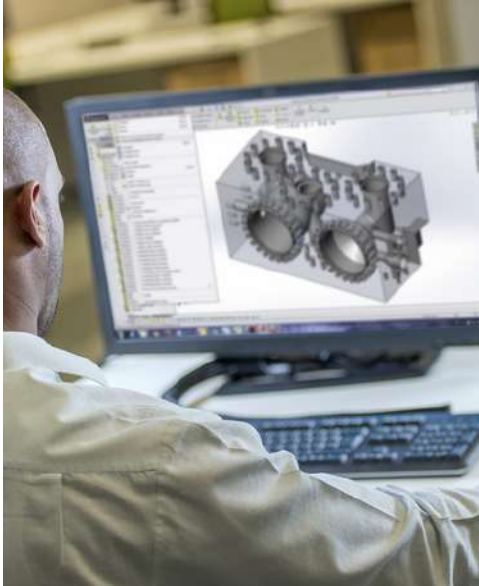


COURSE DESCRIPTION

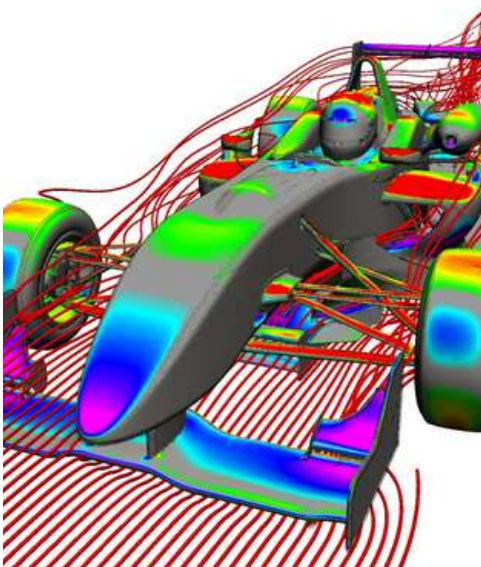
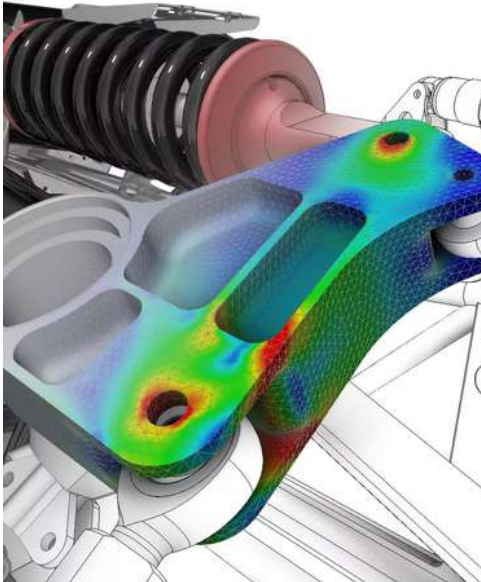
The course curriculum includes:

- - Introduction in Modelica (Dymola, OpenModelica)
- - Introduction in MVL (MwStudium, Rand Model Designer).

Introduction in Object-Oriented Modeling is based on two courses «Modeling and Simulation with Modelica for engineers» (prof. Alfonso Urguia, Spain) and «Rand Model Designer for beginners» (prof. Yuri Senichenkov, Russia) developed for InMotion Project. Modelica and Model Vision Language are object-oriented, equation based modeling languages for modeling and simulation complex dynamical systems. Models of complex dynamical systems are hierarchical, component models with event-driven behavior. Both courses include lectures, practical work and independent work with tools for visual modeling.



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Curriculum

- - Isolated models based on differential and difference equation/lectures
- - Simple dynamical systems/practical workshop
- - Hybrid system and State Machines/lectures
- - Event-driven behavior: bouncing ball, ideal diod/practical workshop
- - Classes, objects, inheritance, packages and libraries/lectures
- - Components with inputs/outputs («Causal» modeling)/lectures
- - Control systems: PID regulator/practical workshop
- - Components with contacts/flows («Physical» Modeling)/lectures
- - Electrical and Hydraulic component systems/practical workshop

Cost:

US\$421 - includes registration, teaching costs, 4.0 ECTS credits Certificate, additional Russian Language virtul course by ALAR Training Center (33h) + Certificate

Program dates: Aug 02 - 13, 2021

Registration deadline: 12 July 2021

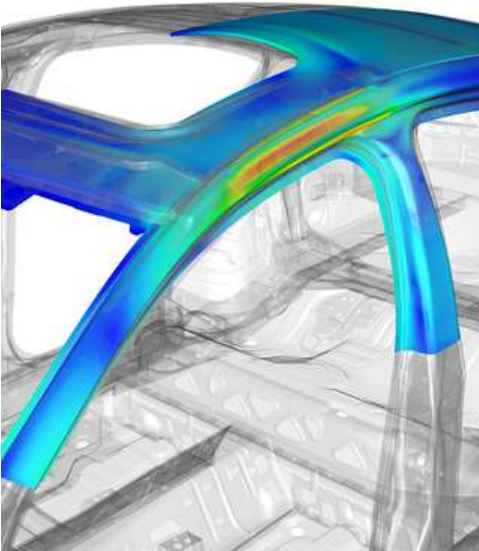
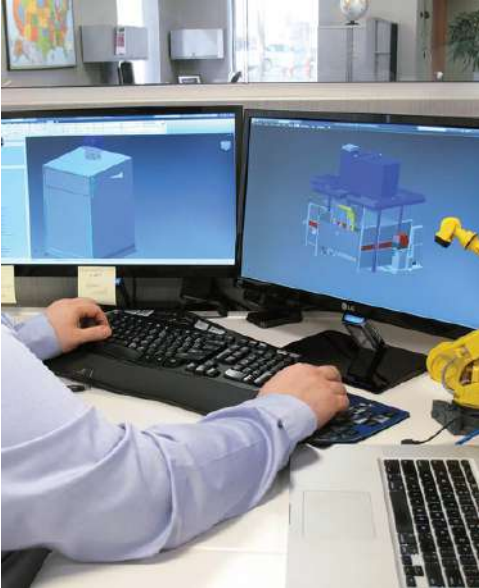
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Entrance requirements

- Good command of English. All classes and extracurricular activities are carried out in English. Knowledge of the Russian language is not required.
- Applicants are expected to have at least 1 year of University level studies.

Professors and lecturers

- Prof. Yuri Senichenkov, Polytech (Russia)

Program partners:

- UNED: National University of Distance Education (Spain)



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