

**ECONOPHYSICS,  
NEW ECONOMY & COMPLEXITY  
INTERNATIONAL CONFERENCE**

***“ENEC - 2014”***

**29 – 31 May, 2014**

**PROGRAMME**



**HYPERION UNIVERSITY**  
**and**  
**HYPERION RESEARCH & DEVELOPMENT INSTITUTE**  
**in partnership with**  
**BUCHAREST-ILFOV REGIONAL DEVELOPMENT AGENCY**  
**BUCHAREST, ROMANIA**

see: [www.enec.ro](http://www.enec.ro)

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**President of the**  
**Hyperion University of Bucharest – Romania**

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CARMEN PĂUNA – *I.E.F., Romanian Academy, Romania*

***PROGRAMME SECTIONS OF THE CONFERENCE:***

***FIRST SECTION – ECONOPHYSICS***

***SECOND SECTION – NEW ECONOMY***

***THIRD SECTION – COMPLEXITY***

# **OUTLINE OF PROGRAMME:**

**THURSDAY, MAY 29**

**CONFERENCE HALL – 6 FLOOR – BUILDING A**

**10<sup>00</sup> OPENING SESSION**

**– Opening Address**

**10<sup>00</sup> – 11<sup>00</sup> – ECONOPHYSICS Section – Papers Presentation**

**11<sup>00</sup> – 11<sup>30</sup> – Coffee Break**

**11<sup>30</sup> – 14<sup>30</sup> – ECONOPHYSICS Section – continued**

**14<sup>30</sup> – 15<sup>30</sup> – Scientific Lunch**

**15<sup>30</sup>-18<sup>30</sup> – NEW ECONOMY Section – Papers Presentation**

**18<sup>30</sup>-19<sup>00</sup> – Discussions**

**FRIDAY, MAY 30**

**CONFERENCE HALL – 6 FLOOR – BUILDING A**

**9<sup>00</sup> – 11<sup>00</sup> – NEW ECONOMY Section – Papers Presentation**

**11<sup>00</sup> – 11<sup>30</sup> – Coffee Break**

**11<sup>30</sup> – 14<sup>30</sup> – NEW ECONOMY Section – continued**

**14<sup>30</sup> – 15<sup>30</sup> – Scientific Lunch**

**15<sup>30</sup> – 18<sup>30</sup> – COMPLEXITY SECTION – Papers Presentation**

**18<sup>30</sup> – 19<sup>00</sup> – Discussions**

## **SATURDAY, MAY 31**

### **SHORT SCIENTIFIC TRAVEL (Visit Bucharest surroundings)**

**Organized by Anda Gheorghiu (organizer and supervisor)**

One day scientific trip around Bucharest-Ilfov area, at 45 km distance from Bucharest, by minibus. We will visit Mogosoia Castle, Romanian-Renaissance style, inaugurated in 1702 by the martyr King Constantin Brancoveanu. Throughout its history, the Castle hosted some important personalities, from royalty and politicians to artists. The excursion continues in Snagov, an area in idyllic Romanian countryside about 30 km away from Bucharest. The tranquil Lake and Deep Oak Woods which are the hallmark of the region are a peaceful haven for those who love nature. There are also ancient monasteries in the area, most famous amongst them is the Vlad Tepes Monastery believed to house the tomb of the well-known Dracula.

**9<sup>00</sup> – Departure from Hyperion University by minibus at 9<sup>00</sup> o'clock**

# SCIENTIFIC PROGRAMME:

THURSDAY, 29 MAY

CONFERENCE HALL – 6 FLOOR – BUILDING A

10<sup>15</sup> – 11<sup>15</sup> – ECONOPHYSICS Section<sup>1</sup>

**Chairmen: Matti Estola**  
**Anca Gheorghiu**

29C – E1 – *Errors in the Neoclassical Theory of a Firm and their Corrections*

**Matti Estola**

University of Eastern Finland, [matti.estola@uef.fi](mailto:matti.estola@uef.fi)

29C – E2 – *Comparative Analysis of Electromagnetic Field Study Using Operator Diagonalization Methods*

**Irina Dmitrieva**

Odessa National Academy of Telecommunications, [irina.dm@mail.ru](mailto:irina.dm@mail.ru)

29C – E3 – *Two Interdependent Binary Opinion Networks*

**Feodor Kusmartsev**

Loughborough University, U.K., [f.kusmartsev@lboro.ac.uk](mailto:f.kusmartsev@lboro.ac.uk)

