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Technical University of Civil Engineering
Bucharest



Technical University of Cluj – Napoca



Advanced Research Center for
Ambient Quality and Building Physics
Advanced Research Center for Ambient
Quality and Building Physics



Asociația Română de Ingineria Vântului
Romanian Association for Wind
Engineering



EENVIRO

EENVIRO 2018

9 - 13 October

Cluj - Napoca

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Welcome to EENVIRO 2018, welcome to Cluj-Napoca,

On behalf of the local organizing committee, we would like to welcome you to EENVIRO 2018, the 5th International Conference on Sustainable Solutions for Energy and Environment.

The host for this year's gathering is the beautiful city of Cluj-Napoca, the Heart of Transylvania.

Commonly known as Cluj, this is the fourth most populous city in Romania and the seat of Cluj County in the northwestern part of the country. Geographically, it is roughly equidistant from Bucharest, Budapest and Belgrade. Located in the Someşul Mic River valley, the city is considered the unofficial capital to the historical province of Transylvania. From 1790 to 1848 and from 1861 to 1867, it was the official capital of the Grand Principality of Transylvania.

The Cluj-Napoca metropolitan area has a population of over 410,000 people. The city spreads out from St. Michael's Church in Unirii Square, built in the 14th century and named after the Archangel Michael, the patron saint of Cluj-Napoca. The city held the title of European Youth Capital in 2015 and it currently holds the title of European City of Sport. Today, the city is one of the most important academic, cultural, industrial and business centres in Romania. Among other institutions, it hosts the country's largest university, Babeş-Bolyai University, with its famous botanical garden; nationally renowned cultural institutions; internationally renowned music (Electric Castle and Untold) and film (TIFF – Transylvania International Film Festival) festivals.

Some of the most famous surrounding landmarks are the Turda Gorges and the Turda Salt Mine, the Banffy Castle in Bontida, the traditional rural houses of Manastireni and the Nicula Monastery. The best landmarks for footwalk within the town are the Eroilor Boulevard, linking the Catholic (Unirii Square) and the Orthodox (Theatre Square) Churches, the Central Park, with the newly built Cluj-Arena football stadium and Multipurpose Sports' Hall, the Cetatua Park, with a beautiful overview of the city – especially at night, the Old City Centre (the Museum's Square) and the Iulius Park, surrounding the Gheorgheni Lake.

Cluj-Napoca has lots of restaurants and bars with a large variety of generic or specific products. Some of the best eats in town are: Valahia Restaurant (for traditional cuisine), Shanghai Restaurant (for Chinese cuisine), El Torro (steakhouse), any of the 6 Marty Restaurants (for bistro and European cuisine) and so on (feel free to consult TripAdvisor or other similar smartphone apps for places near your location). The best bars and terraces in town are: Klausen Burger (central penthouse and/or rooftop craft brewery), Fabrica de Bere Ursus (old beer factory memorial bistro and craft brewery), Charlie (best cocktail bar situated in the Old City Centre with a national renowned cocktail bartender) and Pergola (Cetatuia Park terrace with a beautiful overview of the city, especially after dawn).

From October 10 to 12 an exhibition will take place in the same location with EENVIRO Conference: Research at the ARUT universities, an event dedicated to the dissemination of research results from the 5 universities that form the Romanian Alliance of Technical Universities – ARUT.

Thank you again for attending the EENVIRO 2018 Conference and we hope that you will have fruitful scientific and pleasant personal experiences at this event.

Best wishes,

The EENVIRO 2018 organizing committee

Transportation in Cluj-Napoca

Airport

The “Avram Iancu” International Airport is the main gateway into the city for foreign travelers. The first important aspect you should know about Romania is that the only official currency accepted is the Romanian Leu (the current conversion rate is somewhere between 4.6 – 4.7 RON / 1 EUR). Make sure to get a hold of some cash at the first exchange office you encounter, but keep in mind that you can later get better rates at the offices located in the city.

The Cluj-Napoca airport is connected to city center and the railway station by the direct bus line no. 5, but this is not express (meaning it also stops at all the bus stations on its way, picking up and dropping commuters from neighboring suburbs).

Public transportation

More information about public transportation company of Cluj-Napoca you can find on their [website](http://ctpcj.ro/index.php/en) (<http://ctpcj.ro/index.php/en>).

If you choose this means of transportation remember to buy tickets at the self-service machines as you cannot pay for your trip once you are in the bus. You can find the English version of the Cluj-Napoca public transportation company at the website address below, where you can find a coverage network map and timetables for all the routes the company operates.



Taxi around the city

Also, using a taxi service is recommended due to the short distances in the city, which means that your fares should be in the range of 15 – 35 RON (the equivalent of 3 - 8 EUR) depending on the location of the accommodation you have chosen. Cluj-Napoca has a very low crime rate and you should generally not be afraid of situations like this, but there is no better solution to a problem than to avoiding it in the first place.

You can also use in Cluj-Napoca [Uber mobile app](https://www.uber.com/ro/cities/cluj/).
(<https://www.uber.com/ro/cities/cluj/>)

Venue

The address of the EENVIRO 2018 location is Bulevardul Muncii, no. 103-105, the headquarters of the Faculty of Automotive, Mechatronics and Mechanics (with the informal short form of Faculty of Mechanics – which we recommend you use if you want to ask for directions). The routes of the public transportation company that take you from the city to the conference premises are tram line 102 and bus lines 48, 50, 26, 23. They are presented in this list sorted by the frequency at which they travel. The timetables are subjected to change so be sure to download the latest for the route you are using from the Cluj-Napoca Public Transportation company [website](http://ctpcj.ro/index.php/en) (<http://ctpcj.ro/index.php/en>).

