

- **Romanian Society of Applied and Industrial Mathematics**
- **Faculty of Sciences of “Vasile Alecsandri” University of Bacău**
- **"Gh. Mihoc - C. Iacob" Institute of Mathematical Statistics and Applied Mathematics, of the Romanian Academy**
- **Academy of Romanian Scientists**

**cordially invite you to**  
**THE 22<sup>nd</sup> CONFERENCE ON APPLIED AND INDUSTRIAL**  
**MATHEMATICS**

**CAIM 2014**

**Bacău, Romania, September 18-21, 2014**

The Romanian Society of Applied and Industrial Mathematics (ROMAI), Faculty of Sciences of “Vasile Alecsandri” University of Bacău, "Gh. Mihoc - C. Iacob" Institute of Mathematical Statistics and Applied Mathematics of the Romanian Academy (Bucharest), and the Academy of Romanian Scientists (Bucharest) announce the organization of the 22<sup>nd</sup> Conference on Applied and Industrial Mathematics - CAIM 2014. The Conference will be held at the Faculty of Sciences, “Vasile Alecsandri” University of Bacău between 18 and 21 of September, 2014.

### **On The Organizing Institutions**

**1. ROMAI** was founded in 1992. It is a non-profit scientific association whose members are mathematicians, physicists, engineers, chemists, biologists, economists, and other scientists from Romania, Republic of Moldova, and some other countries. ROMAI encourages and promotes studies on applied mathematics and organizes annually, since 1993, the Conference on Applied and Industrial Mathematics (CAIM). The web page of ROMAI is [www.romai.ro](http://www.romai.ro) .

**2. The Faculty of Sciences of “Vasile Alecsandri” University of Bacău** continues the traditions of academic education in Bacău, in the fields of exact sciences and life sciences. The Faculty of Mathematics and the Faculty of Natural Sciences from the Pedagogical Institute of Bacău have been founded in 1961. Nowadays, the Faculty of Sciences has two departments, the Department of Mathematics, Informatics and Education Sciences and the Department of Biology, Ecology and Environmental protection. The Faculty of Sciences has the following bachelor study programs: Mathematics, Informatics (full-time attendance and part-time attendance), Pedagogy of Primary and Preschool Education, Biology and Ecology, as well as master study programs: Applied Informatics in Science, Technology and Economy, Didactic Mathematics, Biological Resources Valorization and Environmental Protection.

The Department of Mathematics, Informatics and Education Sciences (formerly, the Chair of Mathematics and Informatics) organized several scientific events as: the International Conference on Mathematics and Informatics ICMI45, Bacău, September 18-20 2006; the National Conference on Mathematics and Informatics, Bacău, November 16-17, 2007; the XII<sup>th</sup> Conference of the Romanian

Society of Mathematical Sciences, Bacău, October 17-19, 2008; the „Gheorghe Vrănceanu” International Conference on Mathematics and Informatics ICMI 2, September 8-10, 2009; the “Gheorghe Vrănceanu” National Conference on Mathematics and Informatics with international participation NCMI2011 Bacău, May 26-28, 2011; the “Gheorghe Vrănceanu” National Conference on Mathematics and Informatics with international participation, May 30-31 2013, Bacău.

The Department of Mathematics, Informatics and Education Sciences publishes the research journal „Scientific Studies and Research. Series Mathematics and Informatics”, (<http://pubs.ub.ro/?pg=revues&rev=ssrsmi>); which is indexed in Zentralblatt Math, Mathematical Reviews, AMS Mathematics Digital Registry, EBSCO, Index Copernicus, Ulrich’s Global Serials Directory and ProQuest. For more information concerning the Faculty of Sciences of “Vasile Alecsandri” University of Bacău, please visit <http://ub.ro/stiinte>.

3. *"Gh. Mihoc - C. Iacob" Institute of Mathematical Statistics and Applied Mathematics* is an institute of the Romanian Academy and was founded in 2001 by the unification of two institutes: *Center of Mathematical Statistics* and *"Caius Iacob" Institute of Applied Mathematics*. The domains of research are: Probability and Stochastic Processes, Statistical Inference, Operational Research, Dynamical Systems and Control Theory, Fluid Mechanics, Partial Differential Equations and applications in Environmental and Life Sciences. Further information on the activity of this institute may be found at [www.ima.ro](http://www.ima.ro).

4. *The Academy of Romanian Scientists* is the continuator of the Academy of Sciences of Romania (1936-1948) and of the Association of Romanian Scientists (founded in 1956), that in 1996 became the Academy of Romanian Scientists. In 2007 it was organized in the actual form. Among the honorific members of the Academy of Sciences of Romania we remind the following winners of Nobel Prize: Louis de Broglie, Jean Perrin, Max Born, Werner-Karl Heisenberg, Paul Sabatier, Friedrich Bergius, Paul Karrer, George Emil Palade.

## Objectives of CAIM 2014

CAIM 2014 provides a forum for the review of the recent trends in applied mathematics: mathematical modeling, studies of models coming from industry, biology, economy, either from a qualitative or from a numerical point of view. Since theoretical studies find sooner or later their applicability, the conference has also sections for more theoretical branches of mathematics like algebra or geometry. Computer science communications are welcome.

