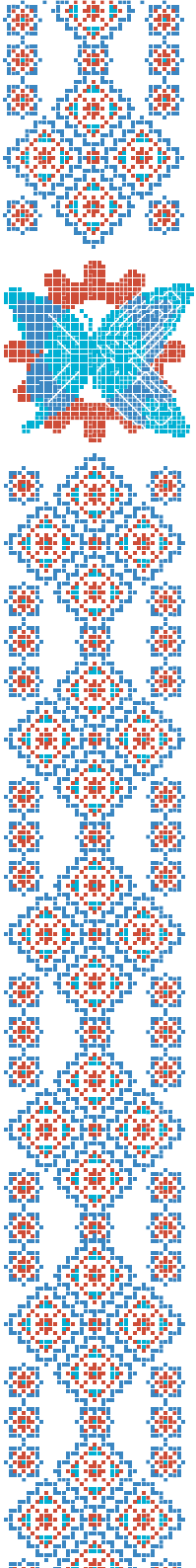
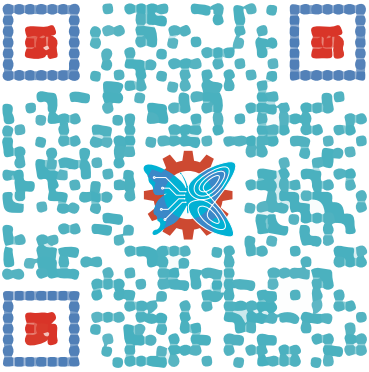
SUMMER SCHOOL

Achievements and applications of contemporary informatics, mathematics and physics

2014

http://summerschool.ssa.org.ua





Student Science Association

+38 044 454-95-72

summerschool@ssa.org.ua

http://ssa.org.ua

Ukraine
03056 Kyiv, Politekhnichna 14,
Building #14, room 6

IX Summer School "Achievements and Applications
of Contemporary Informatics, Mathematics and Physics"

National Technical University of Ukraine
"Kyiv Polytechnic Institute"

August 1-15, 2014 — Kyiv, Ukraine

http://summerschool.ssa.org.ua/

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WELCOME



The Summer School "Achievements and Applications of Contemporary Informatics, Mathematics and Physics" is an annual project organized and held by Student Science Association and the National Technical University of Ukraine "KPI" in Kyiv, Ukraine. The prior aim of the project is to promote science among youth.

The courses are held by highly qualified lecturers and scientists from Ukraine, Austria, Canada, Estonia, France, Germany, Italia, Sweden, Turkey, UK, USA and other countries. Such variety of the lecturers will provide multinational environment for discussions on the hot topics of contemporary science and technology. Different teaching methods and techniques are used at the School including lectures, workshops, round tables and presentations. Apart from educational program, exciting leisure activities such as excursions, debates and quest, cinema club and parties are prepared for the participants.

This summer we will be offering four streams covering the most intriguing and contemporary academic fields - **Applied Computer Science, Energy, Neuroscience and Operational Research**. All of our courses are designed to challenge and inspire you in the field that holds your interest. In Kiev, an ancient city known for design, technology and a vibrant cultural life, discover the perfect environment for studying, making new friends and having fun!

ORGANIZERS

National Technical University of Ukraine "Kyiv Polytechnic Institute" (NTUU "KPI") founded in 1898 is one of the oldest higher education institutions in Ukraine. It ranks first nationally among technical universities and has educational partners all over the world. NTUU "KPI" maintains its solid reputation for highly skilled specialists preparation - the ones recognized both by scientific community and employers.

Student Science Association (SSA) is a team of young and motivated people who create a science-friendly environment by implementing successful projects that are aimed at supporting knowledge-intensive ideas, innovations and experience exchange.

The projects of SSA are aimed at active people who are interested in obtaining, sharing and creating new ideas and technologies at NTUU "KPI", Ukraine and worldwide.

PROJECT TEAM



Oleksii Pasichnyi
Strategic development & academic program



Kate Pereverza
Academic program



Dmytro Fishman
Academic program



Oksana Dziuba
Secretary



Liudmyla Pavlenko
Work with partners



Irina Smolina
Information campaign



Lena Sologub
Work with participants



Marina Kozar
Logistics & infrastructure,
social program

Sandra Yaremchuk
Work with lecturers





Mariia Shchurska
Web-administrator

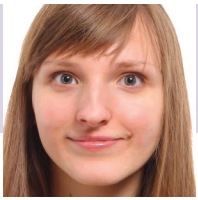
Iuliia Shevchenko
Work with participants





