

CAS 2018 PROGRAM

41th Edition

October 10-12, 2018, Sinaia, ROMANIA



INTERNATIONAL SEMICONDUCTOR CONFERENCE

organized by
**National Institute for Research and
Development in Microtechnologies
IMT Bucharest**



co-sponsored by
IEEE – Electron Devices Society



Ministry of Research and Innovation



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FOREWORD

ABOUT THE CONFERENCE

The **International Semiconductor Conference (CAS)**, organized (since 1997) by the **National Institute for Research and Development in Microtechnologies – IMT Bucharest** is now at its 41st edition. The conference is a yearly event (since 1978) and it was initiated by the former ICCE institute (merging in 1996 with IMT). Starting with 1991, CAS became an International Conference and since 1995 the conference is also an **IEEE event**. The CAS Conference has been for years devoted to physics, design, technology and applications of semiconductor devices and materials, including integrated circuits. Since 1997, **the Conference profile** has been gradually extended to **micro- and nano-technologies** (including micro- and nanoelectronics, micro- and nanosystems and also nanostructures and nanostructured materials).

This year edition of CAS (October 10-12, 2018, Sinaia) includes 3 plenary sessions with 12 invited lectures and other sessions comprising 71 regular papers.

SOCIAL PROGRAMME

The main social events* of CAS 2018 are:

- CAS 2018 “Get-together” Cocktail – Tuesday, October 09, 20:30 h
- Trip to Poiana Brasov and Brasov old town – Thursday, October 11, 14:00 h
- CAS 2018 Banquet – Friday, October 13, 20:30 h

**included for all registered participants*

TOURISM

There are a number of places in Sinaia deserving a visit (Peles Royal Castle, Pelisor Castle, Sinaia Monastery). A few kilometres North from Sinaia, one can visit Cantacuzino Castle or Caraiman Monastery (in Busteni). Farther away are Bran Castle and Rasnov Fortress (see details on the conference site, www.imt.ro/cas).

Enjoy the Conference in a beautiful environment and a friendly atmosphere!

15th of September 2018

Miron Adrian Dinescu
Conference Chairman

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** CAS Chairman (1998-2016)

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M. Dragoman – IMT Bucharest, Romania
A. Müller – IMT Bucharest, Romania
R. Müller – IMT Bucharest, Romania
D. Neculoiu – IMT Bucharest, Romania

TECHNICAL PROGRAM CAS 2018

9 Oct. Tuesday	15:00-18:00	Registration
	20:30	Welcome Cocktail (Rina Sinaia Hotel Restaurant Hall)

10 Oct. Wednesday	08:30-09:00	Registration
	09:00-09:30	Welcome to CAS 2018 Miron Adrian Dinescu , CAS 2018 General Chairman, IMT Bucharest, Romania (Room Bucegi)

		Room Bucegi	Room Itamar
10 Oct. Wednesday	09:30-11:30	<p align="center">PLENARY SESSION 1 – PS 1 (Invited Papers)</p> <p><i>Chair:</i> <i>M.A. Dinescu, Romania</i> <i>M. Dragoman, Romania</i></p> <p>Shunri ODA, Japan Dominique BAILLARGEAT, France Fabrizio ROCCAFORTE, Italy Mihai GIRTU, Romania</p>	
	11:30-11:50	Coffee break	

10 Oct. Wednesday		Room Bucegi	Room Itamar
	11:50-13:10	Nanoscience and Nanoengineering 1 – N&N1 <i>(Oral presentations)</i> <i>Chair: Mihai Girtu, Romania</i> <i>Dominique Baillargeat, France</i>	Integrated Circuits 1 – Student papers IC 1-S <i>(Oral presentations)</i> <i>Chair: Viorel Banu, Spain</i> <i>Florin Draghici, Romania</i>
	13:10-14:00	Lunch	
	14:00-15:20	Integrated Circuits 2 – IC 2 <i>(Oral presentations)</i> <i>Chair: Stefan Marinca, Romania</i> <i>Vlad Anghel, Romania</i>	Semiconductor Devices – SD <i>(Oral presentations)</i> <i>Chair: Emilian Ceuca, Romania</i> <i>Octavian Buiu, Romania</i>
	15:20-15:50	Coffee break	
	15:50-17:10	Microsensors and Microsystems – M&M <i>(Oral presentations)</i> <i>Chair: Danijela Randjelovic, Serbia</i> <i>Toma Stoica, Romania</i>	Integrated Circuits 3 – Student papers IC3-S <i>(Oral presentations)</i> <i>Chair: Marius Neag, Romania</i> <i>Liviu Goras, Romania</i>

		Room Bucegi	Room Itamar
11 oct. (Thursday)	09:00-11:00	<p align="center">PLENARY SESSION 2 – PS 2 (Invited papers)</p> <p><i>Chair:</i> <i>Raluca Müller, Romania</i> <i>Gheorghe Brezeanu, Romania</i></p> <p>Danijela RANDJELOVIC, Serbia Stefan MARINCA, Romania Christoph MEINECKE, Germany Irina IONICA, France</p>	
	11:00-11:30	Coffee break	

11 oct. (Thursday)		Room Bucegi	Room Itamar
	11:30-12:30	Nanoscience and Nanoengineering 2 – N&N2 <i>(Oral presentations)</i> <i>Chair:</i> <i>Magdalena Lidia Ciurea, Romania</i> <i>Irina Ionica, France</i>	Modelling – M <i>(Oral presentations)</i> <i>Chair:</i> <i>Oana Nedelcu, Romania</i> <i>Gheorghe Pristavu, Romania</i>
	12:30-12:50	PHOTO REMEMBER CAS 2018 in front of the RINA Sinaia Hotel	
	13:00- 14:00	Lunch	
	14:00- 20:00	Trip to Poiana Brasov and Brasov old town	

		Room Bucegi	Room Itamar
12 Oct. Friday	09:00- 11:00	<p>PLENARY SESSION 3 – PS 3 (Invited papers)</p> <p><i>Chair:</i> <i>Fabrizio Roccaforte, Italy</i> <i>Dan Neculoiu, Romania</i></p> <p>Hervé AUBERT, France Jan MEHNER, Germany Sorin COTOFANA, The Netherlands Eric MOORE, Ireland</p>	
	11:00-11:30	Coffee break	

		Room Bucegi	Room Itamar
12 Oct. Friday	11:30-13:10	<p>Microwave and Millimeter Wave Circuits and Systems – MW <i>(Oral presentations)</i></p> <p><i>Chair:</i> <i>Hervé Aubert, France</i> <i>Alexandru Müller, Romania</i></p>	<p>Workshop “Microsystems for Energy Harvesting and Environment Monitoring” – 1, organized in connection with the projects “PiezoMEMS”, “WaterSafe” and “PiezoHARV”</p> <p><i>Chair:</i> <i>Carmen Moldovan, Romania</i> <i>Mariuca Gartner, Romania</i></p>
	13:10-14:00	Lunch	