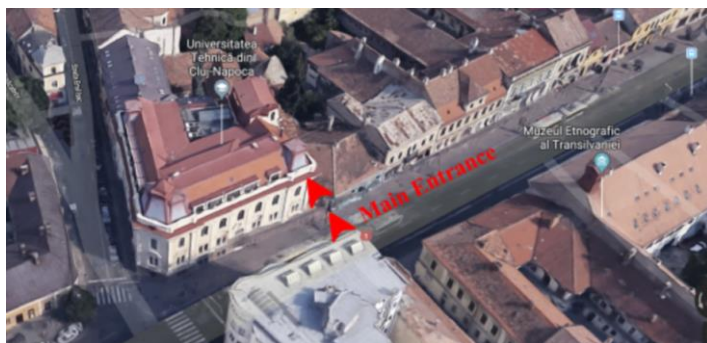
Conference premises

**Location – Technical University of Cluj – Napoca, Rectorate Building
Str. Memorandumului nr. 28, hall 219, second floor**

On Tuesday 9th of October 2018 starting with 18:30 a welcome cocktail will be offered for guests of the 5th edition of the EENVIRO Conference.



Rectorate Building

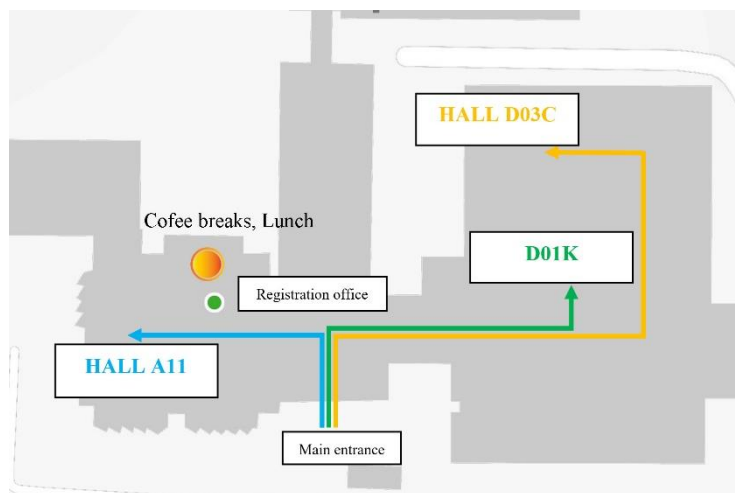


Main entrance Rectorate Building

**Location: Faculty of Automotive, Mechatronics and Mechanics,
Technical University of Cluj-Napoca
B-dul Muncii 103-105**



Upon your arrival at the conference premises, please proceed to the Registration office as illustrated in the sketch below.



EENVIRO 2018 conference premises



Dr. Corneliu BĂLAN

Vicepresident of Romanian Society of Rheology, Professor, University Politehnica Bucharest, Romania

In 1981, he took a master's degree in Mechanical Engineering at University Politehnica of Bucharest and in 1991 a Ph.D. in Continuum Mechanics at Technische Hochschule Darmstadt, Germany. From 2000 he is head of REOROM Group of Rheology at University Politehnica Bucharest. From 2003 to 2012 he was deputy director of the Department of Bioengineering and Biotechnology at the University Politehnica Bucharest. From 2012 he is member of CSUD – Doctoral Council of the University Politehnica Bucharest. From 2012 he is CNATDCU member for the Mechanics Section. He is currently professor (Ph. D. advisor) and director of the Hydraulics Department from the University Politehnica Bucharest. His areas of scientific interest consist of continuum mechanics, fluid mechanics, non-Newtonian fluid mechanics, rheology, rheometry, constitutive relations, viscoelastic fluids, yield stress fluids and biofluid dynamics.



Dr. Luigi BERARDI

Associate Professor, University “G. d’Annunzio” of Chieti-Pescara, Engineering and Geology Department, Italy

In 2004, he took a master's degree in Civil and Environmental Engineering and in 2009 a Ph.D. in “Civil and Environmental Engineering Science” at Technical University of Bari (Politecnico di Bari), Italy. From 2010 to 2014, he was Research Fellow at Department of Civil Engineering and Architecture at Technical University of Bari. From 2015 to 2018 Assistant Professor at the same university. Since 2018 he is Associate Professor in Hydraulics and Hydraulic Constructions at Engineering and Geology Department, University “G. d’Annunzio” of Chieti-Pescara, Italy.

His main research activities deal with hydraulic modelling, decision support strategies and data modelling for water distribution system analysis and management.



Dr. Walter BOSSCHAERTS

President of the Belgian Society of Mechanical and Environmental Engineering, Professor, Royal Military Academy (RMA) Belgium, Head of the Mechanics Department

Professor Walter Bosschaerts is President of the Belgian Society of Mechanical and Environmental Engineering (BSMEE) and full professor at the Royal Military Academy (RMA) Belgium, Head of the Mechanics Department. Invited professor at both Free Universities of Brussels (ULB and VUB), Erasmus University College (Brussels), Université Lille 1 (Polytech Lille). Between 2011-2013 he is the President of the Belgian section of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). The research activities are oriented to fluid mechanics, air conditioning, indoor environmental quality for healthcare facilities, energy efficiency of buildings etc.



