

**TECHNICAL UNIVERSITY OF CLUJ-NAPOCA  
FACULTY OF ELECTRONICS, TELECOMMUNICATIONS AND INFORMATION  
TECHNOLOGY**

***ACTA TECHNICA NAPOCENSIS – Electronica - telecomunicatii  
(Electronics and Telecommunications) ISSN 1221 – 6542***

**Local editorial committee**

**Radu ARSINTE**, Editor in Chief, Technical University of Cluj Napoca, Romania  
**Nicolae CRISAN**, Executive Editor, Technical University of Cluj Napoca, Romania  
**Cristian FARCAS**, Associate Editor, Technical University of Cluj Napoca, Romania  
**Alin GRAMA**, Associate Editor, Technical University of Cluj Napoca, Romania  
**Doris LUPEA CSIPKES**, Associate Editor, Technical University of Cluj Napoca, Romania  
**Costin MIRON**, Honorary Editor, Technical University of Cluj Napoca, Romania

**Editorial Board**

<b>Aurel Vlaicu</b> – Technical University of Cluj Napoca, Romania	<b>Dorin Petreus</b> - Technical University of Cluj Napoca, Romania
<b>Marina Topa</b> - Technical University of Cluj Napoca, Romania	<b>Corneliu Rusu</b> – Technical University of Cluj Napoca, Romania
<b>Gilbert De Mey</b> - University of Gent, Belgium	<b>Alkis Hatzopoulos</b> - University of Thessaloniki, Greece
<b>Virgil Dobrota</b> - Technical University of Cluj Napoca, Romania	<b>Corneliu Burileanu</b> – Politehnica University of Bucharest, Romania
<b>Dan Pitica</b> - Technical University of Cluj Napoca, Romania	<b>Mihai Romanca</b> – Transilvania University of Brasov, Romania
<b>José Ramón Beltrán Blázquez</b> - University of Zaragoza, Spain	<b>Radu Vasiu</b> – Politehnica University of Timisoara, Romania
<b>Jan Turan</b> – Technical University of Kosice, Slovakia	<b>Eugenio Garcia Moreno</b> - University of Palma de Mallorca, Spain
<b>Liviu Goras</b> – Technical University Gh. Asachi Iasi, Romania	<b>Ioan Nafornta</b> - Politehnica University of Timisoara, Romania
<b>Valeriu Munteanu</b> - Technical University Gh. Asachi Iasi, Romania	<b>Attila Ferencz</b> – Dayhoun Broadcast Research Company, Seoul, Korea
<b>Michel Riveill</b> – University of Nice, France	<b>Tony Ward</b> - University of York, UK
<b>Ana Rusu</b> - Royal Institute of Technology (KTH), Stockholm, Sweden	<b>Cristina Morel</b> – Ecole Supérieure d'Electronique de l'Ouest, France
<b>Sorin Hintea</b> - Technical University of Cluj Napoca, Romania	<b>Eugen Lupu</b> - Technical University of Cluj Napoca, Romania
<b>Marcian Cirstea</b> – Anglia Ruskin University, Cambridge, UK	<b>Dan Lascu</b> - Politehnica University of Timisoara, Romania

**Scientific Board (\*)**

Anca APÁTEAN	Mircea GIURGIU
Radu ARSINTE	Alin GRAMA
Florin BOIAN	Robert GROZA
Doris CSIPKES	Petre POP
Virgil DOBROTĂ	Corneliu RUSU
Paul FARAGO	Mircea VAIDA

(\*) Note – Only members active as reviewers for the current number are listed. For full list of reviewers see the Journal website: <http://users.utcluj.ro/~atn>

**Publisher:** Technical University of Cluj-Napoca – Romania,  
Str. Baritiu 26-28, 400027 Cluj-Napoca, Romania

© Technical University of Cluj-Napoca. Romania All rights reserved.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, without the prior written permission of the copyright owner. Open access content may be employed for personal use only indicating clearly the source.

No responsibility is assumed by the publisher or by the copyright owner for any injury and/or damage to persons and property as a matter of any use or operation of any methods, products, instructions or ideas contained herein.