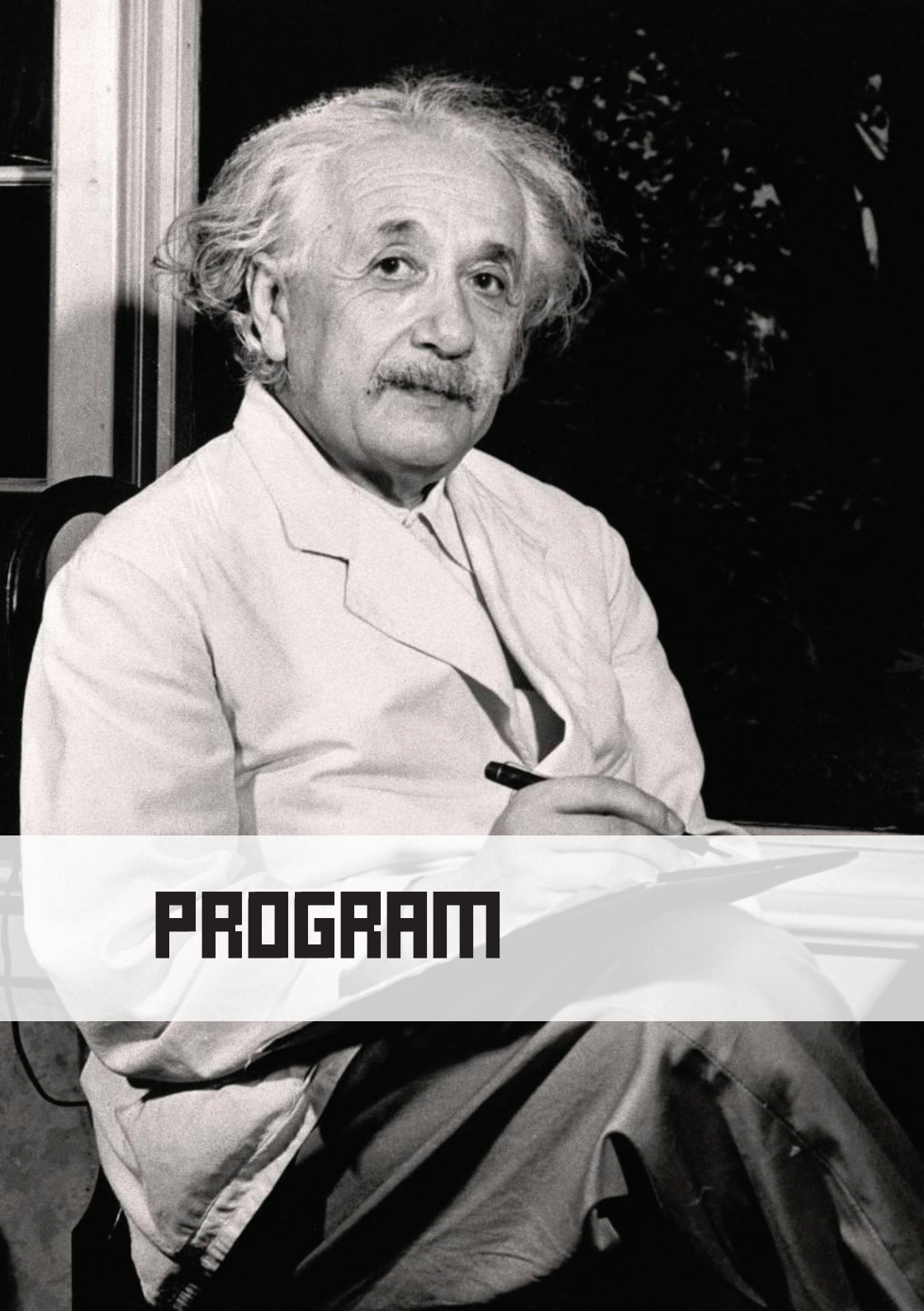
Yevheniia Kuhuk
Work with lecturers

Iuliia Iaryna
Work with lecturers





Anna Gnidets
Meals, accommodation
manager



PROGRAM

GENERAL SCHEDULE

Overview

Mon			4	Studies	11	Free day	
Tue			5		12	Studies	
Wed			6	Excursion	13		
Thu	31	*Arrivals*	7	Studies	14		
Fri	1	Opening, studies	8		15	Studies, closing	
Sat	2	Studies	9		16	*Departures*	
Sun	3		10				

Regular study day

	ACS	E	NS	OR
09^{00}	*Breakfast*			
10^{00}	Studies	Studies	Studies	Studies
13^{30}	*Lunch*			
15^{00}	Studies	Studies	Studies	Studies
16^{40}	Free time			
17^{40}	*Dinner*			
18^{30}	Social program			

Detailed schedule for every stream you can find further.

PLENARY LECTURE

"Brain, Body and Robotics. The Dialogue Between Biological and Man-made Machines"

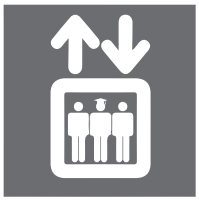


August 1, 11^{00}, Academic Council Hall

Dr. Sergiy Yakovenko
(West Virginia, USA)
Neural Engineering Laboratory,
West Virginia University
School of Medicine

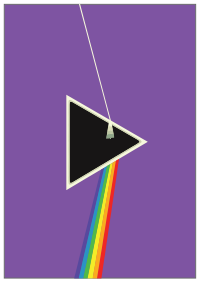
Neuroscientists seek new ways to cure and prevent brain disorders and bridge gaps in our understanding of brain function. What distinguishes neuroscience from the rest of otherwise interesting scientific fields is the most fascinating and fundamental question ever posed by a human being — "How does the brain work?" In this general overview lecture we will cover some recent breakthroughs and glimpse into the future of Neuroscience and related technologies.

NETWORKING ACTIVITIES



Elevator pitch

An "elevator pitch" is a concise and carefully planned description of one's research that non-experts in the field will be able to understand in the time it would take to ride up an elevator. Thus, participants and lecturers of the Summer School will have a chance to practice presenting their research interests in the form of elevator pitch and to get promptly acquainted with different people at the School.



Poster session

A poster session at the Summer School is a forum for participants from around the world to share their ideas with peers by presenting a research study or a practical problem-solving effort with a poster. Poster presentations provide other participants an opportunity to quickly and easily become acquainted with a topic. Also, at the poster session, partners of the Summer School will talk about various educational programs and opportunities.

APPLIED COMPUTER SCIENCE



APPLIED COMPUTER SCIENCE

Data analysis



Participants of the ACS stream will study different aspects of data science. We will cover data retrieval and storage techniques, look into some methods of statistical analysis, data mining and machine learning and provide overview for data visualisation and data analysis tools. We will supplement lectures with such interesting real-world applications as image processing, bioinformatics, social science, natural language processing etc. In addition, we will conduct a number of practices to apply gained theoretical knowledge and train skills.

Program coordinators



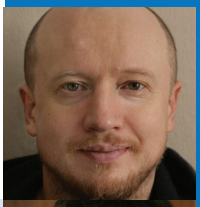
Mr. Dmytro Fishman *(Tartu, Estonia)*
Department of Computer Science,
University of Tartu



Mr. Oleksii Molchanovskyi
(Kyiv, Ukraine)
Faculty of Informatics and Computer Science, National Technical University of Ukraine "Kyiv Polytechnic Institute"

LECTURERS

Mr. Anatoliy Bondarenko *(Kyiv, Ukraine)*
Texty.org.ua



Mr. Vsevolod Dyomkin *(Kyiv, Ukraine)*
Grammarly Inc.



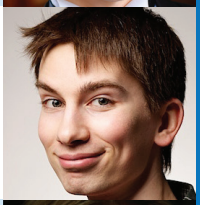
Dr. Mark Fishel *(Zurich, Switzerland)*
Institute of Computational Linguistics,
University of Zurich



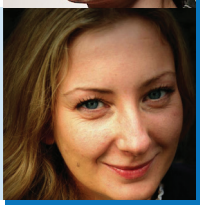
Dr. Dmytro Karamshuk
(London, United Kingdom)
Department of Informatics, King's College
London



Mr. Alexey Leonov *(Kyiv, Ukraine)*
Cropio

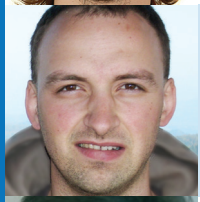


Ms. Anna Leontjeva *(Tartu, Estonia)*
Department of Computer Science,
University of Tartu

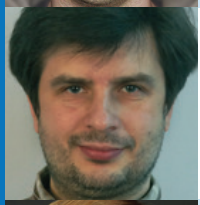




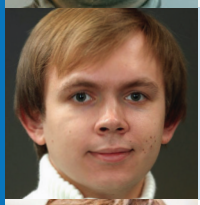
Mr. Stanislav Levental *(Kyiv, Ukraine)*
Grammarly Inc.