Dr. Jens Bo HOLM-NIELSEN

Head of Center for Bioenergy and Green Engineering, Aalborg University, Esbjerg Campus Denmark

Is having 25 years of experience in the field of biorefinery concepts and biogas production – anaerobic digestion. He is having a strong research background in Biogas purification, optimal utilization of biomass resources and conversion technologies, Bioenergy and Renewable energy system integration. He supervised academic staff, governmental bodies, and experts in bioenergy systems and brought integrated solutions for core competencies in bioenergy technologies and biomass resource conversion to biogas or biofuels. He is one of the driving forces behind the establishment of education and research programs in renewable energy on the AAU campus in Esbjerg. He implemented several international projects of bioenergy systems in region of EU and UN projects. He worked as the chair of Danish Bioenergy Association (1995 – 1999) and Biogas Association board member 1999 – 2009. Since 2008 with main focus on the areas of Biomass resource studies, Biomass pre-treatment platforms for 2nd and 3rd generation biorefinery production and bioenergy and RES integration projects.



Dr. Mark TYRER

Executive director, Faculty Research Center for Build & Natural Environment, Coventry University, UK

Professor Mark Tyrer is a cement chemist and geochemist with interests in resource efficiency and environmental protection. He is currently Professor of Geomaterials and Executive Director of the Faculty Research Centre at Coventry University (appointed December 2016). He completed his Ph.D. in blended Portland-slag cement hydration chemistry. In 2000 he was appointed as Research Manager for the Faraday Partnership between, Imperial, Cambridge and Birmingham universities. Mark Tyrer was appointed as visiting Professor of Construction Materials at Coventry University in 2008 and received the IOM3 Pfeil award (2011) for work there on CO₂ reduction in the cement industry. Mark Tyrer was elected as a Fellow of the Geological Society of London in 1993, a Fellow of the Institute of Materials Minerals and Mining in 2003, a Fellow of the Mineralogical Society of Great Britain and Ireland in 2013 and to the Min. Soc. Council in 2014. In 2015, he was elected as a member of the Mathematics Advisory Panel at the National Physical Laboratory with whom he has worked for fifteen years.



EENVIRO 2018

9 - 13 October

Cluj - Napoca

CONFERENCE PROGRAM

	Tuesday 9th of October 2018 Location – Technical University of Cluj – Napoca, Rectorate Building Str. Memorandumului nr. 28, hall 219, second floor
18³⁰ - 21⁰⁰	WELCOME COCKTAIL EENVIRO 2018 – REGISTRATION – Artistic program

AND NOW

LET THE SCIENCE BEGIN!

WEDNESDAY 10th of October 2018			
Location – Technical University of Cluj – Napoca, Faculty of Automotive, Mechatronics and Mechanics			
9⁰⁰ - 10⁰⁰		EENVIRO 2018 – REGISTRATION – Welcome Coffee	
EENVIRO 2018 - OPENING SESSION HALL A11			
10⁰⁰ – 10²⁰		Vasile TOPA – Rector of the Technical University of Cluj-Napoca Radu VĂCĂREANU – Rector of the Technical University of Civil Engineering Bucharest	
10²⁰ – 10⁴⁵		Key Note Lecture – Mark TYRER, Coventry University, UK Sustainability, cement and society – changing demands in a changing world	
10⁴⁵ – 11¹⁰		Key Note Lecture – Corneliu BĂLAN, University Politehnica of Bucharest, Romania Dynamics of interfaces in infinite and cofinite geometries	
COFFEE BREAK			
11³⁰ – 12⁴⁵		SESSION I – HALL A11	
Chair – Ilinca NĂSTASE (Technical University of Civil Engineering Bucharest)			
11³⁰ – 11⁴⁵		Claudiu PĂTRAȘCU, Corneliu BĂLAN	University Politehnica of Bucharest
			A peculiar behaviour of liquid jet impact
11⁴⁵ – 12⁰⁰		Nikolav IVANOV, Marina ZASIMOVA	Peter the Great St. Petersburg Polytechnic University
			Evaluation of mean velocity and mean speed for test ventilated room from RANS and LES CFD modeling
12⁰⁰ – 12¹⁵		Nilesh DHONDOO ¹ , Ștefan- Mugur SIMIONESCU ¹ , Corneliu BĂLAN ²	¹ REOROM Group ² University Politehnica of Bucharest
			Impinging jets array: an experimental investigation and numerical modeling
12¹⁵ – 12³⁰		Alexandru TATOMIR ¹ , Alexandru – Nicolae DIMACHE ² , Iulian IANCU ² , Martin SAUTER ¹	¹ Georg-August-Universität Göttingen ² Technical University of Civil Engineering Bucharest
			Modelling of CO ₂ storage in geological formations with DuMux, a free-open-source numerical framework. A possible tool to assess geological storage of carbon dioxide in Romania
12³⁰ – 12⁴⁵		Alexandru TATOMIR ¹ , Dejian ZHOU ¹ , Huhao GAO ¹ , Alexandru – Nicolae DIMACHE ² , Iulian IANCU ² , Martin SAUTER ¹	¹ Georg-August-Universität Göttingen ² Technical University of Civil Engineering Bucharest
			Modelling of kinetic interface sensitive tracers reactive transport in 2D two-phase flow heterogenous porous media
12⁴⁵ – 13⁴⁵		LUNCH	
13⁴⁵ – 14¹⁵		Key Note Lecture – Luigi BERARDI, University” G. d’Annunzio” of Chieti, Italy Integrated pressure control strategies for sustainable management of water distribution	
SESSION II – HALL A11			
Chair – Daniela GOGOĂȘE NISTORAN (University Politehnica Bucharest), Mihnea SANDU (Technical University of Civil Engineering Bucharest)			
14¹⁵ – 14³⁰		Julia Alina ANTON, Mariana PANAITESCU, Fănel – Viorel PANAITESCU, Simona GHITĂ	Constanța Maritime University
			Impact of beach protection systems on coastal ecosystems
14³⁰ – 14⁴⁵		Cristina Sorana IONESCU, Daniela Elena GOGOĂȘE NISTORAN	University Politehnica of Bucharest
			Influence of reservoir shape upon the choice of Hydraulic vs. Hydrologic reservoir routing method
14⁴⁵ – 15⁰⁰		Cătălin POPESCU ¹ , Laurențiu LUNGU ² , Valentin ZAHARIA ² , Altan ABDULAMIT ¹	¹ Technical University of Civil Engineering Bucharest ² ApaNova București Veolia S.A.
			Mathematical modelling and interpretation of results for siltation phenomena rivers in the vicinity of reservoirs
15⁰⁰ – 15¹⁵		Cătălin POPESCU ¹ , Alin STANCA CONSTANTIN ² , Petruța ISOFACHEAND ² , Altan ABDULAMIT ¹	¹ Technical University of Civil Engineering Bucharest ² Aquaproiect S.A. Romania
			Preventing the natural hazards and protection against floods in a deltaic area
15¹⁵ – 15³⁰		Daniela Elena GOGOĂȘE NISTORAN¹ Cristina Sorana IONESCU ¹ , Mihail GEORGESCU ² , Doruleț Ștefan DAVID ²	¹ University Politehnica of Bucharest ² National Administration ”Romanian Waters”
			Hydraulic model for water management along Dâmbovița River through Bucharest city, Romania

