July 16

16-00 – 17-30	Registration
18-00 – 20-00	Welcome- party

July 17, "fundamental background"

9-30 – 10-45	Atom and molecular structure, quantum level of matter *(Alexander Nemukhin, MSU)*
10-50 – 11-10	*Coffee-break*
11-10– 12-25	Matter structure: gases, liquids, condensed (crystal and amorphous) *(Alexei Khokhlov, MSU)*
12-30 – 14-00	*Lunch*
14-00 – 15-15	Thermodynamics and statistical physics, phase transitions, field-driven and particle-driven description *(Mikhail Tamm, MSU)*
15-20 – 15-40	*Coffee-break*
15-40	practical seminar
17-30	*MSU campus excursion, free time*

July 18, "simulation methodology"

9-30 – 10-45	Ab-initio & DFT *(Gian Paolo Brivio, Milano-Bicocca, Italy)*
10-50 – 11-10	*Coffee-break*
11-10– 12-25	MD *(Alexey Shaytan, MSU)*
12-30 – 14-00	*Lunch*
14-00 – 15-15	Mesoscopic and Monte Carlo Simulations *(Marcus Müller, Gottingen, Germany)*
15-20 – 15-40	*Coffee-break*
15-40	practical seminar

July 19, "hardware+software"

9-30 – 10-45	Supercomputer architecture *(Anton Korzh, T-platforms ltd)*
10-50 – 11-10	*Coffee-break*
11-10– 12-25	Atomistic simulations on supercomputers using open source codes *(Igor Morozov, JIHT)*
12-30 – 14-00	*Lunch*
14-00 – 15-15	Predictive Modeling of Advance Materials and Material Processing Based on Multiscale Simulation Paradigms *(Boris Potapkin, Kintech lab)*
15-20 – 15-40	*Coffee-break*
15-40	practical seminar

July 20, "simulations in material science: examples"

9-30 – 10-15	Composite materials: mechanical properties *(Luciano Colombo, University of Cagliari, Italy)*
10-20 – 10-40	*Coffee-break*
10-40 – 11-25	Materials in extreme states: from warm dense matter to laser induced surface nanostructuring *(Genry Norman, JIHT)*
11-30 – 11-40	*Break*
11-40 – 12-25	Materials for solar cell applications *(Andrei Knizhnik, Kurchatov Institute)*
12-30 – 14-00	*Lunch*
14-00 – 14-45	student talks
14-45 – 15-05	*Coffee-break*
15-05 – 15-50	student talks
15-50 – 16-00	*Break*
16-00 – 17-30	poster session
18-00 – 21-00	*School dinner*

July 21, "simulation of complex systems: examples"

10-30 – 11-15	Multiscale modelling in materials science *(James Elliott, University of Cambridge, UK)*
11-20 – 11-40	*Coffee-break*
11-40 – 12-25	Large-scale quantum molecular dynamics *(Joost VandeVondele, ETH Zurich, Switzerland)*
12-30 – 14-00	*Lunch*
14-00 – 14-45	Organic Solar cells: from material design to system efficiency *(Jenny Nelson, Imperial College, UK)*
14-50 – 15-10	*Coffee-break*
15-10 – 15-55	Cell membranes: structure and transport properties *(Mounir Tarek, Nancy University, France)*
16-00 – 16-10	*Break*
16-10 – 17-30	poster session

**Lectures will be held at lecture hall 1624,
MSU main building, section A, 16-th floor**

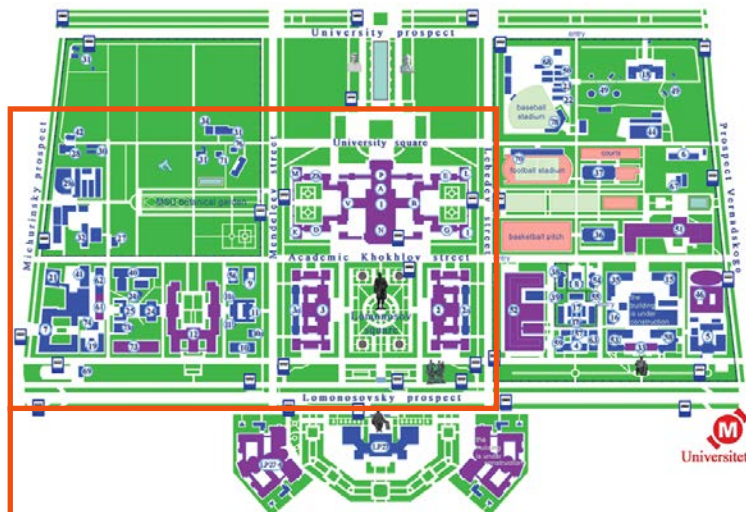*Lunches will be served at canteen #4, MSU main building, section A, 2-d floor*

MSU Campus Scheme

Main building: lecture hall and lunches
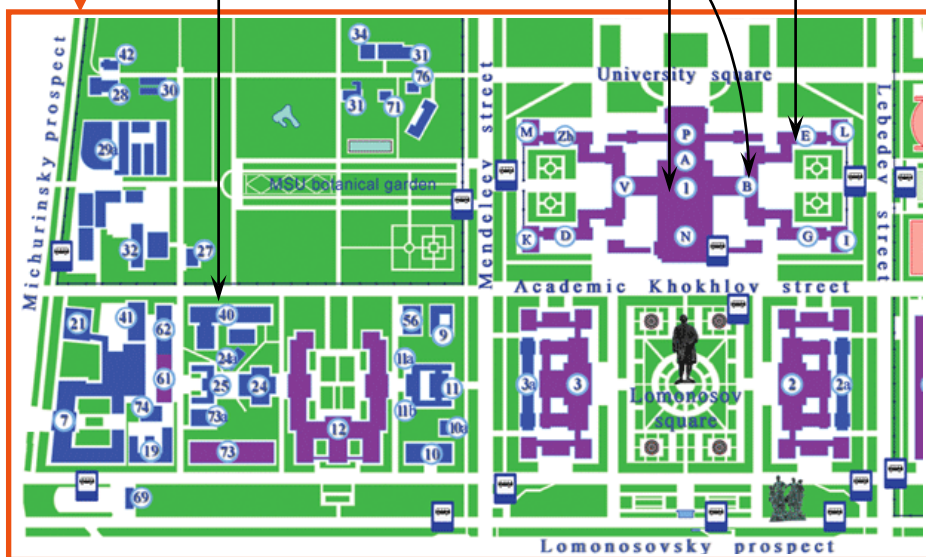Lectures: lecture hall 1624, section A, 16-th floor
Lunches: canteen #4, section A, 2-d floor

MSU Guest house (same building)
Section B (reception)   Section E (living area)

Welcome Party and School Dinner place

Lomonosov Moscow State University

MSU Nanotechnology Education and Research Center

PCAM European Doctorate

PCAM

Computer simulation of advanced materials

International Summer School

http://nano.msu.ru/en/csam2012

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