Mr. Andrey Lyubonko *(Kyiv, Ukraine)*
Samsung Research and Development Institute Ukraine



Dr.Hab. Andriy Oliynyk *(Kyiv, Ukraine)*
Samsung Research and Development Institute Ukraine



Mr. Dmytro Prylipko *(Magdeburg, Germany)*
Faculty of Electrical Engineering and Information Technology Institute for Electronics, Otto-von-Guericke University Magdeburg



Mr. Konstantin Tretyakov *(Tartu, Estonia)*
Department of Computer Science, University of Tartu

	9^{00} | 9^{50}	10^{00} | 10^{50}	11^{00} | 11^{50}	12^{10} | 12^{40}	13^{00} | 14^{00}	14^{10} | 14^{55}	15^{05} | 15^{50}	16^{00} | 17^{00}
Fri, 1	*Br*	**Opening ceremony**	**Plenary talk**	**Intro lecture**	*Lunch*	**Mr. Konstantin Tretyakov** "Data Management"		**Elevator pitch**

	9^{00} | 9^{40}	10^{00} | 10^{45}	10^{55} | 11^{40}	11^{50} | 12^{35}	12^{45} | 13^{30}	13^{45} | 14^{45}	15^{00} | 15^{45}	15^{55} | 16^{40}
Sat, 2	*Breakfast*	**Mr. Konstantin Tretyakov** "Data Management"				*Lunch*	**Mr. Andrey Lyubonko** "ABCs of machine learning"	
Sun, 3		**Mr. Andrey Lyubonko** "ABCs of machine learning"					**Mr. Vsevolod Dyomkin** "Natural Language Processing"	
Mon, 4		**Mr. Vsevolod Dyomkin** "Natural Language Processing"					**Mr. Andrey Lyubonko** "ABCs of machine learning"	
Tue, 5		**Mr. Andrey Lyubonko** "ABCs of machine learning"					**Poster session**	
Wed, 6		**Social Program** — *Excursion to Pyrohiv*						
Thu, 7		**Dr. Dmytro Karamshuk** "Recommender Systems on the Web"				*Lunch*	**Dr. Mark Fishel** "Unsupervised Language Learning"	
Fri, 8		**Dr. Mark Fishel** "Unsupervised Language Learning"					**Dr. Dmytro Karamshuk** "Recommender Systems on the Web"	
Sat, 9								
Sun, 10		**Ms. Anna Leontjeva** "Predictive modelling using R"					**Mr. Anatoliy Bondarenko** "Visualizing data: how to make a first steps"	
Mon, 11		**Social Program** — *Football Cup*						
Tue, 12		**Ms. Anna Leontjeva** "Predictive modelling using R"				*Lunch*	**Mr. Dmytro Prylipko** "Speech Recognition"	
Wed, 13		**Mr. Dmytro Prylipko** "Speech Recognition"					**Mr. Stanislav Levental** "Advanced Data Management"	
Thu, 14		**Mr. Alexey Leonov** "Satellite Image Processing"					**Mr. Dmytro Prylipko** "Speech Recognition"	
Fri, 15		**Dr.Hab. Andriy Oliynyk** "Cryptography for Cloud Security"					**Mr. Alexey Leonov** "Storing and Processing Large Amounts of Data in Real life"	





ENERGY

Low Energy Buildings



Focus of the stream is set on low energy housing and particularly new approaches and solutions to enhancing energy efficiency of buildings. We will start with broad overview of existing challenges joined with discussion of the widespread and emerging approaches to low energy building. That will expand to the study of the particular technologies such as "smart buildings", "smart grid" and their components, efficient usage of solar energy, natural ventilation and integrated energy efficiency equipment, daylight systems, heating, ventilation and air conditioning, new materials and construction methods, and advanced simulation tools.

Program coordinator



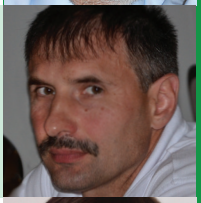
Dr. Sergey Khairnasov *(Kyiv, Ukraine)*
Thermal Power Department of the
National Technical University of Ukraine
"Kyiv Polytechnic Institute"

LECTURERS

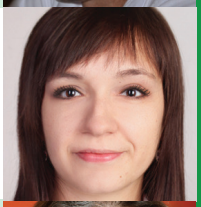
Dr. Guenther Beck *(Klosterneuburg, Austria)*
Beck&Partner KG company



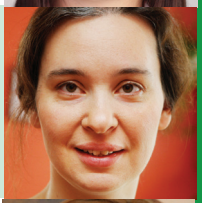
Mr. Sergey Bessarab *(Kyiv, Ukraine)*
DP "Vaillant group Ukraine"



Ms. Mariia Druzhynina *(Vinnytsia, Ukraine)*
Vinnytsia City Council



Dr. Tetiana Ernst *(Kyiv, Ukraine)*
Architectural practice "Architecture and Ecology"



Ms. Christiana Hageneder *(Kyiv, Ukraine)*
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

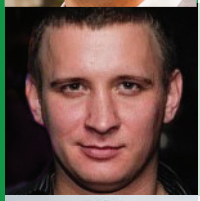


Dr. Johann Harter *(Vienna, Austria)*
Activ Solar

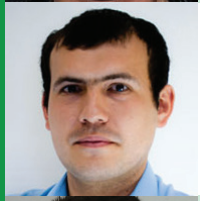




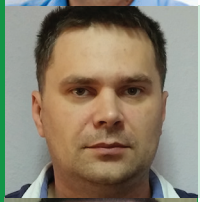
Dr. Sergey Khairnasov *(Kyiv, Ukraine)*
Thermal Power Department
of the National Technical University of Ukraine
"Kyiv Polytechnic Institute"



Mr. Andriy Lisovyk *(Kyiv, Ukraine)*
KyivESKO



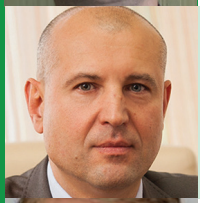
Mr. Vadym Lytvyn *(Kyiv, Ukraine)*
KyivESKO



Mr. Dmytro Marusych *(Kyiv, Ukraine)*
Deutsche Gesellschaft für Internationale
Zusammenarbeit (GIZ) GmbH



Mr. Dmitriy Ocheretianyi *(Kyiv, Ukraine)*
KyivESKO



Mr. Sergey Orlov *(Kyiv, Ukraine)*
Glas Troesch group of companies
in Ukraine and Moldova



Dr. Viktor Pyrkov *(Kyiv, Ukraine)*
Danfoss TOV, Heating Solutions Ukraine

Mr. Oleksiy Takhistov *(Kyiv, Ukraine)*
Department of building Technologies
at DP "Siemens Ukraine"