The conference offers to the researchers the opportunity to share new research advances and ideas in different areas of Mathematics with a special stress on their applicability. Also, it is our intention to create a framework for discussions on the interface between Mathematics and Industry.

Traditionally, our Conferences in Applied and Industrial Mathematics have a Section devoted to undergraduate mathematical education.

## Webpage of CAIM 2014

[http://www.romai.ro/conferintele\\_romai/caim2014.html](http://www.romai.ro/conferintele_romai/caim2014.html).

## Conference Sections

1. Real, Complex, Functional and Numerical Analysis;
2. Partial Differential Equations with applications in Mechanics, Biology, etc.;
3. Ordinary Differential Equations; Dynamical Systems;
4. Probability Theory, Mathematical Statistics, Operations Research;
5. Algebra, Logic, Geometry (with applications);
6. Mathematical Modeling;
7. Computer Science;
8. Education.

## Scientific Committee

Nuri AKSEL (Bayreuth), Constantin BĂCUȚĂ (Delaware, U.S.A.), Dumitru BOTNARU (Chișinău), Tassos BOUNTIS (Patras), Sergiu CATARANCIUC (Chișinău), Victor CHEPOI (Marseille), Acad. Mitrofan CIOBANU (Chișinău), Acad. Constantin CORDUNEANU (Arlington, USA), Piergiulio CORSINI (Italy), Mathias DEHMER (Austria), Angelo FAVINI (Bologna), Vladimir GERDT (Russian Federation), Bogdan KAZMIERCZAK (Poland), Victor LEPIN (Minsk), Boris LOGINOV (Ulyanovsk), Nenad MLADENOVICI (Birmingham), Andrei MOROIANU (Paris), Gheorghe MOROȘANU (Budapesta), Lidia PALESE (Bari), Mihail POPA (Chișinău), Mairo RAHULA (Estonia), Kumbakonam RAJAGOPAL (Texas), Liliana RESTUCCIA (Messina), Ruggero Maria SANTILLI (U.S.A.), Dana SCHLOMIUK (Montreal), Kiyoyuki TCHIZAWA (Tokyo), Ioan TODINCĂ (Orléans), Nicolae VULPE (Chișinău).

Mihai ANASTASIEI (Iași), Vladimir BĂLAN (Bucharest), Șerban BASARAB (Bucharest), Wladimir-Georges BOSKOFF (Constanța), Vasile BRÂNZĂNESCU (Bucharest), Daniel BREAZ (Alba Iulia), Adrian CARABINEANU (Bucharest), Ovidiu CÂRJĂ (Iași), Sanda CLEJA-ȚIGOIU (Bucharest), Adrian CONSTANTINESCU (Bucharest), Ion CRĂCIUN (Iași), Narcisa APREUTESEI DUMITRIU (Iași), Gabriel DIMITRIU (Iași), Ioan DZITAC (Oradea), Constantin FETECĂU (Iași), Paul GEORGESCU (Iași), Acad. Marius IOSIFESCU (Bucharest), Gabriela MARINOSCHI (Bucharest), Acad. Solomon MARCUS (Bucharest), Acad. Radu MIRON (Iași), Ioana MOISIL (Sibiu), Costică MOROȘANU (Iași), Titus PETRILA (Cluj-Napoca), Constantin POPA (Constanța), Vasile POSTOLICĂ (Bacău), Vasile PREDĂ (Bucharest), Ioan STANCU MINASIAN (Bucharest), Mirela ȘTEFĂNESCU (Constanța), Dan TIBA (Bucharest), Acad. Ioan TOMESCU (Bucharest), Mihai TURINICI (Iași), Gheorghită ZBĂGANU (Bucharest).

## Organizing Committee

**President:** Ilie BURDUJAN (President of ROMAI, Iași)

**Vice President:** Mihai TALMACIU (Dean of Faculty of Sciences, Bacău)

Anca Veronica ION (ISMMA, Bucharest)

Stelian ION (ISMMA, Bucharest)

## Local Organizing Committee (Faculty of Sciences – Bacău)

- Elena NECHITA
- Marcelina MOCANU
- Manuela GÎRȚU
- Valer NIMINEȚ
- Dan POPA
- Simona VÂRLAN

### Location

CAIM 2014 will take place at the Faculty of Sciences, “Vasile Alecsandri” University of Bacău.  
Address: 157, Mărășești Blvd, Bacău, 600115, Tel. Fax: 0234571012, e-mail: [stiinte@ub.ro](mailto:stiinte@ub.ro)

### CAIM 2014 Preliminary Program

#### September 18, 2014

14,00 – 23,00 – Registration at the Faculty of Sciences.

#### September 19, 2014

Registration, Opening Ceremony, Works of the Conference.

#### September 20, 2014

Works of the Conference, Closing Ceremony, ROMAI – General Assembly, Official Dinner.

#### September 21, 2014

Excursion, Departure of participants.