		Room Bucegi	Room Itamar
12 Oct. Friday	14:00-15:40	<p>Devices & Integrated Circuits – Student papers – D&IC-S <i>(Oral presentations)</i></p> <p><i>Chair: Florin Udrea, UK Mihai Brezeanu, Romania</i></p>	<p>Workshop “Microsystems for Energy Harvesting and Environment Monitoring” – 2, organized in connection with the projects “PiezoMEMS”, “WaterSafe” and “PiezoHARV”</p> <p><i>Chair: Maria Zaharescu, Romania Peter Petrik, Hungary</i></p>
	15:40-16:00	Coffee break	

		Room Bucegi	Room Itamar
12 Oct. Friday	16:00 – 18:00	Nanoscience; Micro- & Nanophotonics – N&MN <i>(Poster presentations)</i> <i>Chair: Sorin Cotofana, The Netherlands</i> <i>Mihai Mihaila, Romania</i>	
	16:00 – 18:00	Semiconductor devices and Microsystems – SD&Ms <i>(Poster presentations)</i> <i>Chair: Alexandra Nicoloiu, Romania</i> <i>Marius Pustan, Romania</i>	
	20:30	CAS 2018 BANQUET RINA Sinaia Hotel Restaurant Hall	

Tuesday, October 9, 15:00 - 18:00

CAS Secretariat

- **Acommodation**
 - **Registration**
 - **Distribution of the Conference Materials**
-
-

20:30 – WELCOME COCKTAIL

Wednesday, October 10, 09:00, Room Bucegi

09:00

WELCOME TO CAS 2018

Miron Adrian Dinescu, IMT Bucharest, Romania

PLENARY SESSION 1

(Invited Papers)

Session: PS1: Oral presentations

Chair:

M.A. Dinescu, IMT Bucharest, Romania

M. Dragoman, IMT Bucharest, Romania

PS1.1 LOW-DIMENSIONAL-STRUCTURE DEVICES
09:30 FOR FUTURE ELECTRONICS, **S. ODA**, **T. Kawanago**,
H. Wakabayashi, Tokyo Inst. of Technology, Japan.

PS1.2 3D RADIO-FREQUENCY TO MILLIMETER
10:00 WAVE HETEROGENEOUS SYSTEM INTEGRA-
TION: EMERGING NANOTECHNOLOGIES FOR
RF NANOPACKAGING, **D. BAILLARGEAT**,
Univ. of Limoges / CNRS, Limoges, France.

PS1.3 PROCESSING ISSUES IN SIC AND GAN POWER
10:30 DEVICES TECHNOLOGY, **F. ROCCAFORTE**, **G.**
Greco, **P. Fiorenza**, Inst. per la Microelettronica e
Microsistemi (CNR-IMM), Italy.

PS1.4 DFT CALCULATIONS OF STRUCTURE AND
11:00 OPTICAL PROPERTIES IN WIDE BAND-GAP
SEMICONDUCTOR CLUSTERS FOR DYE-
SENSITIZED SOLAR CELLS, **C.I. Oprea**¹, **P.**
Panait^{1,2}, **R.M. AbdelAal**³, **M.A. GIRTU**¹, Ovidius
Univ. of Constanța, ²Univ. of Bucharest, Romania,
³Suez Univ., Suez, Egypt.

11:30-11:50 – COFFEE BREAK

Wednesday, October 10, 11:50

Room Bucegi

Nanoscience and Nanoengineering 1

(Oral presentations)

Session: N&N1: Oral presentations

Chair:

M. Girtu, Ovidius Univ. of Constanța, Romania

D. Baillargeat, CNRS, Limoges, France

N&N1.1 ENHANCED PHOTOCONDUCTIVITY OF SiGe-
11:50 TRILAYER STACK BY RETRENCHING
ANNEALING CONDITIONS, **M.T. Sultan¹, J.T.**

**Gudmundsson^{2,3}, A. Manolescu¹, M.L. Ciurea^{4,5},
C. Palade⁴, A.V. Maraloiu⁴, H.G. Svavarsson¹,**

¹Reykjavik Univ., Iceland, ²KTH-Royal Inst. of
Tech., Sweden, ³Univ. of Iceland, Iceland, ⁴National
Inst. for R&D in Material Physics, Bucharest,
⁵Academy of Romanian Scientists, Bucharest,
Romania.

N&N1.2 FROM PENTACENE THIN FILM TRANSISTOR
12:10 TO NANOSTRUCTURED MATERIALS
SYNTHESIS FOR GREEN ORGANIC-TFT, **C.**

Ravariu, D.E. Mihaiescu, D. Istrati, M. Stanca,
"Politehnica" Univ. of Bucharest, Romania.

N&N1.3 ELECTRICAL PROPERTIES OF AS-DEPOSITED
12:30 ALD HfO₂ FILMS RELATED TO SILICON
SURFACE STATE, **C. Cobianu, F. Nastase, N.**

**Dumbravescu, O. Buiu, A. Albu, B. Serban, M.
Danila, C. Romanitan, O. Ionescu,** CENASIC -
IMT Bucharest, Romania.

N&N1.4 ENHANCED PHOTOCURRENT IN GeSi NCs/TiO₂
12:50 MULTILAYERS, **C. Palade¹, A. Slav¹, O.**

**Cojocaru¹, V.S. Teodorescu¹, S. Lazanu¹, T.
Stoica¹, M.T. Sultan³, H.G. Svavarsson³, M.L.
Ciurea^{1,2},** ¹National Inst. for R&D in Material
Physics, Bucharest, ²Academy of Romanian
Scientists, Bucharest, Romania, ³Reykjavik Univ.,
Iceland.

13:10-14:00 – LUNCH

Wednesday, October 10, 11:50

Room Itamar

**INTEGRATED CIRCUITS 1 -
STUDENT PAPERS**

Session: IC1-S: Oral presentations

Chair:

V. Banu, IMB-CNM, Barcelona, Spain

F. Draghici, "Politehnica" Univ. of Bucharest

IC1-S.1 A HIGH PERFORMANCE MIXED-VOLTAGE
11:50 DIGITAL OUTPUT BUFFER, **A.M. Dragan^{1,2}, A. Enache^{1,2}, A. Negut¹, A.M. Tache¹, G. Brezeanu²**,
¹ON Semiconductor Romania, ²"Politehnica" Univ. of Bucharest, Romania.

IC1-S.2 DUTY CYCLE ADJUSTMENT FOR THE LOW
12:10 COST HIGH FREQUENCY CHARGE/DISCHARGE CMOS OSCILLATOR, **A.M. Antonescu, L. Dobrescu, D. Dobrescu**, "Politehnica" Univ. of Bucharest, Romania.