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<sup>1</sup> The Lecture Number Stands for:

30	– date (30 May)
C	– Conference Hall
E	– Conference Section (Econophysics)
1 ... n	– number of the paper

29C – E4 – *Innovation Management versus Fractal Infinite Paths Integral*

**Alain Le Mehaute, Dmitrii Tayurskii, Rui Menezes**

French National Network on Complex systems, France,  
[alm@materialsdesign.com](mailto:alm@materialsdesign.com)

**11<sup>15</sup> – 11<sup>30</sup> – Coffee Break**

**11<sup>30</sup> – 14<sup>00</sup> – ECONOPHYSICS SECTION – continued**

29C – E5 – *Well-being and Poverty Reduction in Ecological Economics: Macro-Measures and the Bioeconomic Flow-Fund Model*

**Raluca I. Iorgulescu**

Institute for Economic Forecasting-NIER, Romanian Academy,  
[raluca\\_i@lycos.com](mailto:raluca_i@lycos.com)

29C – E6 – *The Okun's Law And The Chaotic Unemployment Rate Growth*

**Vesna Jablanovic**

University of Belgrade, Faculty of Agriculture  
[vesnajib@ptt.rs](mailto:vesnajib@ptt.rs)

29C – E7 – *Binary Social and Biological Networks: Dynamical Phase Transitions in Opinion Formation*

**Karl Kürten**

Vienna University, Austria, [kuertek3@univie.ac.at](mailto:kuertek3@univie.ac.at)



**14<sup>00</sup> – 15<sup>30</sup> - Scientific Lunch**

**15<sup>30</sup> – 18<sup>30</sup> – NEW ECONOMY Section**

**Chairmen: Wioletta Wereda  
Anda Gheorghiu**

*29C – NE1 – Common Mistakes in Combating the Economic  
and Financial Crisis*

**Cătălin Emilian Huidumac, Alexandru Catalin Popa**

The Bucharest University of Economic Studies, [catalinhuidumac@yahoo.com](mailto:catalinhuidumac@yahoo.com)

*30C – NE2 – Europe 2020 Strategy and new opportunities for  
SMEs in Bucharest Ilfov Region*

**Ana Cristina Adumitroaei, Claudia Ionescu**

Bucharest Ilfov RDA, [acdumi2008@yahoo.com](mailto:acdumi2008@yahoo.com)

*29C – NE3 – IT risk management in the banking sector*

**Beata Domańska-Szaruga**

Siedlce University of Natural Sciences and Humanities, Poland,  
[szarugab@uph.edu.pl](mailto:szarugab@uph.edu.pl)

*29C – NE4 – E-administration as a modern form of stakeholders  
relationship management in the public sector*

**Wioletta Wereda**

Siedlce University of Natural Sciences and Humanities, Poland,  
[weredawioletta@tlen.pl](mailto:weredawioletta@tlen.pl)

*29C – NE5 – Youth Employment Policies in Some Member  
States of the European Union*

**Mariana Balan**

Institute for Economic Forecasting-NIER, Romanian Academy,  
[dr.mariana.balan@gmail.com](mailto:dr.mariana.balan@gmail.com)

29C – NE6 – *What Was Not Resolved by the Anti-Crisis Strategies*

**Cătălin Emilian Huidumac, Alexandru Catalin Popa**

The Bucharest University of Economic Studies, [catalinhuidumac@yahoo.com](mailto:catalinhuidumac@yahoo.com)

29C – NE7 – *Security of Computer Networks Implemented in Universities and Business Environment*

**Andreea Ionescu**

Hyperion University of Bucharest, [andreea\\_ionescu\\_25\\_2011@yahoo.com](mailto:andreea_ionescu_25_2011@yahoo.com)

29C – NE8 – *How communication style can affect the economic development? Study case: Romania, Bucharest Ilfov Region*

**Claudia Ionescu**

Bucharest Ilfov RDA, [adrbinvest@yahoo.com](mailto:adrbinvest@yahoo.com)

29C – NE9 – *Costs and Benefits of Roma Integration Strategies from a New Perspective*

**Liviu Ștefan Râncioagă**

Bucharest Ilfov RDA, [liviu.rancioaga@adrbi.ro](mailto:liviu.rancioaga@adrbi.ro)