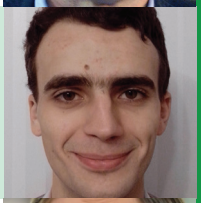
Mr. Ricardo Ramirez Villegas
(Falun, Sweden)
Dalarna University



Dr. Volodymyr Voloshchuk *(Rivne, Ukraine)*
Department of Hydro-Thermal Power
Engineering and Hydraulics Machines,
National University of Water Management and
Nature Resources Use



Mr. Andrii Zakovorotnyi *(Kyiv, Ukraine)*
Institute of Engineering Thermophysics,
National Academy of Sciences of Ukraine



Mr. Roman Zinchenko *(Kyiv, Ukraine)*
Greencubator



Fri, 1	*Br*	**Opening ceremony**	**Plenary talk**	**Intro lecture**	*L*	**Dr. Sergii Khairnasov** Program overview	**Mr. Oleksiy Takhistov** "Automation impact on energy-efficiency of the buildings"	**Elevator pitch**
	9^{00} | 9^{40}	10^{00} | 10^{50}	11^{00} | 11^{50}	12^{10} | 12^{40}	13^{00} | 14^{00}	14^{10} | 14^{55}	15^{05} | 15^{50}	16^{00} | 17^{00}

	9⁰⁰ – 9⁴⁰	10⁰⁰ – 10⁴⁵	10⁵⁵ – 11⁴⁰	11⁵⁰ – 12³⁵	12⁴⁵ – 13³⁰	13⁴⁵ – 14⁴⁵	15⁰⁰ – 15⁴⁵	15⁵⁵ – 16⁴⁰
Sat, 2		**Dr. Sergii Khairnasov** "Heat Pipes Application to Energy Saving Technologies"		**Mr. Andrii Zakovorotnyi** "Application of numerical analysis for resolving building energy saving problems"		*L*		
Sun, 3		**Excursion to Energypassive house, Yasnogorodka**			*Lunch*		**Excursion to Eco-village**	
Mon, 4		**Dr. Guenther Beck** "Which R&D Results make it to Market? Technologies for Low Energy Buildings in Theory versus Reality"				*L*	**Dr. Viktor Pyrkov** "Energy Efficiency. Harmonization of Ukrainian lows and standards"	
Tue, 5							**Poster session**	
Wed, 6		**Social Program** — *Excursion to Pyrohiv*						
Thu, 7		**Dr. Volodymyr Voloshchuk** "Thermal efficiency in buildings"		**Mr. Sergey Bessarab** "High efficiency solutions based on Vaillant equipment for domestic segment"			**Dr. Johann Harter** "Photovoltaics and Building Integrated Photovoltaics"	
Fri, 8		**Dr. Johann Harter** "Photovoltaics and Building Integrated Photovoltaics"		**Dr. Volodymyr Voloshchuk** "Thermal efficiency in buildings"			**Mr. Roman Zinchenko** "Energy innovations for smart homes and smart cities"	
Sat, 9		**Dr. Volodymyr Voloshchuk** "Cloud" computing in energy performance of buildings"		**Dr. Tetiana Ernst** "Architectural and engineering concept of passive and energy-saving eco buildings. Experience of design and construction in Ukraine and neighboring countries"				
Sun, 10				**Dr. Volodymyr Voloshchuk** "Heat pumps technology"			**Excursion to Heat-pipes laboratory, NTUU KPI**	
Mon, 11		**Social Program** — *Football Cup*						
Tue, 12		**Mr. Andriy Lisovyk** "Physiology of energy efficiency"	**Mr. Andriy Lisovyk** "Energy management and monitoring in buildings"	**Mr. Vadym Lytvyn** "First steps for energy saving projects. Energy audits"	**Mr. Vadym Lytvyn** "Energy efficient technologies in Kyiv energy efficiency centre"		**Mr. Vadym Lytvyn** "Practice for groups: Choosing the energy sources for building"	**Mr. Andriy Lisovyk** "Practice for groups: Finding the problems by using monitoring systems"
Wed, 13		**Mr. Dmitriy Ocheretianyi** "Energy efficiency technologies for building. Problems and decisions"	**Mr. Dmitriy Ocheretianyi** "'Passive' houses"	**Mr. Dmitriy Ocheretianyi** "Excursion to kindergarten after renovation"	**Mr. Dmitriy Ocheretianyi, Mr. Vadym Lytvyn** "Practice for groups: making the simple solar collector. Preparing by solar concentrator"		**Mr. Vadym Lytvyn** "Testing the solar collectors"	
Thu, 14		**Mr. Ricardo Ramirez Villegas** "Energy Efficient Renovation and operation of buildings"			**Mr. Sergey Orlov** "Resources for energy saving in building glazing"		**Mr. Ricardo Ramirez Villegas** "Energy Efficient Renovation and operation of buildings"	
Fri, 15		**Ms. Christiana Hageneder** "Energy Efficient Cities"	**Mr. Dmytro Marusych** "Energy monitoring in cities – practical experience"	**Ms. Christiana Hageneder** "Energy Efficient Cities"			**Ms. Mariia Druzhynina** "The European Energy Award — practical example from Vinnytsia"	

Breakfast — 9⁰⁰ – 9⁴⁰

Lunch — 13⁴⁵ – 14⁴⁵


NEUROSCIENCE

NEUROSCIENCE

The NS stream will provide essential review of the contemporary computational neuroscience and introduce to analytical and simulation packages. We will present broad range of topics, i.e. dynamical principles of visual and auditory systems, rhythm generation, neuromechanics of movement control, neuron-computer interface in dynamic-clamp experiments, brain computer interfaces. We will use practical examples of applications of modelling and biosignal analysis for functional assessment of movement control mechanisms and dynamics of sensory systems.

Program coordinators



Dr. Gennady S. Cymbalyuk
(Atlanta, USA)
Dynamical Neuroscience Laboratory,
Neuroscience Institute, Georgia State University



Dr. Sergiy Yakovenko
(West Virginia, USA)
Neural Engineering Laboratory,
West Virginia University School of Medicine

LECTURERS

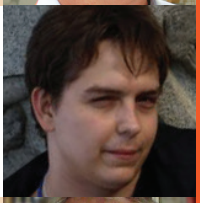
Dr. Pavel Belan *(Kyiv, Ukraine)*
Department of General Physiology of Nervous System, Bogomolets Institute of Physiology of the NASU



Dr. Gennady S. Cymbalyuk *(Atlanta, USA)*
Dynamical Neuroscience Laboratory, Neuroscience Institute, Georgia State University



Mr. Sergiy Kochubey
(Dnepropetrovsk, Ukraine)
Department of Experimental Physics, Faculty of Physics, Electronics and Computer Systems, Dnepropetrovsk National University