IC1-S.3 RESISTOR BASED TEMPERATURE SENSOR
12:30 USING ACTIVE INDUCTOR OSCILLATOR, **V.-S. Savinescu, I.-A. Nica, L. Goras***, "Gh. Asachi" Technical Univ. Iasi, Romania, *Inst. for Information Tech. Iasi, Romania.

IC1-S.4 LDO WITH A DUAL COMPLEMENTARY
12:50 BUFFER ARCHITECTURE, **M. Dicianu, V. Ionescu***, **C. Dan**, "Politehnica" Univ. of Bucharest, *Infineon Technologies Romania SCS, Bucharest, Romania.

13:10-14:00 – LUNCH

Wednesday, October 10, 14:00

Room Bucegi

INTEGRATED CIRCUITS 2

Session: IC2: Oral presentations

Chair:

S. Marinca, Infineon Technology RO,
Cluj-Napoca, Romania

V. Anghel, ON Semiconductor, Bucharest,
Romania

IC2.1 LOW POWER AND LOW AREA CMOS
14:00 CAPACITANCE MULTIPLIER, **G. Bonteanu, A. Cracan**, "Gh. Asachi" Technical Univ. of Iasi.

IC2.2 REGULATION MECHANISM FOR DICKSON
14:20 CHARGE PUMPS USING CHARGE RECYCLING AND ADIABATIC CHARGING, **F. Bîzîitu¹, L. Goras^{2,3}**, ¹Infineon Technologies Romania, ²"Gh. Asachi" Technical Univ. Iasi, Romania, ³Inst. for Information Tech. Iasi, Romania.

IC2.3 APPLICATION SPECIFIC INTEGRATED CIRCUIT
14:40 (ASIC) FOR AN ENERGY EFFICIENT IMPULSE RADIO ULTRA-WIDEBAND TRANSCEIVER. TESTING AND STATISTIC ASSESSMENT, **N. Varachiu, B. Benamrouche*, J.-L. Noullet*, A. Rumeau*, D. Dragomirescu***, IMT Bucharest, Romania, *LAAS-CNRS, Univ. de Toulouse, Toulouse, France.

IC2.4 WIDE DYNAMIC RANGE CURRENT MIRROR,
15:00 **A. Cracan, G. Bonteanu**, "Gh. Asachi" Tech. Univ. of Iasi, Romania.

15:20-15:50 – COFFEE BREAK

Wednesday, October 10, 14:00

Room Itamar

SEMICONDUCTOR DEVICES

Session: SD: Oral presentations

Chair:

E. Ceuca, “1 Decembrie 1818” Univ., Alba Iulia,
Romania

O. Buiu, IMT Bucharest, Romania

SD.1 Ψ-MOSFET CONFIGURATION FOR DNA
14:00 DETECTION, **L. Benea¹, M. Banu², M. Bawedin¹,
C. Delacour³, M. Simion², M. Kusko², S.
Cristoloveanu¹, I. Ionica¹**, ¹Univ. Grenoble Alpes,
CNRS, France, ²IMT Bucharest, Romania, ³Néel
Inst., CNRS, France.

SD.2 INTERFACE TRAP EFFECTS IN THE DESIGN
14:20 OF A 4H-SIC MOSFET FOR LOW VOLTAGE
APPLICATIONS, **G. De Martino, F. Pezzimenti,
F.G. Della Corte**, Univ. of Reggio Calabria, Italy.

SD.3 HIGH PILLAR DOPING CONCENTRATION
14:40 FOR SiC SUPERJUNCTION IGBTs, **H. Kang, F.
Udrea**, Univ. of Cambridge, U.K.

SD.4 SURFACE RECOMBINATION EVALUATION
15:00 IN BIPOLAR JUNCTION TRANSISTORS BY
COMBINED ELECTRO-OPTICAL METHOD, **V.
Banu, J. Montserrat*, X. Jorda*, P. Godignon***,
D+T Microelectronica A.I.E., Spain, *IMB-CNM,
CSIC, Spain.

15:20-15:50 – COFFEE BREAK

Wednesday, October 10, 15:50

Room Bucegi

**MICROSENSORS AND
MICROSYSTEMS**

Session: M&M: Oral presentations

Chair:

D. Randjelovic, ICTM – Centre of
Microelectronic Technologies,
Belgrade, Serbia

T. Stoica, National Inst. for R&D in Material
Physics, Bucharest, Romania

M&M.1 LOW-TEMPERATURE PACKAGING METHODS
15:50 AS A KEY ENABLERS FOR MICROSYSTEMS
ASSEMBLY AND INTEGRATION, **S. Stoukatch**,
F. Dupont, **M. Kraft***, Liege Univ., *Univ. of
Leuven, Belgium.

M&M.2 SENSING APPLICATIONS BASED ON CAVITY
16:10 PERTURBATION METHOD – A PROOF OF
CONCEPT, **V. Buiculescu**, **R. Rebigan**, IMT
Bucharest, Romania.

M&M.3 CONTINUOUS-WAVE MM-WAVE WAVE-
16:30 GUIDE-BASED PROBE FOR SKIN TISSUE
CHARACTERISATION, **K.Y. Chan**, **X. Li**, **Y. Fu**,
R. Ramer, The Univ. of New South Wales, Sydney,
Australia.

Wednesday, October 10, 15:50

Room Itamar

**INTEGRATED CIRCUITS 3
STUDENT PAPERS**

Session: IC3-S: Oral presentations

Chair:

M. Neag, Technical Univ. of Cluj-Napoca,
Romania

L. Goras, Technical Univ. of Iasi, Romania

IC.3-S.1 I/O BLOCKS RELIABILITY FOR AN SRAM-
15:50 BASED FPGA WHEN EXPOSED TO IONIZING
RADIATION, **V.M. Placinta^{1,2}, I.N. Cojocariu¹,
C. Ravariu²**, ¹"Horia Hulubei" National Inst. for
R&D in Physics and Nuclear Engineering,
²"Politehnica" Univ. of Bucharest, Romania.

IC.3-S.2 FAULT IMPACT ASSESSMENT FOR AUTO-
16:10 MOTIVE SMART POWER PRODUCTS IN AN
ELECTRIC POWER STEERING APPLICATION,
**J. Stricker, C. Kain*, A. Buzo*, J. Kirscher*, L.
Maurer, G. Pelz***, Bundeswehr Univ. München,
*Infineon Technologies AG, Germany.

IC.3-S.3 MESSAGE RECOVERED: A ROBUST FAULT
16:30 DETECTION AND REPORTING METHOD FOR
GALVANICALLY ISOLATED IGBT GATE
DRIVERS, **I. Hurez^{1,2}, T. Chen³, F. Vlădoianu²,
V. Anghel², G. Brezeanu¹**, ¹"Politehnica" Univ. of
Bucharest, ²ON Semiconductor Romania, Bucharest,
³ON Semiconductor, USA.

