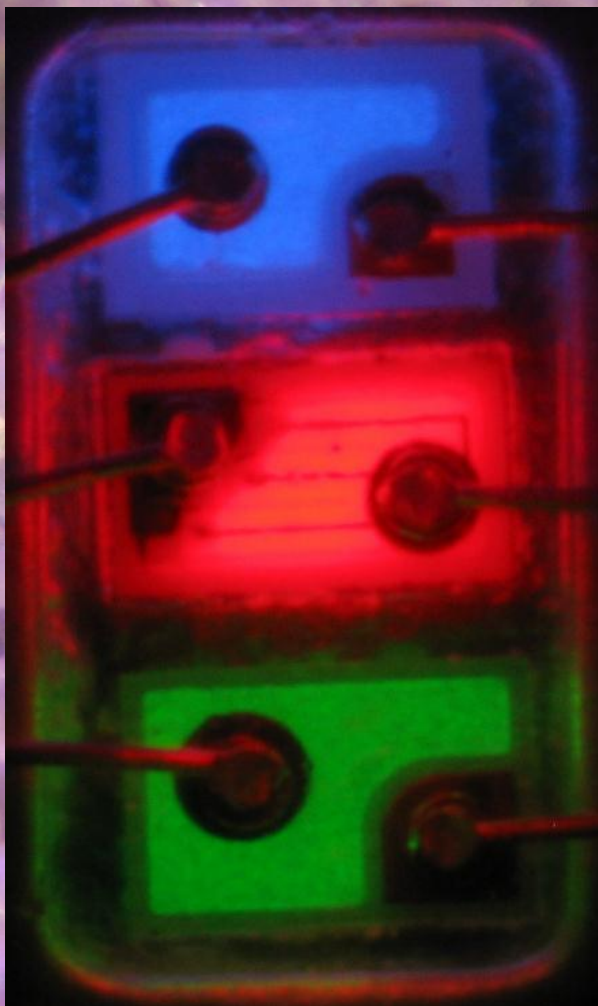


# IEEE 21<sup>st</sup> International Symposium for Design and Technology in Electronic Packaging

22<sup>nd</sup> – 25<sup>th</sup> October 2015, Braşov, Romania



Advanced Programme

**SIITME 2015**

## SIITME 2015 - Conference program

Welcome to SIITME 2015 .....	1
Committees .....	9
Program at a Glance .....	12
Workshop Agenda .....	14
Keynote Speakers .....	15
Oral Sessions.....	19
Poster Sessions.....	23
Industry .....	32
Brasov .....	49
General Information.....	50
SIITME 2016.....	52

EDITORS: Paul Svasta, Cristina Marghescu, Detlef Bonfert, Delia Lepadatu  
DTP: Bogdan Mihailescu  
Fraunhofer Research institution for modular solid state technologies,  
EMFT, Munich - partner of SIITME 2015  
Publisher: Cavallioti [www.cavallioti.ro](http://www.cavallioti.ro)

**The SIITME event,  
becomes, more and more a bridge, in our region, between  
the electronic industry and academia**

The recent editions of our conference were characterized by the increasing interest of the electronics industry representatives to attend the event. Engineers from industry, as speakers or as attendees, rounded out the conference environment which, at the beginnings, could be described as being dominantly an academic one. Complementary to the conference activities (plenary sessions, oral sessions and very active poster sessions), an exhibition of industrial companies, involved in innovation, was promoted. Of course, the number of participant companies is, for the moment, far from the number of exhibitors at events as ECTC, ESTC or EMPC, but the most important thing is that, in our region, there are companies which participate at this event. In fact, for both parts of attendees (from electronics industry and academia), it is very important to come together, to know each other, to see their achievements and, why not, to identify common activities like internships, research projects focused on diploma/license thesis, setup of consortia focused on the development of proposals to be submitted in various research programs and calls, etc. This building up of a professional community in our region is one of the outcomes of the strong and long relationship developed in this part of Europe, thank to the solid commitment of the IEEE CPMT Hu&Ro Joint Chapter established more than 15 years ago.

Speaking about SIITME in general, and SIITME 2015 in particular, it is necessary to notice the importance gave by the Steering Committee to the poster sessions. The high quality presentations of papers represents a perfect mode to educate and train the young researchers for the behavior in their future professional life. Each participant has to deliver firstly a short power point oral presentation in front of all conference attendees. After this, in front of her/his poster she/he will explain, to the evaluation commission, the content of the research work. This dialog between author and the evaluation commission could last 10-15 minutes. In the same time, the posters are displayed permanently during all duration of the conference. So, it is possible to may take place, in front of the poster, in each day of the event, interesting spontaneous discussions. For more information regarding how important could be for a young researcher such an approach, I recommend to read the **SIITME Testimony** presented in this program brochure. Generally, I have to highlight how full of life are SIITME poster sessions. They create a very good merge between a scientific event and a social one.

All these achievements would not have been possible without the major commitment, over time, of the many volunteers who have made considerable efforts for the smooth running of our conference. With every edition, the quality of papers has been increasing.