SESSION III – HALL D03C			
Chair – Sanda-Carmen GEORGESCU (University Politehnica Bucharest), Andrei-Mugur GEORGESCU (Technical University of Civil Engineering Bucharest)			
14¹⁵ – 15³⁰			
14¹⁵ – 14³⁰	Petre-Ovidiu CIUC ¹ , Remus Alexandru MĂDULAREA ¹ , Andrei-Mugur GEORGESCU ² , Mihaela Amalia DIMINESCU ¹ , Sanda-Carmen GEORGESCU ¹	¹ University Politehnica of Bucharest ² Technical University of Civil Engineering Bucharest	Experimental setup designed for pumping station operation controlled by pressure sensed at WDN critical points
14³⁰ – 14⁴⁵	Remus Alexandru MĂDULAREA ¹ , Petre-Ovidiu CIUC ¹ , Andrei-Mugur GEORGESCU ² , Sanda-Carmen GEORGESCU ¹	¹ University Politehnica of Bucharest ² Technical University of Civil Engineering Bucharest	Speed factors computed for pumping schedules in Water Distribution Networks: DDA versus PDA formulations
14⁴⁵ – 15⁰⁰	Iulian IANCU ¹ , Alexandru-Nicolae DIMACHE ¹ , Sanda-Carmen GEORGESCU ² , Andrei-Mugur GEORGESCU ¹	¹ Technical University of Civil Engineering Bucharest ² University Politehnica of Bucharest	EPANET modeling of an urban groundwater field
15⁰⁰ – 15¹⁵	Rareş Andrei CHIHAIA, Lucia-Andreea EL-LEATHEY, Gabriela CÎRCIUMARU, Nicolae TĂNASE	National Institute for Research & Development in Electrical Engineering ICPE-CA	Increasing the energy conversion efficiency for shrouded hydrokinetic turbines using experimental analysis on a scale model
15¹⁵ – 15³⁰	Andrei Dragomirescu, Carmen-Anca Safta, Nicolae Orasanu, Ioan Magheti, Lucian Mandra	University Politehnica of Bucharest	Vibrations of Water Hydraulic Systems – an Experimental Approach
15³⁰ - 15⁴⁵	COFFEE BREAK		
SESSION IV – HALL A11			
15⁴⁵ - 17³⁰	Chair – Nikolay IVANOV (Peter the Great St. Petersburg Polytechnic University)		
15⁴⁵ – 16⁰⁰	Martin IVANOV ¹ , Sergey MIJORSKI ²	¹ Technical University – Sofia ² SoftSimConsult Ltd.	Geometrical form assessment of a CFD based breathing thermal manikins, designed by simplified polygonal shapes
16⁰⁰ – 16¹⁵	Gonzalo SANCHEZ-BARROSO, Justo GARCIA-SANZ-CALCEDO, Alfonso Marcos ROMERO	University of Extremadura	Influence of air velocity on Indoor Environment Quality in unidirectional flow operating theatres: a study based on Computational Fluid Dynamics
16¹⁵ – 16³⁰	Gelu MUSCĂ ¹ , George-Mădălin CHITARU ¹ , Costin Ioan COȘOIU ¹ , CĂTĂLIN Nae ²	¹ Technical University of Civil Engineering Bucharest ² National Institute for Aerospace Research	Numerical simulation of the flow into a circular pipe section
16³⁰ – 16⁴⁵	Bogdan GHERMAN, Ion MĂLĂEL, Ionuț PORUMBEL	Romanian Research and Development Institute for Gas Turbines COMOTI	Experimental combustion chamber simulation at transient regimes
16⁴⁵ – 17⁰⁰	Robert Ștefan VIZITIU, Gavril SOSOI, Andrei BURLACU, Florin Emilian ȚURCANU	"Gheorghe Asachi" Technical University of Iași	CFD Analysis of a Dual Heat Recovery System
17⁰⁰ – 17¹⁵	Florin Emilian ȚURCANU, Ion ȘERBĂNOIU, Marina VERDEȘ, Vasiliică CIOCAN, Andrei BURLACU, Gavril SOSOI	"Gheorghe Asachi" Technical University of Iași	Numerical analysis of the thermal comfort in a church building
17¹⁵ – 17³⁰	Tarek ALIOUA ¹ , Boudjemaa AGOUDJIL ² , Abderrahim BOUDENNE ¹	¹ Université Paris-Est Créteil ² Université Batna 1	Numerical modelling and experimental study of heat and moisture properties of a wall based on date palm fibers concrete