Dr. Nikolai Kononenko *(Kyiv, Ukraine)*
Department of General Physiology of Nervous System, Bogomolets Institute of Physiology of the NASU



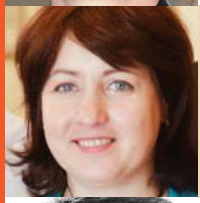
Mr. Ilya Kuzovkin *(Tartu, Estonia)*
Department of Computer Science, University of Tartu



Mr. Nikita Lukianets *(Nice, France)*
University of Nice-Sophia Antipolis, Labex SIGNALIFE



Dr. Sergii Romanenko *(France/Ukraine)*
The bioelectrophotonics laboratory (Biophysics and Health theme of the Sigma-Lim Laboratory of Excellence (LABEX) project), XLIM



Dr. Nana Voitenko *(Kyiv, Ukraine)*
Department of General Physiology of Nervous System, Bogomolets Institute of Physiology of the NASU



Dr. Sergiy Yakovenko *(West Virginia, USA)*
Neural Engineering Laboratory,
West Virginia University School of Medicine



What is common between zombie and neuroscientist?

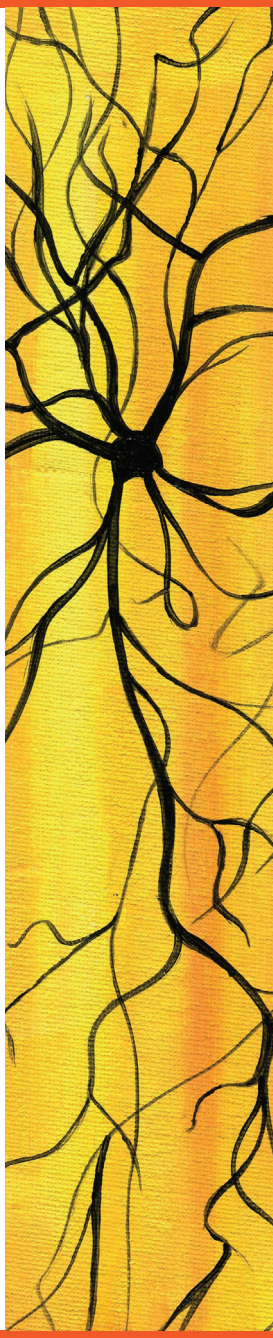
RESEARCH PROJECTS

Students will apply theoretical knowledge in their own research project that can be based on the workshop examples presented during lectures or their own previous research in the related area of interest. We will introduce all the essential tools for neuromechanical simulations (OpenSim) and neural dynamics (Matlab).

The brief project proposal from individuals or groups will help streamline the ideas and their implementation within the brief time allocated for this active learning experience. The activity will be concluded with a conference style oral presentation of the results. The expected outcome is the practical and intuitive understanding of new concepts.



We love brains!!!



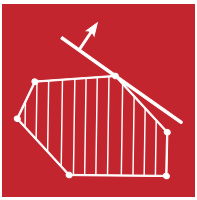
	9^{00} | 9^{40}	10^{00} | 10^{50}	11^{00} | 11^{50}	12^{10} | 12^{40}	13^{00} | 14^{00}	14^{10} | 14^{55}	15^{05} | 15^{50}	16^{00} | 17^{00}
Fri, 1	*Br*	**Opening ceremony**	**Plenary talk**	**Intro lecture**	*Lunch*	**Dr. Sergiy Yakovenko** "Neuromechanics of movement control"		**Elevator pitch**

	9^{00} | 9^{40}	10^{00} | 10^{45}	10^{55} | 11^{40}	11^{50} | 12^{35}	12^{45} | 13^{30}	13^{45} | 14^{45}	15^{00} | 15^{45}	15^{55} | 16^{40}
Sat, 2	*Breakfast*	**Dr. Sergiy Yakovenko** "Neuromechanics of movement control"		**Dr. Nikolai Kononenko** "Circadian Clock in Mammals"		*Lunch*	**Dr. Sergiy Yakovenko** "Neuromechanics of movement control"	
Sun, 3								
Mon, 4		**Dr. Nana Voitenko** "Molecular Mechanisms of Pain"					**Dr. Pavel Belan** "Fluorescent and Genetic Approaches in Current Biology"	
Tue, 5		**Dr. Sergii Romanenko** "Electric Nature in the Life: Inside & Out"		**Mr. Ilya Kuzovkin** "Machine Learning on Neuroimaging Data"			**Poster session**	
Wed, 6		**Social Program** — *Excursion to Pyrohiv*						
Thu, 7		**Mr. Ilya Kuzovkin** "Machine Learning on Neuroimaging Data"					**Dr. Gennady S. Cymbalyuk** "Neurons as dynamical systems and regimes of neuronal activity"	
Fri, 8		**Dr. Gennady S. Cymbalyuk** "Multistability in Neuronal Dynamics"					**Mr. Ilya Kuzovkin** "Machine Learning on Neuroimaging Data"	
Sat, 9				**Research projects.** Work on projects			**Dr. Gennady S. Cymbalyuk** "Neurons as dynamical systems and regimes of neuronal activity"	
Sun, 10								
Mon, 11		**Social Program** — *Football Cup*						
Tue, 12		**Mr. Sergiy Kochubey** "Chemical synapses: inhibitory, excitatory and shunting. Diffuse signal transmission"		**Dr. Sergiy Yakovenko** "Neuromechanics of movement control"			**Mr. Nikita Lukianets** "Towards Neuronal Cell Identity. Cell morphology and functional constraints"	
Wed, 13		**Mr. Nikita Lukianets** "3D segmentation of pyramidal cortical neurons. Defining neuron's structural parameters"					**Research projects.** Work on projects	
Thu, 14		**Research projects.** Work on projects						
Fri, 15		**Research projects.** Presentations					**Research projects.** Concluding remarks by Dr. Gennady S. Cymbalyuk and Dr. Sergiy Yakovenko	



OPERATIONAL RESEARCH

Logistics and Finance



Annual Operational Research (OR) stream aims to provide an overview on state-of-the-art OR. Students will explore different types of models (both hard and soft techniques) that are used to improve decision-making in the face of uncertainty in real problems of business, governments or society, e.g. supply chain management, humanitarian and commercial logistics, financial markets modelling and also soft OR methods and approaches.