IC.3-S.4 COMPARISON OF LEVEL SHIFTER
16:50 ARCHITECTURES: APPLICATION TO I/O CELL,
**R.-V. Petrica^{1,2}, M.-D. Dobre^{1,2}, P. Coll¹, F.
Draghici², G. Brezeanu²**, ¹Microchip Technology
Inc., ²"Politehnica" Univ. of Bucharest, Romania.

Thursday, October 11, 09:00, Room Bucegi

PLENARY SESSION 2
(Invited Papers)
Session: PS2: Oral presentations

Chair:

R. Müller, IMT Bucharest, Romania

Gh. Brezeanu, "Politehnica" Univ. of Bucharest,
Romania

PS2.1 ANALYTICAL MODELLING APPROACH IN
09:00 STUDY OF THE TRANSIENT RESPONSE OF
THERMOPILE-BASED MEMS SENSORS
APPLIED FOR SIMULTANEOUS DETECTION
OF PRESSURE AND GAS COMPOSITION, **D.**
RANDJELOVIC, ICTM – Centre of
Microelectronic Technologies, Belgrade, Serbia.

PS2.2 IC VOLTAGE REFERENCES: NEW FRONTIERS
09:30 **S. MARINCA**, Infineon Technology RO, Cluj-
Napoca, Romania.

PS2.3 NANOFABRICATED NETWORKS USED FOR
10:00 PROTEIN-POWERED BIOCOMPUTATION DEVICES,
C. MEINECKE, Center for Microtechnologies in
Chemnitz, Germany.

PS2.4 SECOND HARMONIC GENERATION FOR
10:30 NON-DESTRUCTIVE CHARACTERIZATION OF
DIELECTRIC-SEMICONDUCTOR
INTERFACES, **I. IONICA**¹, **D. Damianos**¹, **A.**
Kaminski-Cachopo¹, **D. Blanc-Pelissier**², **M. Lei**³,
J. Changala³, **A. Bouchard**¹, **X. Mescot**¹, **M. Gri**¹,
G. Grosa¹, **S. Cristoloveanu**¹, **G. Vitrant**¹, ¹Univ.
Grenoble Alpes, CNRS, ²INSA de Lyon, France,
³FemtoMetrix, USA.

11:00-11:30 – COFFEE BREAK

Thursday, October 11, 11:30, Room Bucegi

**NANOSCIENCE AND
NANOENGINEERING 2**
Session: N&N2: Oral presentations

Chair:

M.L. Ciurea, INCD-FM, Bucharest, Romania

I. Ionica, PHELMA / Grenoble INP, France

N&N2.1 TiO₂ – GRAPHENE OXIDE THIN FILMS

11:30 OBTAINED BY SPRAY PYROLYSIS DEPOSITION, **I. Tismanar, L. Isac, A.C. Obreja*, O. Buiu*, A. Duta**, “Transilvania” Univ. of Brasov, *IMT Bucharest, Romania.

N&N2.2 EFFECT OF THE DEPOSITION CONDITIONS

11:50 ON TITANIUM OXIDE THIN FILMS PROPERTIES, **M. Pustan, C. Birleanu, A. Trif, S. Garabagiu*, D. Marconi*, L. Barbu-Tudoran***, Technical Univ. of Cluj-Napoca, *National Inst. for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, Romania.

N&N2.3 MOS DOSIMETER BASED ON Ge

12:10 NANOCRYSTALS IN HfO₂, **C. Palade, A. Slav, A.M. Lepadatu, I. Stavarache, I. Dascalescu, O. Cojocar, T. Stoica, M.L. Ciurea, S. Lazanu**, National Inst. for R&D in Material Physics, Bucharest, Romania.

12:30-12:50 – PHOTO REMEMBER CAS 2018
in front of the RINA Sinaia Hotel

13:00-14:00 – LUNCH

14:00-20:00 – Trip to Poiana Brasov and
Brasov old town

Thursday, October 11, 11:30, Room Itamar

MODELLING

Session: M: Oral presentations

Chair:

O. Nedelcu, IMT Bucharest, Romania

G. Pristavu, “Politehnica” Univ. of Bucharest,
Romania

M.1 MULTI-SCALE FINITE ELEMENT MODELING
11:30 OF CNT-POLYMER-COMPOSITES, **M. Schiebold**,
J. Mehner, Chemnitz Univ. of Technology,
Chemnitz, Germany.

M.2 MODELING OF HIGH TOTAL IONIZING DOSE
11:50 (TID) EFFECTS FOR ENCLOSED LAYOUT
TRANSISTORS IN 65 NM BULK CMOS, **A.**
Nikolaou¹, **M. Bucher**¹, **N. Makris**¹, **A.**
Papadopoulou¹, **L. Chevas**¹, **G. Borghello**^{2,4}, **H.D.**
Koch^{3,4}, **F. Faccio**⁴, ¹Technical Univ. of Crete,
Greece, ²Univ. degli Studi di Udine, Italy, ³Univ. de
Mons, Belgium, ⁴EP Dept., CERN, Switzerland.

M.3 ANALYTICAL ANALYSIS OF THE PLAS-
12:10 MONIC ENHANCEMENT OF RESONANCE
ENERGY TRANSFER IN THE VICINITY OF A
SPHERICAL NANOPARTICLE, **T. Sandu**, **C.**
Tibeica, **O.T. Nedelcu**, **M. Gologanu**, IMT
Bucharest, Romania.

**12:30-12:50 – PHOTO REMEMBER CAS 2018 in
front of the RINA Sinaia Hotel**

13:00-14:00 – LUNCH

**14:00-20:00 – Trip to Poiana Brasov and
Brasov old town**

Friday, October 12, 09:00, Room Bucegi

PLENARY SESSION 3

(Invited papers)

Session: PS3: Oral presentations

Chair:

F. Roccaforte, CNR – IMM, Italy

D. Neculoiu, IMT Bucharest, Romania

PS.3.1 ZERO-POWER MILLIMETER-WAVE WIRELESS
09:00 SENSORS, **H. AUBERT, P. Pons**, Centre National
de la Recherche Scientifique, Toulouse, France.

PS.3.2 DESIGN AUTOMATION FOR MICRO-ELECTRO-
09:30 MECHANICAL SYSTEMS, **D. Kriebel,**
H. Schmidt, M. Schiebold, M. Freitag, B. Arnold,
M. Naumann, J.E. MEHNER, Univ. of
Technology Chemnitz, Germany.

PS.3.3 ON EFFECTIVE GRAPHENE BASED
10:00 COMPUTING, **N. Cucu Laurenciu, S.**
COTOFANA, Delft Univ. of Technology, The
Netherlands.