SESSION V – HALL D03C			
Chair – Chadi MAALOUF (University of Reims Champagne Ardenne), Angel TERZIEV (Technical University of Sofia)			
15⁴⁵ - 17³⁰			
15⁴⁵ – 16⁰⁰	Cristian DROBOMIRESCU , Valeriu VILAG	Research and development institute for gas turbines COMOTI	Energy conversion and efficiency in turboshaft engines
16⁰⁰ – 16¹⁵	Victor-Eduard CENUȘĂ, Mihaela NORIȘOR, Florin-Niculae ALEXE, Mădălina BARBU	University Politehnica of Bucharest	The influence of cooling the compressed air-gas mixture on the energetic performances of reciprocating gas engines for residential cogeneration
16¹⁵ – 16³⁰	Gonzalo SANCHEZ-BARROSO, Justo GARCIA-SANZ-CALCEDO , Alfonso GONZALEZ, David SALGADO	University of Extremadura	Sustainable solutions for thermal energy saving in hospital operating theatres
16³⁰ – 16⁴⁵	Iliya ILIEV ¹ , Angel TERZIEV ² , Hristo BELOEV ¹ , Christiyan ILIEV ³	¹ Ruse University ² Technical University of Sofia ³ University of Birmingham	Specifics in the operating modes ofthermosphon air heater of steam generator No1 and No2 in TPP "Republika" at fuel switch from coal to natural gas
16⁴⁵ – 17⁰⁰	Daniel-Mihai MUNTEAN , Marius ADAM, Miodrag POPOV, Daniel GRECEA, Viorel UNGUREANU	Politehnica University Timisoara	Integrated energy efficient cooling solutions for large prefabricated panels collective dwellings from the 1970s
17⁰⁰ – 17¹⁵	Florin Emilian TURCANU, Ion ȘERBĂNOIU, Marina VERDEȘ, Vasilică CIOCAN, Andrei BURLACU, Robert Ștefan VIZITIU	"Gheorghe Asachi" Technical University of Iași	Simulation and modelling of microclimate in a building with high thermal mass during the winter season
17¹⁵ – 17³⁰	Chadi MAALOUF ¹ , Tala MOUSSA ¹ , Amel Ferjal BOUDJABI ² , Djallel ABADA ² , Guillame POLIDORI ¹ , Djamilia Rouag SAFFDINE ² , Etienne Wurtz ³	¹ University of Reims Champagne Ardenne ² Energy & Environment Laboratory, University Salah Boubnider of Constantine 3 ³ Liten, CEA	Numerical study and design of a dew point evaporative cooler for buildings
17³⁰	END OF FIRST DAY		
19⁰⁰ – 23⁰⁰	GALA DINNER – Panoramic Restaurant Cluj-Napoca Str. Serpuitoare nr. 1		