Program coordinator



Mrs. Olga Nazarenko *(Kyiv, Ukraine)*
National Technical University of Ukraine
"Kyiv Polytechnic Institute"

LECTURERS

Dr. Emel Aktas
(Cranfield, Bedfordshire, United Kingdom)
Cranfield University, United Kingdom



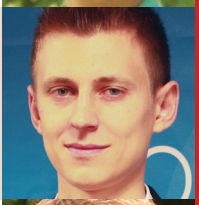
Prof. Giuseppe Bruno *(Naples, Italy)*
University of Naples "Federico II",
University Parthenope of Naples



Dr. Nazar Fihun *(Lviv, Ukraine)*
Department of Marketing and Logistics,
National University "Lvivska Polytechnika"



Mr. Pavlo Illashenko *(Kyiv, Ukraine)*
"KINTO" Asset Management



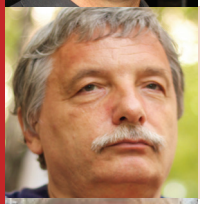
Mr. Anton Ivinskyi *(Kyiv, Ukraine)*
Yandex Ukraine



Mrs. Mila Krep *(Kyiv, Ukraine)*
Luxoft



Dr. Erik Kropat *(Munich, Germany)*
University of the Bundeswehr Munich,
Institute for Applied Computer Science



Prof. Oleksandr Makarenko *(Kyiv, Ukraine)*
Institute for Applied System Analysis,
National Technical University of Ukraine "KPI"



Dr. Oleksii Mostovyi *(Austin, USA)*
University of Texas



Dr. Oleg Prokopyev *(Pittsburgh, USA)*
Department of Industrial Engineering,
University of Pittsburgh



Dr. Oleksandr Romanko *(Toronto, Canada)*
IBM Canada, University of Toronto



Prof. Gerhard Wilhelm Weber
(Ankara, Turkey)
Institute of Applied Mathematics,
Middle East Technical University



Mr. Boris Yakovlev *(Kyiv, Ukraine)*
INSEAD MBA Candidate

	9:00 – 9:40	10:00 – 10:50	11:00 – 11:50	12:10 – 12:40	13:00 – 14:00	14:10 – 14:55	15:05 – 15:50	16:00 – 17:00
Fri, 1	*Br*	**Opening ceremony**	**Plenary talk**	**Intro lecture**	*Lunch*	**Prof. Gerhard Wilhelm Weber** "Financial Mathematics and Related Topics in Economics and Development"		**Elevator pitch**

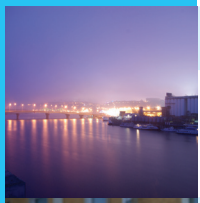
	9:00 – 9:40	10:00 – 10:45	10:55 – 11:40	11:50 – 12:35	12:45 – 13:30	13:45 – 14:45	15:00 – 15:45	15:55 – 16:40
Sat, 2	*Breakfast*	**Prof. G.-W. Weber** "Financial Mathematics and Related Topics in Economics and Development"		**Mr. Boris Yakovlev** "Introduction to the theory of negotiations"		*Lunch*	**Mr. Boris Yakovlev** "Introduction to the theory of negotiations"	
Sun, 3		**Dr. Oleksandr Romanko** "Computational Finance and Risk Analytics"					**Prof. G.-W. Weber** "Financial Mathematics and Related Topics in Economics and Development"	
Mon, 4		**Dr. Oleksandr Romanko** "Computational Finance and Risk Analytics"		**Prof. G.-W. Weber** "Financial Mathematics and Related Topics..."			**Mr. Anton Ivinskyi** "Principles and strategy of auction design"	
Tue, 5				**Mr. Anton Ivinskyi** "Principles and strategy of auction design"			**Poster session**	
Wed, 6		**Social Program** — *Excursion to Pyrohiv*						
Thu, 7		**Dr. Emel Aktas** "Quantitative Models in Supply Chain Management"		**Prof. Giuseppe Bruno** "Decision making with multiple criteria"			**Prof. Giuseppe Bruno** "Decision making with multiple criteria"	
Fri, 8								
Sat, 9				**Dr. Emel Aktas** "Quantitative Models in Supply Chain Management"		*Lunch*	**Dr. Nazar Fihun** "Metrics for measuring advertising effectiveness"	
Sun, 10		**Dr. Erik Kropat** "Intelligent Decision Support for Crisis and Disaster Management"						
Mon, 11		**Social Program** — *Football Cup*						
Tue, 12		**Dr. Erik Kropat** "Intelligent Decision Support for Crisis and Disaster Management"		**Mr. Pavlo Illashenko** "Behavioral aspects of macroeconomic and financial forecasting"			**Prof. Olexander Makarenko** "Mental Aspects in Operational Research of Large Socioeconomic Systems and Sustainable Development"	
Wed, 13								
Thu, 14		**Mrs. Liudmyla Krep** "Introduction to Business Intelligence"		**Dr. Erik Kropat** "Intelligent Decision Support for Crisis and Disaster Management"			**Dr. Oleg Prokopyev** "Brief Introduction to Integer and Combinatorial Optimization"	
Fri, 15		**Dr. Oleg Prokopyev** "Brief Introduction to Integer and Combinatorial Optimization"		**Dr. Oleksii Mostovyi** "Several Fundamental Problems of Mathematical Finance"			**Dr. Oleksii Mostovyi** "Several Fundamental Problems of Mathematical Finance"	

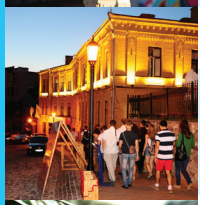


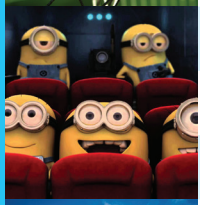


SOCIAL PROGRAM

SOCIAL PROGRAM








Day	Time	Activity
Fri, 1	10^{00}	Opening ceremony
	18^{15}	Welcome party on boat
Sat, 2	18^{30}	Culture fair
Sun, 3	18^{30}	KPI quest
Mon, 4	18^{30}	Crafting masterclasses
Tue, 5	18^{30}	Kyiv city tour #1
Wed, 6	10^{00}	Excursion to Museum of folk architecture and life of Ukraine, Pyrohiv
Thu, 7	18^{30}	Museum evening
Fri, 8	18^{30}	Board games
Sat, 9	18^{30}	Cinema club
Sun, 10	18^{30}	Football training
Mon, 11	10^{00}	Football cup
Tue, 12	18^{30}	Kyiv city tour #2
Wed,13	18^{30}	Kyiv photo quest
Thu, 14	18^{30}	Free evening
Fri, 15	17^{30}	Closing ceremony