**FRIDAY, 30 MAY**

**CONFERENCE HALL – 6 FLOOR – BUILDING A**

**9<sup>00</sup> – 11<sup>00</sup> – NEW ECONOMY SECTION – continued**

**Chairmen: Wioletta Wereda**

**Anda Gheorghiu**

**30C – NE10 – *European Union vs Economic Freedom under the Global Crisis Impact***

**Romeo-Victor Ionescu**

Danubius University Galati, [romeo.v.ionescu@univ-danubius.ro](mailto:romeo.v.ionescu@univ-danubius.ro)

**30C – NE11 – *Relationships between the behavior of medical staff and the level of innovation in Polish hospitals***

**Joanna A. Jończyk**

Bialystok University of Technology

**30C – NE12 – *Rethinking the strategies in the banking sector between necessity and opportunity***

**Catalin Emilian Huidumac, Alina Pop**

The Bucharest University of Economic Studies, [catalinhuidumac@yahoo.com](mailto:catalinhuidumac@yahoo.com)

**30C – NE13 – *The aging of the population as a challenge for modern social policy in Europe as an example of Republic of Poland***

**Katarzyna Peter-Bombik, Agnieszka Szczudlińska-Kanoś**

Jagiellonian University in Krakow, Institute of Public Affairs, Faculty of Management and Social Communication, Poland

30C – NE14 – *The Economy of Public-Private Partnerships:  
Learning from International Experience*

**Monica Gabriela Gherman, Andreea Monica Predonu**

The Bucharest University of Economic Studies, [monicagherman24@yahoo.com](mailto:monicagherman24@yahoo.com)

30C – NE15 – *Europe 2020 new challenges regarding  
communication development through networks communication*

**Simona Curpan, Claudia Ionescu**

Bucharest Ilfov RDA, [simonacurpan@yahoo.com](mailto:simonacurpan@yahoo.com)

**11<sup>00</sup> – 11<sup>30</sup> – Coffee Break**

**11<sup>30</sup> – 14<sup>30</sup> – NEW ECONOMY SECTION – continued**

30C – NE16 – *Competition policy in banking sector and the  
economic crisis*

**Cătălin Emilian Huidumac, Alina Pop**

The Bucharest University of Economic Studies, [catalinhuidumac@yahoo.com](mailto:catalinhuidumac@yahoo.com)

30C – NE17 – *Participatory management in the local  
communities*

**Katarzyna Peter-Bombik, Agnieszka Szczudlińska-Kanoś**

Jagiellonian University in Krakow, Institute of Public Affairs, Faculty of  
Management and Social Communication, Poland

30C – NE18 – *A Paradigm of the New Economy between  
Convergence and Increasing Disparities.  
Challenges for Romania at the Time-Horizon  
2020*

**Cornelia Dumitru**

Institute for Economic Forecasting-NIER, Romanian Academy,,  
[cornelia.dumitru@gmail.com](mailto:cornelia.dumitru@gmail.com)

30C – NE19 – *Changes of Faculties at Polish Universities  
in the Context of Labour Market Needs*

**Sylvia Saczyńska-Sokół, Janusz Sasak**

Bialystok University of Technology, Faculty of Management and Jagiellonian  
University, Institute of Public Affairs, Poland

[janusz.sasak@uj.edu.pl](mailto:janusz.sasak@uj.edu.pl)

30C – NE20 – *Case study on Romania's controversial Roşia  
Montana mining project. Alternatives for  
sustainable development*

**Anda Gheorghiu**

Hyperion University of Bucharest, [anda.gheorghiu@gmail.com](mailto:anda.gheorghiu@gmail.com)

30C – NE21 – *Target Costing in the Procedures for Creating  
a Participatory Budget in Local Government  
Units*

**Artur J. Kożuch, Barbara Kożuch,  
Katarzyna Sienkiewicz-Małyjurek,**

University of Agriculture in Cracow, Jagiellonian University in Krakow, Silesian  
University of Technology, Poland

[a.j.kozuch@ur.krakow.pl](mailto:a.j.kozuch@ur.krakow.pl)

30C – NE22 – *Optimum Currency Area: The Story of  
Thinking About*

**Liviu Catalin Andrei, Dalina Maria Andrei**

SNSPA (1), Institute of Economic Forecasting (2),

[liviuandrei@yahoo.com](mailto:liviuandrei@yahoo.com)

