

**Third International Summer School on
Engineering Computing in Nuclear Technologies
02-13 July 2018**

Venue: conference hall, classroom B-103, library

Date	Session	Time	Topic	Lecturer / Organizer	
First week					
Mon 2 nd July	School opening (conf. hall)	10:00 – 10:30	Passing to MEPHI (meeting at the gates)	Tikhomirov G.V. Bahdanovich R. B. Saldikov I.S. Farkhulina A. L.	
		10:30 – 11:30	<ul style="list-style-type: none"> ○ Opening of the School ○ Introduction of participants ○ School plan, objectives, etc. ○ Presentation about MEPHI ○ Presentation about ECM lab ○ Nuclear Power: advantages, prospects & main concepts 		
		11:30 – 11:50	Break		
		11:50 – 14:20	Monte-Carlo basics. MCU code		
		14:20 – 15:00	Lunch		Shkarovsky D.A.
		15:00 – 16:10	Monte-Carlo basics. MCU code		
		16:10 – 16:30	Break		
		16:30 – 18:00	MCU setup. Input data basics. First steps		
		10:00 – 11:30	Nuclear data. MCU physics		
	Tue 3 rd July	MCU	11:30 – 11:50		Break
11:50 – 14:20			MCU simple geometry		
14:20 – 15:00			Lunch		
15:00 – 16:10			Simple practical tasks		
16:10 – 16:30			Break		
16:30 – 18:00			Simple practical tasks		
			10:00 – 13:00	Excursion to lab 344, dept. №9, Nano-center, Laser-center, NEVOD	
Wed 4 th July	MCU	13:00 – 13:40	Lunch	Shkarovsky D.A.	
		13:40 – 15:40	Practical Tasks		
		15:40 – 16:00	Break		

16:00 – 18:00 Group Project (MCU part) Bahdanovich R.B.

10:00 – 11:30 Fundamentals of computational fluid dynamics. Equations, grids, numerical schemes

11:30 – 11:50 Break Sergeenko K.M., Sapozhnikov I.D.

11:50 – 14:20 Fundamentals of computational fluid dynamics. Equations, grids, numerical schemes

Thu
5th July FlowVision
(Library)

14:20 – 15:00 Lunch

15:00 – 16:10 Consortium "Development" software packages Chernyadeva O.Y.

16:10 – 16:30 Break

16:30 – 17:20 WinMachine software package Prokopov V.S.

17:20 – 18:00 FlowVision – Main Possibilities and Experience of using in Nuclear Industry Shchelyaev A.E.

10:00 – 11:30 FlowVision Practical Task 1

11:30 – 11:50 Break

11:50 – 14:20 FlowVision Practical Task 1

Fr
6th July FlowVision

14:20 – 15:00 Lunch

15:00 – 16:10 FlowVision Practical Task 1

16:10 – 16:30 Break

16:30 – 18:00 Group Project (FlowVision part)

Markova T.V.
Fisher J.V.
Farkhulina A.L.

Sat
7th July Site seeing 10:00-18:00 Sightseeing around Moscow.

Second week

10:00 – 11:30 Introduction to STAR-CCM+

11:30 – 11:50 Break

11:50 – 14:20 Simulation workflow: step-by-step and supplementary materials

Mon
9th July CFD-
models of
process
equipment

14:20 – 15:00 Lunch

15:00 – 16:10 Simulation workflow: field functions

16:10 – 16:30 Break

16:30 – 18:00 Group Project

Balakin B.V.

		10:00 – 11:30	Fundamentals of computational fluid dynamics. Turbulence, examples	
		11:30 – 11:50	Break	
Tue 10 th July	CFD- models of process equipment	11:50 – 14:20	Fundamentals of computational fluid dynamics. Turbulence, examples	Sergeenko K.M., Sapozhnikov I.D., Balakin B.V.
		14:20 – 15:00	Lunch	
		15:00 – 16:10	Tutorial: applied CFD problems and their validation	
		16:10 – 16:30	Break	
		16:30 – 18:00	Group Project	

		10:00 – 11:30	Introduction to the finite element method	
		11:30 – 11:50	Break	Melikyan A.G.
Wen 11 th July	Fidesys	11:50 – 14:20	The general structure and components of CAE Fidesys and their interaction	
		14:20 – 15:00	Lunch	
		15:00 – 16:30	Group Project	
		16:30 – 16:50	Break	
		16:50 – 18:00	Group Project	

Thu 12 th July		10:00 – 18:00	Group Project	
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		11:00 – 13:30	Group Project Presentations	
Fr 13 th July	School closing (conf. hall)	13:30 – 14:00	Participants' survey (feedback)	
		14:00 – 15:00	Lunch	
		15:00 - 16:00	School closing	Tikhomirov G.V. et.al.

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Facebook group: <https://www.facebook.com/groups/ECINT/>