PS.3.4 GENERIC INTEGRATED FORENSIC TOOLBOX
10:30 (GIFT) COUPLED WITH A PORTABLE CE
SYSTEM FOR ON-SITE CBRN FORENSIC
INVESTIGATION IN REAL TIME, **E. MOORE, Xi**
Cao, Y. Wang, A. Hogan, W. Messina, Tyndall
National Inst., Univ. College Cork, Cork, Ireland.

11:00-11:30 – COFFEE BREAK

Friday, October 12, 11:30, Room Bucegi

**MICROWAVE AND MILLIMETER
WAVE CIRCUITS AND SYSTEMS**

Session: MW: Oral presentations

Chair:

H. Aubert, CNRS, France

A. Müller, IMT Bucharest, Romania

- MW.1** INVESTIGATION OF LIQUID METAL AND
11:30 FDM 3D PRINTED MICROWAVE DEVICES, **K.Y. Chan, X. Li, R. Ramer**, The Univ. of New South Wales, Sydney, Australia.
- MW.2** WAFER LEVEL PACKAGING OF GaN/Si SAW
11:50 BAND PASS FILTERS WITH OPERATING FREQUENCIES ABOVE 5 GHZ; **A.-C. Bunea¹, D. Neculoiu^{1,2}, M.A. Dinescu¹**, ¹IMT Bucharest, ²“Politehnica” Univ. of Bucharest, Romania.
- MW.3** METAL-INSULATOR TRANSITION IN
12:10 MONOLAYER MoS₂ FOR TUNABLE AND RECONFIGURABLE DEVICES, **M. Aldrigo, M. Dragoman, D. Masotti***, IMT Bucharest, Romania, *Univ. of Bologna, Italy.
- MW.4** DESIGN ASPECTS AND EXPERIMENTAL
12:30 RESULTS ON BROADBAND MONOPOLE DIELECTRIC RESONATOR ANTENNA, **S. Simion, S. Iordanescu***, *MTA – Bucharest, *IMT Bucharest, Romania.
- MW.5** PERMITTIVITY CHARACTERIZATION USING A
12:50 DOUBLE-SIDED PARALLEL-STRIP LINE RESONATOR, **D.A. Nestic, I. Radnovic***, Univ. of Belgrade, *Inst. IMTEL, New Belgrade, Serbia.

13:10-14:00 – LUNCH

Friday, October 12, 11:30, Room Itamar

Workshop “Microsystems for Energy Harvesting and Environment Monitoring” – 1,
organized in connection with the projects
“PiezoMEMS”, “WaterSafe” and “PiezoHARV”

Chair:

C. Moldovan, IMT Bucharest, Romania

M. Gartner, “Ilie Murgulescu” Inst. of Physical
Chemistry, Romania

- WS.1.1** PIEZOELECTRIC MEMS FOR EFFICIENT
11:30 ENERGY HARVESTING, **C. Moldovan**¹, **A. Anghelescu**¹, **G. Muscalu**¹, **S. Dinulescu**¹, **M. Gartner**², **S. Mihaiu**², **D. Belavic**³, **B. Malic**⁴, **K. Vojisavljevic**⁴, **T. Pecnik**⁴, **H. Ursic**⁴, **J. Zajac**⁵, **D. Szmigiel**⁵, **S. Ion**⁶, ¹IMT Bucharest, ²“Ilie Murgulescu” Inst. of Physical Chemistry, Bucharest, Romania, ³HIPOT-RR, ⁴Jožef Stefan Inst., Slovenia, ⁵Inst. Tehnologii Elektronowej, Poland, ⁶Romelgen SRL, Bucharest, Romania.
- WS.1.2** NANOSTRUCTURED ZINC OXIDE FILMS
11:45 DOPED WITH TRANSITIONAL METALS OBTAINED BY CHEMICAL METHODS FOR PIEZOELECTRIC APPLICATIONS, **S. Mihaiu**, **C. Vladut**, **E. Tenea**, **P. Osiceanu**, **J.M. Calderon-Moreno**, **M. Anastasescu**, **H. Stroescu**, **M. Gartner**, **M. Zaharescu**, “Ilie Murgulescu” Inst. of Physical Chemistry, Bucharest, Romania.
- WS.1.3** POWER HARVESTING AND STORAGE CIRCUIT
12:00 FOR A DOUBLE ARRAY OF LEAD-FREE PIEZOELECTRIC CANTILEVERS, **G. Muscalu**^{1,2}, **B. Firtat**^{1,2}, **S. Dinulescu**¹, **C. Moldovan**¹, **A. Anghelescu**¹, **I. Stan**³, ¹IMT Bucharest, ²“Politehnica” Univ. of Bucharest, ³ROMELGEN SRL, Bucharest, Romania.
- WS.1.4** PZT LAYERS OBTAINED IN THICK FILM
12:20 TECHNOLOGY, **M. Gheorghe**, **C. Moldovan**^{*}, **S. Gheorghe**, NANOM MEMS SRL, Râșnov, ^{*}IMT Bucharest, Romania.

- WS.1.5** DESIGN AND SIMULATION OF PIEZO-
12:35 ELECTRIC ENERGY HARVESTER FOR
AEROSPACE APPLICATIONS, **G. Muscalu**^{1,2},
B. Firtat^{1,2}, **S. Dinulescu**¹, **C. Moldovan**¹,
A. Anghelescu¹, **C. Vasile**^{3,2}, **D. Ciobotaru**³,
C. Hutanu³, ¹IMT Bucharest, ²”Politehnica” Univ.
of Bucharest, ³Advanced Technologies Inst.,
Romania.
- WS.1.6** TiO₂ / ZnO LAMINATE FILMS FOR PIEZO-
12:55 ELECTRIC APPLICATIONS, **M. Modreanu**,
I. Povey^{*}, **S. Doyle**, **M. Stoica**^{*}, **M. Anastasescu**^{*},
M. Gartner^{*}, Univ. College Cork, Ireland, ^{*}”Ilie
Murgulescu” Inst. of Physical Chemistry,
Bucharest, Romania.

13:10-14:00 – LUNCH

Friday, October 12, 14:00, Room Bucegi

**DEVICES & INTEGRATED
CIRCUITS – STUDENT PAPERS**
Session: D&IC-S: Oral presentations

Chair:

F. Udrea, Cambridge Univ., UK

M. Brezeanu, PwC Romania, Bucharest, Romania

D&IC-S.1 POWER SUPPLY DUTY CYCLING FOR
14:00 HIGHLY CONSTRAINED IoT DEVICES, **A. Monti, E. Alata,**

A. Takacs, D. Dragomirescu, LAAS-CNRS, Univ. of Toulouse, France.

D&IC-S.2 OVER-TEMPERATURE PROTECTION FOR A
14:20 SWITCHED-CAPACITOR DC-DC CONVERTER WITH CONTROLLED CHARGING CURRENT, **C.-S. Plesa, M. Neag, C.M. Boianceanu***, Technical Univ. of Cluj-Napoca, *Infineon Technologies, Bucharest, Romania.