PARTNERS

SAMSUNG

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SIEMENS

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Danfoss

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ФРІ

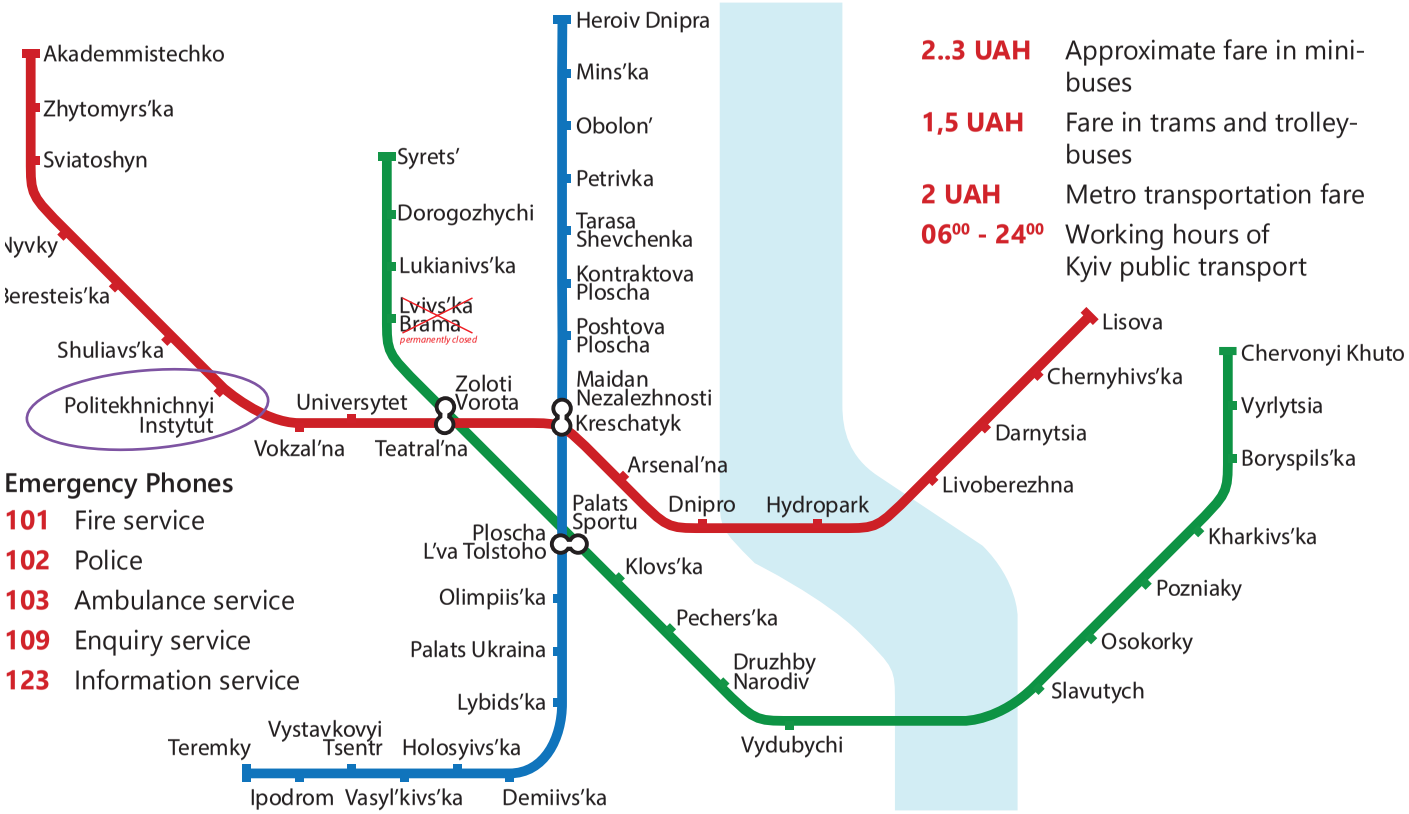
fri.com.ua

Картографія

ukrmap.com.ua

TESS

tesstea.co.uk



2..3 UAH Approximate fare in mini-buses

1,5 UAH Fare in trams and trolley-buses

2 UAH Metro transportation fare

06^{00} - 24^{00} Working hours of Kyiv public transport

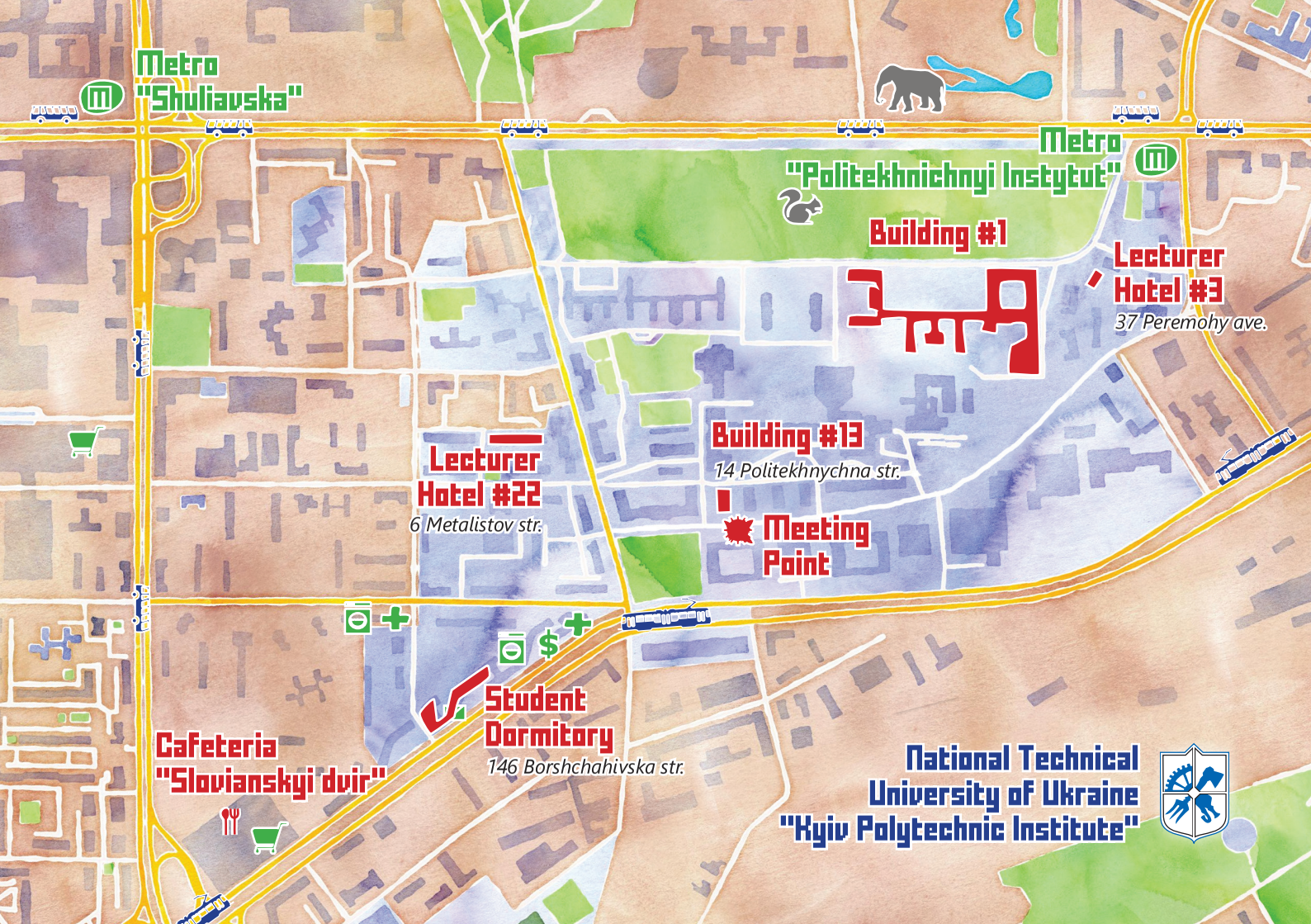
Emergency Phones

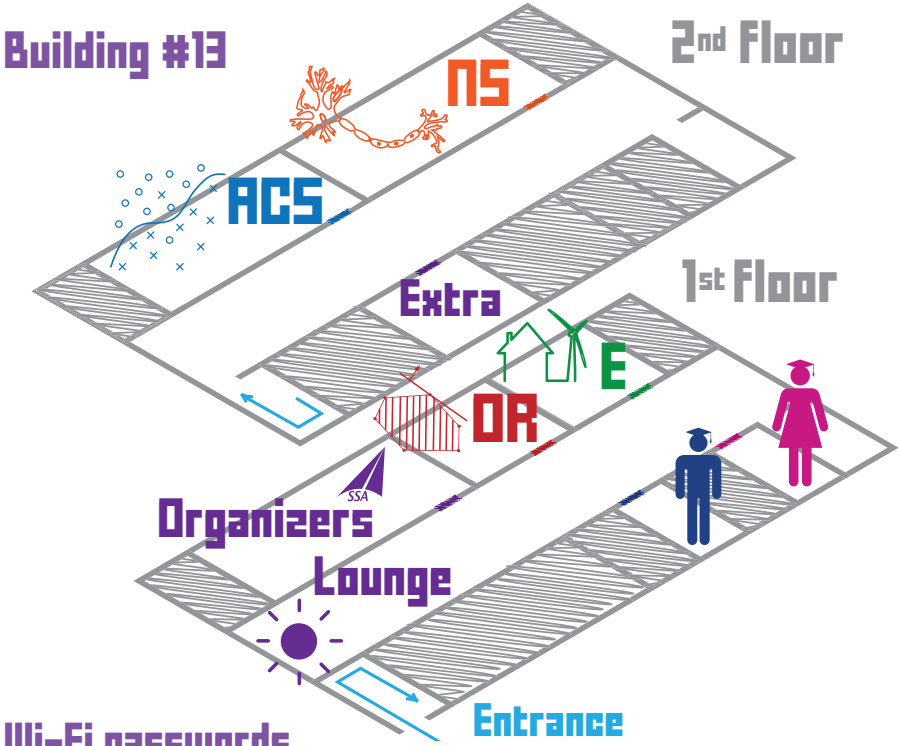
101 Fire service
102 Police
103 Ambulance service
109 Enquiry service
123 Information service

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Hotel #3
37 Peremohy ave.
Lecturer
Hotel #22
6 Metalistov str.
Building #13
14 Politekhnychna str.
Meeting
Point
Student
Dormitory
146 Borshchahivska str.
Cafeteria
"Slovianskyi dvir"
National Technical
University of Ukraine
"Kyiv Polytechnic Institute"



Wi-Fi passwords

Building #13
Password: LetTheScienceIn

Lecturer Hotel #3
Password is available in each room

Lecturer Hotel #22
Password: cTvtq4rf

Student Dormitory
Password: wifiKTprof

ACS stream coordinator



Iuliia Shevchenko

+38 093 120 09 29

E stream coordinator



Illia Luzan

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+38 093 647 38 96

NS stream coordinator



Kseniia Orikhovska

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+38 063 354 17 08

OR stream coordinator



Olga Shydlovska

+38 050 416 18 46

TERMS OF PARTICIPATION

All the AACIMP students are responsible for knowing and adhering to the Summer School AACIMP rules and policies outlined in this notebook.

Student identification, registration and contact information

As a part of registration, an applicant is required to provide his/her full legal name (exactly as given in his/her passport or other government-issued photo ID), gender, date of birth, e-mail address and current postal mailing address.

All the crucial Summer School announcements (e.g., the one about class cancellation) and registration information (e.g., registration confirmation, notice of admission) are sent via e-mail. Therefore, an applicant is strongly recommended to maintain his/her e-mail address functioning throughout the Summer School registration and enrollment.

Rules for participants

Participation in the Summer School AACIMP implies compliance with rules of the School and the legal acts of Ukrainian law.

Some of the most important issues under the law of Ukraine