**14<sup>30</sup> – 15<sup>30</sup> – Scientific Lunch**

**15<sup>30</sup> – 18<sup>30</sup> – COMPLEXITY SECTION**

**Chairmen: Feodor Kusmartsev  
Ioana Armaş**

**30C – C1 – *Intelligent Enterprises - A Capabilities Oriented Model***

**Ioana Armaş**

Hyperion University of Bucharest, [ioanaarm@yahoo.com](mailto:ioanaarm@yahoo.com)

**30C – C2 – *The Complexity and Diversity of Technologies Involved in HDD Production and Operation - Consequences on Reliability***

**Floarea Baicu, Andrei Mihai Baicu**

Hyperion University, VIO TOP Company, [floareabaiacu@xnet.ro](mailto:floareabaiacu@xnet.ro)

**30C – C3 – *Statistical Signal Processing Using Matlab,***

**Emilia Dana Seletchi**

“CAROL I” Technical College, [seletchi@gmail.com](mailto:seletchi@gmail.com)

**30C – C4 – *The complete set of the 28 models and their analytical solutions associated with a parabolic partial differential equation of the second order. Applications for the heat transfer in the bar with finite length***

**Nicolae Popoviciu**

Hyperion University of Bucharest, [nicolae.popoviciu@yahoo.com](mailto:nicolae.popoviciu@yahoo.com)

30C – C5 – *Dimension Reduction Techniques*

**Emilia Dana Seletchi**

“CAROL I” Technical College, [seletchi@gmail.com](mailto:seletchi@gmail.com)

30C – C6 – *Macroeconomic Analysis and Previsioning Models*

**Stancu Ana Maria Ramona**

The Bucharest University of Economic Studies, [ana\\_maria\\_ramona@yahoo.com](mailto:ana_maria_ramona@yahoo.com)

**18<sup>30</sup> – 19<sup>00</sup> – Discussions and Closing Speech**

**EXCURSION-MAY 31, 2014**  
**(Planned by ENEC organising committee**  
**and Hyperion University)**

TIME	ACTIVITY
9	Departure from Bucharest by minibus
10	Arrival to Mogosoaia. One hour visit of the beautiful Palace in Romanian Renaissance style or Brâncovenesc style, a combination of Venetian and Oriental elements, with lovely gardens and pond. The founder, king Brancoveanu was a great personality for the Romanian culture. This year, we celebrate the 300 <sup>th</sup> anniversary of the Holly Brancoveanu Martyrs, who have been sacrificed for their witness to the Christian Faith, in Istanbul (1714). The Palace was to a large extent rebuilt in the 1920s by Marthe Bibesco, a great writer and aristocrat lady. In the late 1920s and especially during the 1930s, the palace became the meeting place for politicians and for the international high society, a quiet retreat during the growing turmoil of the epoch.
11-11,45	Mogosoia - Snagov, Artha Park (auto shift )
12-13,30	Boat tours on the lake, with audio guide ( 2 x 6 km , visit to the Island / Monastery). Stop for 15-20 minutes to visit the historical monument of Snagov Monastery
13,30-15	Lunch in Snagov followed by siesta and scientific talks ☺
15-16,30	Walk in the woods (old oak forest areas with 2 ecosystems)
16,30-19,30	Visit of Snagov Museum collections , the largest collection of kings Vlad Tepes and Basarab - with a brief presentation of 15-20 minutes ( plus refreshment in the shade at the edge of a pond with many species of fauna and flora )
19,30	Departure back to Bucharest
20	Arrival to Bucharest

N.B. Pending on time, we may arrange other surprises for our guests.  
The distance between Bucharest and Snagov is 45 km.



## Images from the places we will visit

Mogosoia Palace



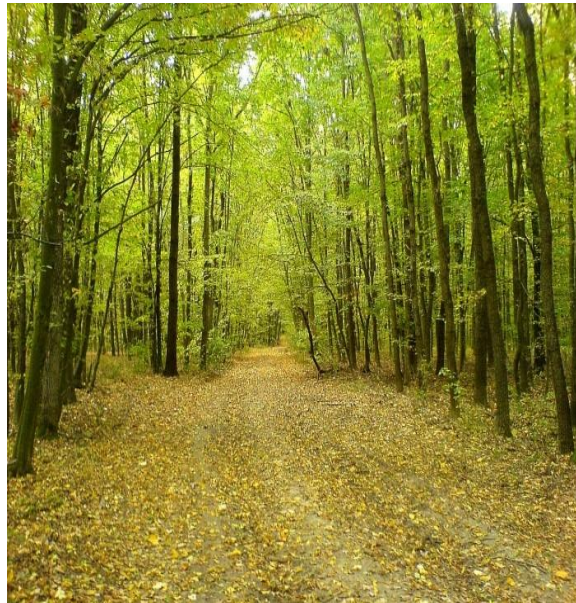
Snagov Lake and Snagov Monastery



Snagov Lake



Snagov natural reservation (flora/fauna)





## Snagov Museum collections





# Instructions for authors

## Submission of papers

For ENEC International Conference, authors are encouraged to send theoretical and/or experimental contribution concerning up-to-date research, before the end of April every year.