D&IC-S.3 INFLUENCE OF PLATINUM-HYDROGEN COM-
14:40 PLEXES ON SILICON P+/N-DIODE CHARACTERISTICS, **J. Prohinig^{1,2}, F. Rasinger¹, H.-J. Schulze³, G. Pobegen¹,** ¹KAI Kompetenzzentrum Automobil- u. Industrieelektronik GmbH, ²Graz Univ. of Technology, Austria, ³Infineon Technologies AG, Germany.

D&IC-S.4 NUMERICAL SIMULATIONS OF RADIATION
15:00 DAMAGE EFFECTS IN ACTIVE-EDGE SILICON PIXEL SENSORS FOR HIGH-ENERGY PHYSICS EXPERIMENTS, **D. Djamai¹, E. Leonidas Gkoukousis², M. Chahdi³, A. Lounis⁴, S. Oussalah⁵,** ¹Univ. Abbes Laghrour Khenchela, Algeria, ²Inst. de Fisica d'Altes Energies (IFAE), Barcelona, Spain, ³Univ. de Batna, Algeria, ⁴Univ. Paris-Sud XI, Orsay, France, ⁵Centre de Développement des Technologies Avancées (CDTA), Algiers, Algeria.

D&IC-S.5 INVESTIGATION OF CARBON INTERSTITIALS
15:20 IN THE VICINITY OF THE SiO₂/4H-SiC(0001)
INTERFACE, **H. Alsnani, J.P. Goss, O. Al-Ani,**
S.H. Olsen, P.R. Briddon, M.J. Rayson,
A.B. Horsfall*, Newcastle Univ., *Durham Univ.,
UK.

15:40-16:00 – COFFEE BREAK

Friday, October 12, 14:00, Room Itamar

Workshop “Microsystems for Energy Harvesting and Environment Monitoring” – 2,
organized in connection with the projects
“PiezoMEMS”, “WaterSafe” and “PiezoHARV”

Chair:

M. Zaharescu, “Ilie Murgulescu” Inst. of Physical
Chemistry, Bucharest, Romania

P. Petrik, Inst. for Technical Physics and Materials
Science, Hungary

WS2.1 ELECTROCHEMICAL SENSORS FOR DETECTION
14:00 OF DIFFERENT IONIC SPECIES (NITRITES /
NITRATES AND HEAVY METALS) IN NATURAL
WATER SOURCES, **M. Gartner¹, C. Lete¹, M.
Chelu¹, H. Stroescu¹, M. Zaharescu¹, C. Moldovan²,
C. Brasoveanu², M. Gheorghe³, S. Gheorghe³, A. Duta⁴,
Z. Labadi⁵, B. Kalas⁵, A. Saftics⁵, M. Fried^{5,6}, P.
Petrik⁵, E. Tóth⁷, H. Jankovics⁷, F. Vonderviszt⁷,**
¹“Ilie Murgulescu” Inst. of Physical Chemistry,
Bucharest, ²IMT Bucharest, ³NANOM MEMS SRL,
Rasnov, ⁴“Transilvania” Univ. of Braşov, Romania,
⁵Inst. for Technical Physics and Materials Science,
⁶Óbuda Univ., ⁷Univ. of Pannonia, Hungary.

WS2.2 NEW SYSTEM FOR NITRITES AND NITRATES
14:20 DETECTION FROM NATURAL WATER SOURCES,
**C. Moldovan¹, S. Dinulescu¹, M. Ion¹, M. Savin¹,
C. Brasoveanu¹, B. Firtat¹, M. Gartner², C. Lete²,
S. Mihaiu², M. Gheorghe³, S. Gheorghe³,** ¹IMT
Bucharest, ²“Ilie Murgulescu” Inst. for Physical
Chemistry, Bucharest, ³NANOM MEMS SRL,
Rasnov, Romania.

WS2.3 COATINGS FOR ELECTRONIC WATER
14:40 POLLUTION SENSORS, **A. Saftics¹, B. Kalas¹, J. Nador¹, A. Romanenko¹, É. Tóth², Z. Labadi¹, M. Gheorghe³, L. Illes¹, B. Kovacs¹, C. Moldovan⁴, M. Gartner⁵, F. Vonderviszt^{1,2}, M. Fried^{1,6}, P. Petrik¹,**
¹Inst. for Technical Physics and Materials Science,
²Univ. of Pannonia, Hungary, ³NANOM MEMS SRL,
Rasnov, ⁴IMT Bucharest, ⁵“Ilie Murgulescu” Inst. of
Physical Chemistry, Bucharest, Romania, ⁶Óbuda
Univ., Hungary.

WS2.4 PHOTOVOLTAIC PANEL FOR PORTABLE
15:00 APPLICATIONS, **M. Gheorghe, S. Gheorghe,**
NANOM MEMS SRL, Rasnov, Romania.

15:20-16:00 – COFFEE BREAK

Friday, October 12, 16:00
Room Bucegi

**NANOSCIENCE; MICRO- AND
NANOPHOTONICS**
Session N&MN: Poster session

Chair:

S. Cotofana, Delft Univ. of Technology, The Netherlands

M. Mihaila, IMT Bucharest, Romania

N&MN.1 GRAPHENE AND TiO₂–PVDF NANOCOMPOSITES FOR POTENTIAL APPLICATIONS IN TRIBO-ELECTRONICS, **P. Pascariu**¹, **I.V. Tudose**², **C. Pachi**³, **M. Danila**³, **O. Ionescu**³, **M. Popescu**³, **E. Koudoumas**², **M. Suchea**^{2,3}, ¹“Petru Poni” Inst. of Macromolecular Chemistry, Iași, Romania, ²Technological Educational Inst. of Crete, Greece, ³IMT Bucharest, Romania.

N&MN.2 KINETICS OF LANTHANUM AND YTTRIUM DOPED ZIRCONIA CRYSTALLIZATION BY X-RAY POWDER DIFFRACTION, **D.V. Dragut**, **V. Badilita**, **R.R. Piticescu**, **A. Motoc**, National Research and Development Inst. For Non-Ferrous and Rare Metals – INCDMNR-IMNR, Bucharest, Romania.

N&MN.3 COMPARATIVE STUDY OF Sm AND La DOPED ZnO properties, **I.V. Tudose**¹, **P. Pascariu**², **C. Pachi**³, **F. Comanescu**³, **M. Danila**³, **R. Gavrilă**³, **E. Koudoumas**¹, **M. Suchea**^{1,3}, ¹Technological Educational Inst. of Crete, Heraklion, Greece, ²“Petru Poni” Inst. of Macromolecular Chemistry, Iasi, ³IMT Bucharest, Romania.