THURSDAY 11th of October 2018			
Location – Technical University of Cluj – Napoca, Faculty of Automotive, Mechatronics and Mechanics			
8⁰⁰ – 9⁰⁰	EENVIRO 2018 – REGISTRATION - Welcome Coffee		
9⁰⁰ – 10⁴⁵	SESSION VI – HALL A11		
9⁰⁰ – 9³⁰	Key Note Lecture – Walter BOSSCHAERTS, Royal Military Academy, Belgium Retrofitting social houses in Belgium		
	Chair – Roxana PĂTRAȘCU (University Politehnica Bucharest), Lăcrămioara Diana ROBESCU (University Politehnica Bucharest)		
9³⁰ – 9⁴⁵	Aida DELCEA , Ioan BITIR – ISTRATE, Roxana PĂTRAȘCU, Cristian GHEORGHIU	University Politehnica of Bucharest	Joint energy and water management scheme for water supply systems in Romania
9⁴⁵ – 10⁰⁰	Angela NEAGOE, Eliza Isabela TICĂ , Mihaela Amalia DIMINESCU, Bogdan POPA, Suzana Carmen CISMAȘ	¹ University Politehnica of Bucharest ² University of Agronomic Sciences and Vet Medicine - USAMV	The Analysis of Hydropower Ratio from Total Energy Production in Romania
10⁰⁰ – 10¹⁵	Mihaela-Amalia DIMINESCU , Elena-Gabriela DUMITRAN, Liana-Ioana VUȚĂ	University Politehnica of Bucharest	Experimental methods to determine the hydraulic conductivity
10¹⁵ – 10³⁰	Bogdan POPA ¹ , Florica POPA ² , Eliza Isabela TICĂ ¹ , Angela NEAGOE ¹ , Mihaela Amalia DIMINESCU ¹	¹ University Politehnica of Bucharest ² University Valahia of Targoviste	Retention reservoir with SHPP downstream Golesti hydropower development to solve problems generated by hydropeaking
10³⁰ – 10⁴⁵	Lăcrămioara Diana ROBESCU , Andreyra Dana BONDREA	University Politehnica of Bucharest	The water footprint from hydroelectricity: a case study for a hydropower plant in Romania
10⁴⁵ – 11⁰⁰	Adel FASKOL, Gabriel RACOVIȚEANU	Technical University of Civil Engineering Bucharest	Removal of Escherichia Coli using waste stabilization pond a simulation in climatic conditions of Libya
11⁰⁰ – 11¹⁵	COFFEE BREAK		
11¹⁵ – 13⁰⁰	SESSION VII – HALL A11		
11¹⁵ – 13⁰⁰	Chair – Andrei-Mugur GEORGESCU (Technical University of Civil Engineering Bucharest), Costin Ioan COȘOIU (Technical University of Civil Engineering Bucharest)		
11¹⁵ – 11³⁰	Alexander GENBACH ¹ , Nellya JAMANKULOVA ¹ , Iliya ILIEV ² , Angel TERZIEV ³	¹ Almaty University of Power Engineering & Telecommunications ² Ruse University ³ Technical University of Sofia	Study of fragile capillary-porous coatings in power installations
11³⁰ – 11⁴⁵	Alexander GENBACH ¹ , David BONDARTSEV ¹ , Iliya ILIEV ² , Angel TERZIEV ³	¹ Almaty University of Power Engineering & Telecommunications Ruse University ² Technical University of Sofia	Analogy in the processes of heat exchange of capillary-porous coatings in energy installations
11⁴⁵ – 12⁰⁰	Gokhan ERGIN ¹ , Severine TOMAS ² , Claudiu PĂTRAȘCU ³	¹ Dantec Dynamics ² IRSTEA ³ University Politehnica of Bucharest	Stereo MicroPIV measurements in an irrigation nozzle
12⁰⁰ – 12¹⁵	Florina COSTEA, Ion MĂLĂEL	Romanian Research and Development Institute for Gas Turbines - COMOTI	Numerical efficiency evaluation of a vertical axis wind turbine equipped with 4 digits and 5 digits NACA airfoils
12¹⁵ – 12³⁰	Elena-Alexandra CHIULAN , Andrei-Mugur GEORGESCU, Costin Ioan COȘOIU, Anton ANTON	Technical University of Civil Engineering Bucharest	Spreadsheet solution for the computation of the mean wind speed and turbulence intensity profiles according to the Romanian standard
12³⁰ – 12⁴⁵	Alexandru Cezar VLĂDUT , Costin Ioan COȘOIU, Andrei-Mugur GEORGESCU, Mircea DEGERATU	Technical University of Civil Engineering Bucharest	Numerical modeling of atmospheric flows over Bolund Island at full scale
12⁴⁵ – 13⁰⁰	Dănuț ZAHARIEA , Dorin Emil HUSARU, Mihai Silviu PAVĂL	"Gheorghe Asachi" Technical University of Iași	Selection of the most suitable small-scale wind turbine for an on-grid power supply system

