



# ANALELE ȘTIINȚIFICE

ale

UNIVERSITĂȚII "OVIDIUS" CONSTANȚA

Seria MATEMATICĂ

(Mathematical Journal of the Ovidius University of Constantza)

Tome XX(2012), No. 1

ISSN 1224-1784

e-ISSN 1844-0835

Ovidius University Press

2012

Printed: May, 2012



**Universitatea Ovidius – Constanța, România,  
Analele Științifice ale Universității Ovidius Constanța,  
Seria Matematică, volumul 20, fascicola 1, 2012  
(The Mathematical Journal of the Ovidius University of  
Constantza, Tome XX, No. 1, 2012)**

This journal is founded by **Mirela Ștefănescu** and **Silviu Sburlan** in 1993 and is devoted to pure and applied mathematics. Papers on theoretical physics, astronomy and informatics may be accepted if they present interesting original mathematical results. The articles published by this journal (An. Științ. Univ. Ovidius Constanța, Ser. Mat.) are reviewed/indexed by Zentralblatt für Mathematik and Mathematical Reviews. Starting 2008 the journal has been selected for coverage in the Science Citation Index Expanded (SCIE)-Thomson Reuters and from 2011 the journal is included in Master Journal List. The IMPACT FACTOR for 2011 is 0.044 (Journal Citation Reports, Thomson Reuters).

**Published by the Faculty of Mathematics and Computer Science, Ovidius University, Constantza, Romania, since 1993.**

**ISSN 1224-1784, e-ISSN 1844-0835**

**EDITOR-IN-CHIEF**

**Mirela Ștefănescu** Department of Mathematics and Computer Science,  
Ovidius University of Constantza,  
Mamaia Bd. 124, 900527  
Constantza, Romania  
e-mail: mirelast@univ-ovidius.ro

**DEPUTY EDITOR-IN-CHIEF**

**Cristina Flaut** Department of Mathematics and Computer Science,  
Ovidius University Constantza,  
Mamaia Bd. 124, 900527  
Constantza, Romania  
e-mail: cflaut@univ-ovidius.ro, cristina.flaut@yahoo.com

**MANAGING EDITOR**

**Alexandru Bobe** Department of Mathematics and Computer Science,  
Ovidius University Constantza,  
Mamaia Bd. 124, 900527  
Constantza, Romania  
e-mail: managing.editor@anstuocmath.ro

**TECHNICAL EDITOR**

**George Cîrlig** Department of Mathematics and Computer Science,  
Ovidius University Constantza,  
Mamaia Bd. 124, 900527  
Constantza, Romania  
e-mail: cgeorge@univ-ovidius.ro

Available also electronically: <http://www.anstuocmath.ro>.

For subscriptions and submission of papers, please use the address: [submission@anstuocmath.ro](mailto:submission@anstuocmath.ro)

## EDITORIAL BOARD

<b>Viorel Barbu</b>	Al.I.Cuza University, Iasi, Romania e-mail: vb41@uaic.ro
<b>Serban Basarab</b>	Mathematical Institute of Academy, Bucharest, Romania e-mail: Serban.Basarab@imar.ro
<b>Vasile Brinzanescu</b>	Mathematical Institute of Academy, Bucharest, Romania e-mail: Vasile.Brinzanescu@imar.ro
<b>Constantin Corduneanu</b>	University of Arlington, Texas, USA e-mail: concord@uta.edu.
<b>Alexandru Dimca</b>	Université de Nice - Sophia Antipolis, Laboratoire J.-A. Dieudonné, Nice, France e-mail: dimca@math.unice.fr
<b>Gheorghe Dincă</b>	University of Bucharest, Romania e-mail: Dinca2002@yahoo.fr
<b>Gheorghe Gussi</b>	Mathematical Institute of Academy, Bucharest, Romania e-mail: ghgussi@imar.ro
<b>Solomon Marcus</b>	University of Bucharest, Romania e-mail: Solomon.Marcus@imar.ro
<b>Radu Miron</b>	Al. I. Cuza University, Iași, Romania e-mail: riron@uaic.ro
<b>Gheorghe Moroșanu</b>	Central European University, Budapest, Hungary e-mail: morosanug@ceu.hu
<b>Constantin Năstăsescu</b>	University of Bucharest, Romania e-mail: cnastase@al.math.unibuc.ro
<b>Dan Pascali</b>	Ovidius University, Constanta, Romania and Courant Institute, New York, USA e-mail: dp39@nyu.edu
<b>Nicolae H. Pavel</b>	Ohio University, USA e-mail: npavel@bing.math.ohio.edu
<b>Nicolae Popa</b>	University of Bucharest, Romania
<b>Dorin Popescu</b>	University of Bucharest, Romania e-mail: Dorin.Popescu@imar.ro, dpopescu@gta.math.unibuc.ro
<b>Vicentiu Radulescu</b>	Mathematical Institute of Academy, Bucharest, Romania e-mail: vicentiu.radulescu@math.cnrs.fr
<b>Dusan Repovš</b>	University of Ljubljana, Slovenia e-mail: dusan.repovs@fmf.uni-lj.si
<b>Silviu Sburlan</b>	Naval Academy "Mircea cel Bătrân" Constantza, Romania e-mail: ssburlan@univ-ovidius.ro
<b>Constantin Vârsan</b>	Mathematical Institute of Academy, Bucharest, Romania e-mail: Constantin.Varsan@imar.ro