For this achievement we have to thank to the Publication Committee chaired by Prof. Zsolt Illyefalvi-Vitéz and, starting with this edition, to the Co-chair Assoc. Prof. Gabriel Chindriș.

This edition brings for the first time a direct and massive involvement of representatives of the electronics industry in Romania. The role to manage the link to the industry is overtaken by the General Industrial Co-chair, Hartmut Hohaus, which, together with the Conference Co-chair, Aurelia Florea, have played an important role for the electronics industry attendance at SIITME. Under such circumstances, this edition accomplishes the presence of the two important actors necessary to promote innovation in electronics, industry and academia.

Of course, a very important contributions in the positive evolution of our conference have played, at this edition, the General Academic Co-chair, Prof. Dan Pitică, and Conference Chair, Prof. Carmen Gerigan.

Generally, the number of those who were involved in ensuring the smooth running of SIITME was huge. It is absolutely necessary to highlight the contribution of the CETTI team, managed by Delia Lepadatu, for the great effort to ensure a warm and pleasant conference environment.

As the SIITME initiator, I am very glad to see the actual achievements of our event and I want to thank very much to all volunteers for their engagement to elevate our conference to a very high scientific level and friendly environment.

Finally, to those who are present in the very nice city of Brașov at the 21<sup>st</sup> edition of SIITME, I wish an agreeable participation, fruitful discussions and professional satisfaction.

**Prof. Dr.h.c.mult. Paul SVASTA, Ph.D.**  
SIITME General Chair



**Dear participants to SIITME Conference,**

I'm more than glad to welcome you to the 21<sup>st</sup> edition of the International Symposium for Design and Technology in Electronic Packaging. By reaching this number of editions, the symposium has established itself as a high class event, showing a solid sustainable scientific growth over the years. As a result, we witness a visible and tangible evolution for both the academia and the industry. Moreover, the constant interest of the participants in thorough research, innovation and keeping an eager eye on the trends of the industry confers the symposium high quality and ranks it in the front line of European academic events.

As a representative of the industry, I notice with great satisfaction the growing part that the industry is offered in the frame of SIITME. This is a reflection of our already consolidated partnership, which we live on an everyday basis, before and after SIITME, in our common projects and tests. We, Miele Tehnica, have constant meetings with our partner professors in Electronics from Brasov, Bucharest, Alba Iulia, Suceava and Iasi, where we seek and find solutions to our occurring production issues and offer them support in their own research topics.

Now, we would like to go one step further in this partnership and bring into discussion the aligning of the university's education concept to the demands of the industry. Recently, I read about a project of Polytechnics Timisoara and Avenza Consulting, financed by the European Union regarding the transition of students from the university into the professional life. This is our challenge. That is why we organize and host within SIITME the Symposium: Partnership between Academia and Industry and hope to raise questions, to define clear roles for the representatives of both worlds and come to solutions in order to have our students fit for a professional life in any industry.

I wish you a fruitful time, enjoy the presence of great minds and innovative ideas and I look forward to see you in SIITME!

**Hartmut Hohaus**

SIITME 2015 General Industrial Co-Chair  
General Manager Miele Tehnica



It is my great pleasure and honor, as Conference Chair, to welcome you to the IEEE 21th International Symposium for Design and Technology in Electronic Packaging - SIITME 2015. My sense is stronger as the faculty of Electrical Engineering and Computer Science of Brasov is for the second time host of this highly valued scientific event. The edition of 2008 was held at Predeal and it was at the same time my first attendance at SIITME.

SIITME is not only a scientific event, SIITME is a comprehensive framework bringing together first of all researchers and academics involved in electronic packaging domain, but not only. SIITME brings together different generations of researchers, industry and academia, universities from different cities and countries.

SIITME is building a strong bridge between industry and academia and Brasov is a good place to strengthen the construction. Electronic industry is growing in Brasov and in the surrounding area and is getting closer and closer to the academia. Being a supporter of the belief that industry and academia must play together, I welcome all the participants from the industry at SIITME 2015.

Brasov is one of the largest and most cherished cities of Romania, a city surrounded by mountains. Brasov is a medieval citadel and a modern city as well. History, culture, science and technology play together in Braşov County and Transilvania University of Braşov is an important performer in the social, cultural and economic life of the city and of the region.

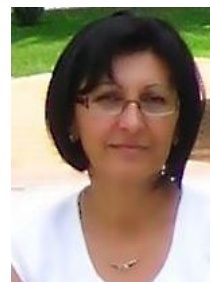
I wish you success for the conference and enjoy your stay in Brasov.

**Assoc. Prof. Carmen Gerigan, Ph.D.**

SIITME 2015 Conference Chair

Dean of Electrical Engineering and Computer Science  
Faculty

Transilvania University of Braşov, Romania





## The Human Resources - a key factor in promoting innovation in the electronic industry in Romania

We are all aware of the fact that innovations in electronics are radically reshaping the world as we know it, changing it constantly, at an amazing speed rate. The changing business landscape impacts the way we need to shape our strategy and, in order to stay successful and competitive, we must adapt and prepare for what the future holds.