- N&MN.4** CARBON NANOTUBE/POLYANILINE COMPOSITE FILMS PREPARED BY HYDROTHERMAL-ELECTROCHEMICAL METHOD FOR BIOSENSOR APPLICATIONS, **L.M. Cursaru (Popescu), A.G. Plaiasu*, C.M. Ducu*, R.M. Piticescu, I.A. Tudor,** *National Research-Development Inst. for Non-Ferrous and Rare Metals, Bucharest, *Univ. of Pitesti, Romania.
- N&MN.5** GeSi NANOCRYSTALS IN SiO₂ MATRIX WITH EXTENDED PHOTO RESPONSE IN NEAR INFRARED, **I. Stavarache¹, L. Nedelcu¹, V.S. Teodorescu¹, V.A. Maraloiu¹, I. Dascalescu¹, M.L. Ciurea^{1,2},** ¹National Inst. for R&D in Material Physics, Bucharest, ²Academy of Romanian Scientists, Bucharest, Romania.
- N&MN.6** THE EFFECT OF H₂/Ar PLASMA TREATMENT OVER PHOTOCONDUCTIVITY OF SiGe NANOPARTICLES SANDWICHED BETWEEN SILICON OXIDE MATRIX, **M.T. Sultan¹, J.T. Gudmundsson^{2,3}, A. Manolescu¹, M.L. Ciurea^{4,5}, H.G. Svavarsson¹,** ¹Reykjavik Univ., Iceland, ²KTH-Royal Inst. of Technology, Sweden, ³Science Inst., Univ. of Iceland, Iceland, ⁴National Inst. for R&D in Material Physics, Bucharest, ⁵Academy of Romanian Scientists, Romania.
- N&MN.7** DIRECT WRITING PATTERNS FOR GOLD THIN FILM WITH DPN TECHNIQUE, **M. Carp, C. Pachi, V. Dediu,** IMT Bucharest, Romania.
- N&MN.8** SUBSTRATE EFFECT ON THE MORPHOLOGY AND OPTICAL PROPERTIES OF ZnO NANORODS LAYERS GROWN BY MICROWAVE-ASSISTED HYDROTHERMAL METHOD, **A. Filip, V. Musat, N. Tigau, A. Cantaragiu, C. Romanitan*, M. Purica*,** "Dunarea de Jos" Univ. of Galati, *IMT Bucharest, Romania.
- N&MN.9** TECHNIQUES FOR THE FABRICATION OF CUSTOMIZED HOLOGRAPHIC SECURITY ELEMENTS, **R. Tomescu, C. Parvulescu, D. Cristea, B. Bit, B. Comanescu*, M. Pelteacu*,** IMT Bucharest, *S.C. Optoelectronica 2001 S.A., Bucharest, Romania.

- N&MN.10** RAMAN INVESTIGATION OF CRITICAL STEPS IN MONOLAYER GRAPHENE TRANSFER FROM COPPER SUBSTRATE TO OXIDIZED SILICON BY MEANS OF ELECTROCHEMICAL DELAMINATION, **F. Comanescu, A. Istrate, M. Purica**, IMT Bucharest, Romania.
- N&MN.11** DESIGN AND FABRICATION OF A FRACTIONAL OPTICAL VORTEX BY ELECTRON BEAM LITHOGRAPHY, **M. Kusko, R. Tomescu, C. Kusko**, IMT Bucharest, Romania.
- N&MN.12** ELECTRON TRANSFER AND DYE REGENERATION IN DYE-SENSITIZED SOLAR CELLS, **C.I. Oprea¹, A. Ndiaye², A. Trandafir^{1,3}, F. Cimpoesu⁴, M.A. Gîrțu¹**, ¹Ovidius Univ. of Constanța, Romania, ²Cheikh Anta Diop Univ. of Dakar, Senegal, ³Univ. of Bath, UK, ⁴“Ilie Murgulescu” Inst. for Physical Chemistry, Bucharest, Romania

20:30 – CAS 2018 BANQUET
RINA Sinaia Hotel Restaurant Hall

Friday, October 12, 16:00

Room Bucegi

**SEMICONDUCTOR DEVICES AND
MICROSYSTEMS**

Poster Session

Chair:

A. Nicoloiu, IMT Bucharest, Romania

M. Pustan, Technical Univ. of Cluj-Napoca,
Romania

SD&Ms.1 EFFICIENCY AND TOTAL HARMONIC DISTORSION IN COMPOSITE RIGHT-/LEFT-HANDED DISTRIBUTED OSCILLATORS, **G. Bartolucci**, **L. Scucchia**, **S. Simion***, Univ. of Roma Tor Vergata, Italy, *MTA-Bucharest, Romania.

SD&Ms.2 EFFECT OF DEGENERATION ON A MILLIMETER WAVE LNA: APPLICATION OF MICROSTRIP TRANSMISSION LINES, **M. Fanoro**, **S.S. Olokede**, **S. Sinha**, Univ. of Johannesburg, South Africa.

SD&Ms.3 MILLIMETER WAVE AND TERAHERTZ INVESTIGATIONS ON SOME DIELECTRIC MATERIALS, **M.G. Banciu**¹, **T. Furuya**², **D.C. Geambasu**¹, **L. Nedelcu**¹, **D. Pantelica**³, **M.-D. Dracea**³, **P. Ionescu**³, **A. Iuga**¹, **C. Chirila**¹, **L. Hrib**¹, **L. Trupina**¹, **M. Tani**², ¹National Inst. for R&D in Material Physics, Bucharest, Romania, ²Fukui Univ., Japan, ³"Horia Hulubei" National Inst. for R&D in Physics and Nuclear Engineering, Bucharest, Romania.