### Registration

The registration will be done on the web page of CAIM 2014,

[http://www.romai.ro/conferintele\\_romai/caim2014.html](http://www.romai.ro/conferintele_romai/caim2014.html) .

The participants are kindly asked to send the abstracts by e-mail, to [caim.2014@yahoo.com](mailto:caim.2014@yahoo.com) .

## Important Dates

**Online registration deadline:** - July 30.

**Submission of abstracts deadline:** - August 15.

**Notification of acceptance** (for presentation): - two weeks after the submission of the abstract.

**Deadline to submit papers:** - October 15.

**Conference period:** - September 18-21.

## Conference Fees

**Registration fee** (that includes organizing expenses and coffee breaks):

Romanian participants - **100 lei**;

For the Romanian members of ROMAI that have paid their Member Fee for 2013 - **70 lei**;

Foreign participants - **50 Euro**;

Participants from Republic of Moldova – **50 lei** (RO -lei).

**The costs of official dinner and the excursion are not included in the above fees. Their amount will be specified in the Second Announcement.**

## Payment methods

The foreign participants are kindly asked to pay the fee until September 1, in the **account of ROMAI:**

**RO19BRDE445SV10137674160**, held at **BRD-Groupe Société Générale**, SWIFT BRDEROBU.

Romanian participants and participants from Republic of Moldova may pay either in the **account of ROMAI: RO23BRDE445SV00031164160**, held at **BRD- Groupe Société Générale**, TRIUMF, Bucharest, or at the Registration Desk.

## CONCERNING ABSTRACTS AND PAPERS

### 1. ABSTRACTS.

The abstracts for **Sections 1-7** will be written in English, by using the LATEX template below.

**CAIM Abstracts Template (for sections 1-7)**

```
\documentclass[11pt, a4paper]{article}
\begin{document}
\title{Title of the abstract}
\author{Author$^1$, Author$^2$ \ $^1$Affiliation, $^2$Affiliation }
\date{}
\maketitle
Text of abstract.
\end{document}
```

Besides the tex file, please send the pdf file of the Abstract.

The abstracts for **Section 8** may be written also by using Microsoft Word (in English or Romanian).

**The Abstracts for all sections must be sent by email at the address [caim.2014@yahoo.com](mailto:caim.2014@yahoo.com) .**

The authors are also asked to name the files containing the abstracts with the name of the Corresponding Author (for example IONESCU-Andrei.tex, or, for Section 8, IONESCU-Andrei.doc).

The Scientific Committee will select the works that will be communicated and will announce the authors in at most two weeks from the moment of receiving the abstracts about the acceptance (or non-acceptance) of the paper.

## 2. PAPERS.

After the Conference, the Scientific Committee will select from the presented papers, the papers to be published either in **ROMAI Journal** (<http://rj.romai.ro/>) or in **Scientific Studies and Research. Series Mathematics and Informatics** (<http://pubs.ub.ro/?pg=revues&rev=ssrsmi>), for Sections 1-7, and in **ROMAI Educational Journal** (<http://rej.romai.ro/>) for Section 8.

The Scientific Committee has the right to reject any work which exhibits an inappropriate scientific or linguistic level.

The authors should obey the standard copyright regulations and are responsible for the scientific and linguistic accuracy of the text.

## Instructions for Authors

**For Sections 1-7**, the papers must be written in LATEX 2e, according to **the instructions for authors** posted at [http://www.romai.ro/conferintele\\_romai/caim2014/instructions\\_for\\_authors.html](http://www.romai.ro/conferintele_romai/caim2014/instructions_for_authors.html) .

The authors are kindly asked to submit also the paper in pdf format.

**For Section 8**, the papers must be written by using Microsoft Word, in Romanian or in English.

All papers will be sent to [caim.2014@yahoo.com](mailto:caim.2014@yahoo.com)

## Travel

Bacău is accessible by train or by plane. See below the webpages of the airports in Bucharest, the airport in Bacău and the schedule of trains in Romania.

Airport "Henri Coandă"-București

<http://www.otp-airport.ro/>

International Airport "George Enescu"-Bacău

<http://www.bacauairport.ro/index.php?limba=engleza>

Train schedule

<http://www.mersultrenurilor.ro/>

The official website for travel and tourism

<http://www.romaniatourism.com/>

## Accommodation

The participants should make a reservation at one of the hotels below:

Bistrița Hotel <http://www.hotelbistrita.ro/>

Decebal Hotel <http://www.hoteldecebal.ro/content.php?lg=ro&id=1|81>

Dumbrava Hotel <http://www.hoteldumbrava.ro/>

Moldova Hotel <http://www.hotel.moldova.bacau.tourneo.ro/>

President Hotel <http://www.presidenthotelbacau.ro/>

Tosca Hotel <http://www.vilatosca.ro/>

A certain number of rooms will be also available in the Students Hostel of the “Vasile Alecsandri” University of Bacău at a low cost. Please mention in the registration form online if you want lodging in the Students Hostel.

## Weather

At the end of September weather is usually nice in BACĂU, with temperatures between 13 and 20 Celsius degrees.

**Contact:** [caim.2014@yahoo.com](mailto:caim.2014@yahoo.com) .