Only original papers and invited papers in English are considered. To qualify for publication, papers must be previously reviewed by members of the Advisory Board and after presentation in the one of section of ENEC Conference. Submission of papers must be made to the Paper Submission section on the Conference Website: [www.enec.ro](http://www.enec.ro).

### Papers structure and preparation

The following structure of a paper is recommended: 1. Introduction, 2. Experimental (Theory, Modeling, ...), 3. Results, 4. Discussion, 5. Conclusions.

The first page must contain:

- Title of paper (main title underlined);
- Authors names and the institute where the work was conducted;
- Keywords, for indexing purposes;
- Abstract.

The exact address complete, with a postal code of the principal author must be given. Add e-mail if possible.

For the preparation of the Conference Proceedings, please upload the abstract and the full paper in English, in electronic format to the Conference Website: [www.enec.ro](http://www.enec.ro)

In order to publish in the Proceedings of ENEC Conference, the manuscripts should be submitted in duplicate sets of illustration (of which one is original) typewritten double-spaced on one side of the paper, with a wide margin. In case of the manuscripts in electronic form, the operating system and word processing software used to produce your document should be WORD for WINDOWS. The following rules for text processing should be used. Main text and equations: Times New Roman 11 pt, spacing: single, first line; left indent 0,5 cm, alignment: justified Footnotes, figure explanations: Times New Roman 9 pt, spacing: single, first line; left indent 0,5 cm, alignment: justified Table content: Times New Roman 9 pt, spacing: single, alignment: centre References: Times New Roman 9 pt, spacing: single, first line; left indent 0,5 cm, alignment: justified, Author's names – plain; Books titles – italic; Publication titles – plain; Tome no. – bold.

References will be consecutively numbered in the text and collected at the end of the paper in the following style for journals, proceedings, books and sites, respectively:

- [1] D. K. Faley, *A Statistical Equilibrium Theory of Markets*, J. Econ. Theory, 62, 321-345 (1994) or D. K. Faley, J. Econ. Theory, **62**, 321 (1994).
- [2] I. Dmitrieva, *Diagnolization problems in the classical Maxwell theory and their industrial applications*, Proc. of ENEC 2008 International Conference, Victor Publishing House, Bucharest, Romania, 2008, p. 11.
- [3] R. N. Mantegna & H. E. Stanley, *An Introduction to Econophysics*, Cambridge University Press, Cambridge, 2000.
- [4] I. Spânulescu and Anca Gheorghiu, *Economic Amplifier – A new Econophysics Model*, in: arXiv.org > q.fin > arXiv: 0707.3703, 25 July 2009.

For papers written by economists the following style also can be used:

- [1] Galam, S. (2002), *Minority Opinion Spreading in Random Geometry*, European Physical Journal B 25, pp. 403-406
- [2] Amissano G. and Giannini C. (1997), *Topics in Structural VAR Econometrics*, Springer Berlin

Numbers of References must be limited (up to 20 references).

Figures and tables must be introduced in the text with their legends.

The manuscripts should be as concise as possible. Original whose length exceeds 12 pages are strongly discouraged.

The manuscripts should be sent to the following address:

Elena PETCU

HYPERION University of Bucharest 169, Calea Calarasilor, 030615, Bucharest, ROMANIA Phone: 401-323 41 67; 401-321 46 67, Fax: 401-321 62 96, and by e-mail or to: [rectorat@hyperion.ro](mailto:rectorat@hyperion.ro);

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**ENEC 2014 INTERNATIONAL CONFERENCE IS INITIATED BY:**

**HYPERION UNIVERSITY OF BUCHAREST**

**AND**

**HYPERION RESEARCH AND DEVELOPMENT INSTITUTE**



**AND ORGANIZED IN PARTNERSHIP WITH**

**BUCHAREST-ILFOV REGIONAL DEVELOPMENT AGENCY**