11 ¹⁵ – 13 ⁰⁰	SESSION VIII – HALL D03C		
	Chair – Angel DOGEANU (Technical University of Civil Engineering Bucharest)		
11 ¹⁵ – 11 ³⁰	Lucia-Andreea EL-LEATHEY, Rareș-Andrei CHIHAIA, Ion MURGESCU, Gabriela CÎRCIUMARU	National Institute for R&D in Electrical Engineering ICPE-CA	Analysis of a low-voltage operating microgrid located in a residential area
11 ³⁰ – 11 ⁴⁵	Ion MURGESCU, Lucia-Andreea EL-LEATHEY, Rareș-Andrei CHIHAIA, Gabriela CÎRCIUMARU	National Institute for R&D in Electrical Engineering ICPE-CA	Efficient Energy Use and Storage Practices within Residential Facilities for Compliance with the nZEB Criteria
11 ⁴⁵ – 12 ⁰⁰	Georges CONSTANTINE ¹ , Chadi MAALOUF ¹ , Tala MOUSSA ¹ , Guillaume POLIDORI ¹ , Elias KINAB ²	¹ GRESPI, University of Reims Champagne Ardenne ² University of Reims Champagne Ardenne - Lebanese University	Numerical modelling of a hemp concrete wall
12 ⁰⁰ – 12 ¹⁵	Ibrahim NIANG ¹ , Chadi MAALOUF ¹ , Tala MOUSSA ¹ , Etienne SAMIN ² , Ton Hoang MAI ¹ , Salif GAYE ³	¹ University of Reims Champagne Ardenne ² Centre international de la construction en terre, Grenoble, France ³ University of Thiès/LME	Hygric behaviour of a clay-Typha bio-based material for building
12 ¹⁵ – 12 ³⁰	Hamze KARAKY, Chadi MAALOUF, Christophe BLIARD, Alexandre GARCOIN, Mohammed LACHI, Guillaume POLIDORI	University of Reims Champagne Ardenne	Mechanical and thermal characterization of a Beet Pulp-Starch Composite for Building Applications
12 ³⁰ – 12 ⁴⁵	Iosif FERENȚI, Dan OPRUȚA, Doru-Laurean BĂLDEAN	Technical University of Cluj-Napoca	Experimental research in mechanic's field of control for further innovation in the hydraulic and electronic operated injection system
12 ⁴⁵ – 13 ⁰⁰	Mihai GUȘTIUC	MetrOptics SRL	Advanced measurement equipment for fluid and solid mechanics and thermal systems
13 ⁰⁰ – 14 ⁰⁰	LUNCH		
14 ⁰⁰ – 16 ⁰⁰	SESSION IX – HALL A11		
14 ⁰⁰ – 14 ³⁰	Key Note Lecture – Jens Bo HOLM-NIELSEN, Aalborg University, Denmark Experience of how to achieve and reach by year 2040 100% Renewable Energy and Energy Efficiency in a society like the Danish and steps forward in EU		
	Chair – Mugur BALAN (Technical University of Cluj-Napoca)		
14 ³⁰ – 14 ⁴⁵	Sanda BUDEA ¹ , Viorel BĂDESCU ¹ , Adrian CIOCĂNEA ¹ , Cristiana Verona CROITORU ² , Ilina NĂSTASE ²	¹ University Politehnica of Bucharest ² Technical University of Civil Engineering Bucharest	The Stability of the radiative regime in Bucharest during 2017-2018
14 ⁴⁵ – 15 ⁰⁰	Dorin PETREUȘ, Mugur BALAN, Octavian POP, Radu ETZ, Toma PĂTĂRĂU	Technical University of Cluj Napoca	Evaluation of the PV energy production determined by measurements, simulation and analytical calculations
15 ⁰⁰ – 15 ¹⁵	Andreea SĂBĂUȘ, Marius PAULESCU	West University of Timisoara	Simple vs complex models for solar cells
15 ¹⁵ – 15 ³⁰	Macedon MOLDOVAN, Ion VIȘA	Transilvania University of Brașov	Development of an indoor testing rig for façade integrated solar thermal collectors
15 ³⁰ – 15 ⁴⁵	Adrian ILIE, Ion VIȘA	Transilvania University of Brașov	Hybrid Solar-Biomass system for District Heating
15 ⁴⁵ – 16 ⁰⁰	Ruxandra ERBAȘU, Daniela ȚĂPUȘI	Technical University of Civil Engineering Bucharest	About the conception and design of anaerobic digesters in zootechnical farms
14 ³⁰ – 16 ⁰⁰	SESSION X – HALL D03C		
	Chair – Cristian DINCĂ (University Politehnica Bucharest), Roxana PĂTRAȘCU (University Politehnica Bucharest)		
14 ³⁰ – 14 ⁴⁵	Cristian DINCĂ, Roxana PĂTRAȘCU, Nela SLAVU, Diana TUTICĂ	University Politehnica of Bucharest	Comparative Analysis of Different Combined Heat and Power Solutions Equipped with CO2 Capture Process
14 ⁴⁵ – 15 ⁰⁰	Constantin IONESCU, Cristian DINCĂ, Nela SLAVU, Diana TUTICĂ	University Politehnica of Bucharest	Evaluation of the energy efficiency of an industrial consumer using trigeneration