- SD&Ms.4** METHODS FOR ART PRESERVATION AND RESTAURATION. IDENTIFICATION OF PARAMETERS FOR POTENTIAL MONITORING THE TEMPORAL EVOLUTION OF PUTTIES, **I.-M. Giura¹, C. Pachi², M. Popescu², B. Bit², O.N. Ionescu², M. Suche^{2,3}**, ¹Romanian Patriarchy, Bucharest, ²IMT Bucharest, Romania, ³Technological Educational Inst. of Crete, Greece.
- SD&Ms.5** TEMPERATURE MEASUREMENTS WITH FOUR-RESISTOR SENSOR PATTERNED ON GOLDEN LAYER, **M. Sarajlić, M. Frantlović, P. Poljak, K. Radulović, D.V. Radović**, Univ. of Belgrade, Serbia.
- SD&Ms.6** MANUFACTURE AND INVESTIGATION OF A VERTICAL MEMS SWITCH, **A. Baracu, R. Müller, R.C. Voicu, M. Pustan*, C. Birleanu*, A. Dinescu**, IMT Bucharest, *Technical Univ. of Cluj-Napoca, Romania.
- SD&Ms.7** THE GATE CURRENT IN MOSFETs VERSUS PLANAR-NOI DEVICES, **C. Ravariu¹, E. Manea², C. Parvulescu², F. Babarada¹, A. Popescu², A. Srinivasulu³**, ¹"Politehnica" Univ. of Bucharest, ²IMT Bucharest, Romania, ³JECRC Univ., Dept. of E.C.E, India.
- SD&Ms.8** IMPROVED Ti/Pt/Au – N-TYPE Si CONTACTS BY POST-METALLIZATION ANNEALING IN NITROGEN ATMOSPHERE, **R. Pascu, M. Danila, P. Varasteanu, M. Kusko, G. Pristavu*, G. Brezeanu*, F. Draghici***, IMT Bucharest, ²"Politehnica" Univ. of Bucharest, Romania.
- SD&Ms.9** COMPARATIVE STUDY OF THE ELECTRICAL PROPERTIES OF CZTS-TiO₂ AND CZTS-ZnO HETEROJUNCTIONS FOR PV APPLICATIONS, **M. Covei, C. Bogatu, D. Perniu, S. Cisse*, A. Duta**, Transilvania Univ. of Brasov, Romania, *Cheikh Anta Diop Univ. of Dakar, Sénégal.

SD&Ms.10 TECHNOLOGICAL PROCESSES FOR PLANAR
– NOTHING ON INSULATOR STRUCTURE,
E. Manea, C. Ravariu*, **C. Parvulescu,**
A. Popescu, L. Staicu, I. Cernica,
F. Babarada*, **F. Comanescu,** IMT Bucharest,
*”Politehnica” Univ. of Bucharest, Romania.

SD&Ms.11 THREE PHASE SYNCHRONOUS BOOST
RECTIFIER, **V. Trifa, Gh. Brezeanu, E. Ceuca***,
”Politehnica” Univ. of Bucharest,
*”1 December 1918” Univ. of Alba Iulia,
Romania.

20:30 – CAS 2018 BANQUET
RINA Sinaia Hotel Restaurant Hall

GENERAL INFORMATION

VENUE AND DATES

The conference will be held from Wednesday, October 10 to Friday, October 12, 2018, at Rina Sinaia Hotel, Sinaia, Romania.

Sinaia is a beautiful mountain resort located at 125 Km (by car or by train) from Bucharest. The weather in Sinaia is mild and sunny in October, the average temperature being about 10°C.

TECHNICAL PROGRAM

The language of the conference is *English*. All written materials and oral presentations should be in this language.

In the oral sessions, the authors should use PowerPoint presentations. The presentation should not exceed 20 minutes for contributed papers (5 minutes for discussions included), respectively 30 minutes for invited papers (5 minutes for discussions included), as indicated in each case by the time schedule.

For the poster sessions, the posters format should be A0 size (841 x 1189 mm).

CAS 2018 SECRETARIAT

The CAS 2018 Secretariat will be opened in the lobby of Rina Sinaia Hotel on Tuesday, October 09, from 15:00 to 18:00, and daily from 08:30 to 13:00 and from 14:00 to 18:00 during the conference.

SOCIAL EVENTS ORGANIZED FOR THE CONFERENCE PARTICIPANTS

CAS 2018 WELCOME COCKTAIL

CAS 2018 “Get-together” Cocktail will be held on Tuesday, October 09, 20:30 h, at the Rina Sinaia Hotel Restaurant Hall.

A trip to Poiana Brasov and Brasov old town is scheduled on Thursday, October 11, starting 14:00.

CAS 2018 BANQUET

The Conference Banquet, the “peak” of the social events at the Conference will be held on Friday, October 12, 20:30 h, at the Rina Sinaia Hotel Restaurant Hall. Informal dress is accepted.

For the registered participants at the conference, the costs of all social events are included in the Conference Fee.

The accompanying persons will pay the fees for social events on the first day of the Conference, at the CAS Secretariat.

ENTERTAINMENT OPPORTUNITIES

The small town of Sinaia, with its famous Peles Castle, formerly the Summer Royal Residence, is the best-known mountain resort in Romania. Sinaia, the so-called "Pearl of Carpathians" (Bucegi chain, with 2500 meters highest altitude) is situated on the Prahova valley and it is the favourite place outside Bucharest for international conferences and high-level meetings.

By foot, by car, by bus or by using cable transportation you can reach very interesting places. One can go to the Peles Royal Castle (from the XIX century) which is the most visited museum in Romania, and to other places of cultural and historical interest (Pelisor Castle, George Enescu Museum). The rocky landscape of the Prahova valley is a paradise for mountain climbers.

You may reach the height of 2000 meters by cable car or by car and enjoy a walk, without any special equipment.

The Bran Castle (from the XIV century, recently related to the famous "Dracula") may be visited in a few hours trip.

The Cantacuzino Castle, situated in the district of Zamora, town of Busteni, is open for visit. The castle is surrounded by waterfalls, caves and fountains and is in top castles in Romania in terms of architecture.

A number of hotels and restaurants are providing excellent food and entertainment.

MOUNTAIN TRIPS

A number of chalets in the Bucegi Mountains may be reached **by car** (Cota 1,400 – elevation 1,400 m, Cuibul Dorului – 2,100 m, Poiana Stanii – 1,300 m etc.). In other cases, it is a better idea to go **by cabin**: you may take the cabin from Hotel Silva in Busteni (10Km North of Sinaia, by bus, or minibus) and you will reach immediately Babele – 2,206 m, from there you may take (for about two hours) the footpath to Omu – 2,505 m, the highest peak – and chalet- in the region. An easiest trip from the Babele chalet is to go South, following the footpath to Piatra Arsa - 1,950 m, and then to the cabin station Cota 2,000. The same point may be reached by using another cabin (in two steps), from the centre of Sinaia (behind the Hotel Montana). Sinaia - Cota 1,400 and Cota 1,400 - Cota 2,000.

MUSEUMS AND ENTERTAINMENT

- Peles Palace Museum within a walking distance (15-20 minutes) from the RINA Sinaia Hotel. Visiting hours: Wednesday: 11:00-16:15; Thursday-Sunday: 09:15-16:15; Monday-Tuesday: closed.
- Sinaia Monastery (giving the name of the entire town) is also close to the RINA Sinaia Hotel (5 minutes).
- Sinaia Casino Palace.
- A wide range of trips (by car or by train) on the Prahova Valley, from Sinaia to Poiana Tapului, Busteni, Azuga, Predeal and beyond (Brasov and Poiana Brasov).

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