- It is forbidden to drink alcohol and smoke in the public places.
- It is advisable to have your documents with you while being at the public places.
- The Summer School does not hold responsibility for the actions of the participants.

GENERAL RULES FOR PARTICIPANTS

- Due to security reasons in the studying area, students have to wear a badge. It is required for the access to classes, social events and place of residence in order to secure the study process and participants from any unwanted incidents.
- The participation in lectures and practice sessions is obligatory, if a student wants to receive a statement of accomplishment. To obtain the certificate, one should attend at least 80% of the classes. Attendance of social events is not strictly required.
- If a student has a reasonable excuse for skipping the class, he/she should inform the stream coordinator and explain the reason.
- It is forbidden to attend the lectures under the influence of alcohol, drugs or other intoxicants.
- All damage made by a participant to the Summer School and NTUU "KPI" property and facilities must be compensated at the participant's own expense.
- Organizing committee is not responsible for any loss of expensive things, documents or unpredicted expenses incurred during the Summer School.
- The accommodation offered by the NTUU KPI implies compliance with the rules of the campus (http://kpi.ua/admin-rule-hostel), including:
  - The participants staying at the dormitory, are given the security card, which gives an access to the dormitory and one`s room.
  - The entrance to the dormitory is provided with a security card. It is forbidden to pass the card to the others (third person).
  - It is not allowed to bring guests to the dormitory and to make noise later than 22^{00} and earlier that 8^{00}. The ignorant behaviour will cause the departure from the dormitory.
  - It is strictly forbidden to consume or keep alcohol and to smoke inside the dormitory and on the territory of the KPI campus.
  - The participants staying at the dormitory, have to maintain their rooms tidy and clean.
  - It is required to inform the Organizing committee about any accidents or troubles in the dormitory.
- In case of misconduct participant may face the following consequences: first warning, second warning, departure from the dormitory, exclusion from the Summer school program, written notification to the home university or/and to the scholarship support organization.

http://summerschool.ssa.org.ua