15 ⁰⁰ – 15 ¹⁵	Ioana UDREA ¹ , Romeo POPA ²	¹ ASC-Romania ² University Politehnica of Bucharest	Comparing the energy efficiency of exterior shading by metal slats and mesh screens in an early phase design exercise for an office building in Bucharest
15 ¹⁵ – 15 ³⁰	Corina BONCESCU, Lăcrămioara Diana ROBESCU	University Politehnica of Bucharest	Study of air bubble dynamics in an air column using CFD
15 ³⁰ – 15 ⁴⁵	Alexandra COVALEOV	Technical University of Civil Engineering Bucharest	Transparent concrete
15 ⁴⁵ – 16 ⁰⁰	Lucian NĂSCUTITU ¹ , Corina GIURGEA ¹ , Florin BODE ¹ , Octavian BUDIU ² , Octavian ANDERCOU ³	¹ Technical University of Cluj-Napoca ² Carei Municipal Hospital, surgery section ³ Iuliu Hațieganu University of Medicine and Pharmacy Cluj-Napoca	Triggering in PIV investigations of a pulsatile flow
16 ⁰⁰ – 16 ¹⁵	COFFEE BREAK		
SESSION XI – HALL A11			
16 ¹⁵ – 17 ³⁰	Chair – Florentina BUNEA (National Institute for R&D in Electric Engineering ICPE-CA), Alexandru ALDEA (Technical University of Civil Engineering Bucharest)		
16 ¹⁵ – 16 ³⁰	Adrian CICOCANE ¹ , Andrei DRAGOMIRESCU ¹ , TOFAN ² , Bogdan	¹ University Politehnica of Bucharest ² University of Architecture	Pedestrian-Level Ventilation In An Urban Environment Adjacent to River Channel: A Case Study For Bucharest City - Roumania
16 ³⁰ – 16 ⁴⁵	Gabriela IONESCU, Cora BULMĂU, Cosmin MĂRCULESCU	University Politehnica of Bucharest	Biomass conversion into valuable products within the integrated management of bio-resources
16 ⁴⁵ – 17 ⁰⁰	Alexandru ALDEA, Mihaela ALDEA, Sorin PERJU	Technical University of Civil Engineering Bucharest	GIS use of Land Use/Land Cover layers and historical data for water losses indices
17 ⁰⁰ – 17 ¹⁵	Irina MURGAN ¹ , Florentina BUNEA ² , Adrian NEDELICU ² , Gabriel Dan CIOCAN ¹	¹ Laval University ² National Institute for R&D in Electric Engineering ICPE-CA	Experimental setup to study two phase flows for environmental applications
17 ¹⁵ – 17 ³⁰	Lucian FECHETE-TUTUNARU ¹ , Ferenc GASPARI ¹ , Zoltan GYORGY ²	¹ Technical University of Cluj-Napoca ² INMA Bucharest	Soil-tool interaction of a simple tillage tool in sand
SESSION XII Young Researchers section – HALL D03C			
16 ¹⁵ – 17 ³⁰	Chair – Florin BODE (Technical University of Cluj-Napoca)		
16 ¹⁵ – 16 ³⁰	Alexandru FODOREAN, Adrian CUREU, Oana GIURGIU, Dan OPRUȚA	Technical University of Cluj-Napoca	Solutions for increasing the quality of hydro-technical building elements obtained by numerical simulations
16 ³⁰ – 16 ⁴⁵	Paul Alexandru DANCA, Florin BODE, Ilinca NASTASE	Technical University of Civil Engineering Bucharest	Developing a CFD model of the air distribution inside a vehicle cockpit with innovative air diffusers
16 ⁴⁵ – 17 ⁰⁰	Matei-Răzvan GEORGESCU and Charles BERVILLE	Technical University of Civil Engineering Bucharest	Conception of a numerical model of the air distribution system in the Crew Quarters on board of the International Space Station
17 ⁰⁰ – 17 ¹⁵	Micsku TAMÁS, Roxana Maria MORAR	Technical University of Cluj-Napoca	A more accessible way of post processing CFD simulation data in to a VR experience
17 ¹⁵ – 17 ³⁰	Alin BOTH, Alexandru KONDREI	Technical University of Cluj-Napoca	Numerical Simulation of a pulsatile flow
17 ³⁰	END OF SECOND DAY		

FRIDAY 12th of October 2018			
Location – Technical University of Cluj – Napoca, Faculty of Mechanics			
8⁰⁰ – 9⁰⁰	EENVIRO 2018 – REGISTRATION - Welcome Coffee		
9⁰⁰ – 10³⁰	WORKSHOP I – HALL A11		
9⁰⁰ – 10³⁰	SIMILITUDE ISSUES IN EXPERIMENTAL STUDIES		
	PART I - FUNDAMENTALS		
	Corneliu BĂLAN (University Politehnica Bucharest) Ilinca NASTASE (Technical University of Civil Engineering Bucharest) Andrei-Mugur GEORGESCU (Technical University of Civil Engineering Bucharest)		
10³⁰ – 11⁰⁰	COFFEE BREAK		
11⁰⁰ – 12³⁰	WORKSHOP II – HALL A11		
11⁰⁰ – 12³⁰	ANSYS TECHNOLOGY FOR CFD		
	Răzvan MAHU (Tensor Romania)		
11⁰⁰ – 11⁴⁵	Răzvan MAHU	Tensor Romania	Ansys Discovery Live
11⁴⁵ – 12³⁰	Răzvan MAHU	Tensor Romania	Ansys Fluent Meshing
12³⁰ – 13⁰⁰	AWARDING AND CLOSING CEREMONY EENVIRO 2018		
13⁰⁰ – 14⁰⁰	LUNCH		
14⁰⁰ – 15³⁰	WORKSHOP III – HALL A11		
14⁰⁰ – 15³⁰	SIMILITUDE ISSUES IN EXPERIMENTAL STUDIES		
	PART II – CASE STUDIES		
	Carmen-Anca SAFTA (University Politehnica Bucharest) Mihnea SANDU (Technical University of Civil Engineering Bucharest)		
15³⁰ – 16⁰⁰	FAREWELL COFFEE		
16⁰⁰	END OF THIRD DAY		

SATURDAY 13th of October 2018	
Meeting Location – To be announced	
9⁰⁰ - 20⁰⁰	DAY TRIP EXCURSION TO ALBA IULIA CITY AND TURDA SALT MINE (Cold snack provided)

Notes

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For any situation prior or during the event, please feel free to address the organizers:

Florin BODE

Email: Florin.Bode@termo.utcluj.ro

Personal mobile number: +40743567765

For any major emergencies requiring medical, police, firefighting or other specialized intervention forces, please dial

112 – the centralized call center for emergency situations

(it is recommended to announce your emergency and location at the very beginning of the call in order to have the intervention forces dispatched as soon as possible and only then give further details and information that should be recorded for future reference or investigations; only end your call if instructed so by the call center operator)