When picturing the future of the electronic industry we think about two key elements: technology and human resources. The two elements are linked and interdependent: well prepared people sustain innovation and cutting-edge technology demands skilled people that operate it.

In order to get the right result, the key in this equation is collaboration and a shared vision. Thus, the industry representatives, the academic environment and the legislator share the responsibility for joining forces and developing an ongoing partnership that will sustain the future progress of the electronic industry.

The 21<sup>st</sup> edition of SIITME represents a good opportunity for setting up the stage for a strategic partnership, since industry, university and political representative are all very well represented in the event. The Workshop ***“Strategic partnership between the University and the electronics industry”*** was included in the SIITME 2015 agenda precisely to initiate a constructive dialogue on this topic.

The attention is placed on dialogue between all the involved parties in order to ensure synchronization of industry requirements and academic curricula.

Building the premises of an environment that fosters cooperation is only the first step. By joining forces and know-how we can set the grounds for sustaining the technological advancements and training the future workforce with skills that are adapted to the rapidly changing electronic market requirements.

Aurelia Florea  
SIITME 2015 Conference Co-Chair  
Human Resources Director  
SC Miele Tehnica SRL  
Braşov



## Message from the IEEE CPMT Hungary-Romania Joint Chapter, Chair

As a leading Professional Organization in the field of Electrical Engineering, IEEE has always promoted technological innovation and excellence. One of the Key Initiatives for supporting the goals of IEEE, as can be seen in the IEEE Strategic Plan 2015-2020, is “Ensure the vitality and relevance of our core activities in standards, conferences, education, and publications while providing increased value to the members”. In this sense, the IEEE CPMT Society, in particular through the HU-RO Joint Chapter has supported the SIITME Conference, every year since 2009. This has brought more benefit to the visibility of both Conference and authors, the majority of papers being selected to be accessible through the On-line Platform IEEE Explore.

The reality that today the number of attendees from industry at SIITME Conference has constantly grown is a sign that our industry, after having a long separate stand alone way has returned the sight toward Universities. The same idea in strengthening the contacts with industrial companies was felt from Academia too.

Another Core Value of IEEE is “Growth and Nurturing: encouraging education as a fundamental activity of engineers, scientists, and technologists at all levels and at all times; ensuring a pipeline of students to preserve the profession.” A good example in this sense is the Professional Contest TIE (Interconnection Techniques in Electronics). TIE, which is also an IEEE supported Event is a good example of collaboration between Universities and Companies. In this sense, not only the tasks for contests are written accordingly to indications from companies but also the granted Certificates of PCB Designer came from an Industrial Committee.

Coming back to SIITME, as an expression of the Partnership we have established, during the Conference an Industrial Session with presentations from companies is organized and also the companies can present their offer in an exhibition that the attendees can visit during the all duration of Conference.

Finally, on behalf of the Chair that I represent I hope that this year 21st Edition of SIITME to go a step further in promoting the IEEE core values and initiatives and to be a real success.

Prof. Ciprian IONESCU, Ph. D.,  
Chair of the IEEE CPMT Hungary-Romania  
Joint Chapter





## SIITME TESTIMONY

SIITME 2009 was the first conference I have attended. It remains in my soul, because this was my breakthrough in the world of science and conferences. At SIITME 2009 in Gyula, Hungary, I broke the ice and went on a path, never knowing that this step will change my life forever.

First it started simple, my Professor, Aurel GONTEAN, who in 2012 became my PhD advisor, asked me to write a paper, I didn't know what it was all about, but as a good student, I listened to him. Before the conference we came up with two papers, instead of one, the "force was with me".

I remember as it was yesterday, in September the 17th, 2009, me and one of my Professor's PhD students, early in the morning, drove to Gyula, Hungary, to my first conference.

The next day was my presentation, it was a poster session, but as it is done for serious conferences it needed to be presented in front of the audience with some PowerPoint slides. I remember I woke up really early in that morning, much earlier than I should be woke up, and I could not sleep. In the time I was tying my tie I was trying to rehearse my speech. I was really anxious. The time was passing in slow motion. I know I was in trouble, my heart was beating really fast, I felt I was about to faint. Finally the presentation came. The presentation went really bad; in fact, I think, this was the worst presentation in my life, my voice was shaking and really could not explain clearly what I did in the past year on my research, but thankfully the poster presented my whole work. Even though the first presentation did not went well, it opened me a new door, the door for the conferences, for the scientific community, a place where ideas can be shared and lifetime friendships and collaboration can be made.

The conference is the only place where a scientist feels good and welcomed. It's a warm and cozy place like nothing other. For me a conference is the place where I feel like home, here I am calm, have no stress, here I am really happy. This was observed by my colleagues too. The conference is like a benefic drug or virus, which gets in your body and you cannot escape from it. A true scientist when attends the first conference, will never want to stop and will want to attend even more conferences. The conference it's like a hunter, which stalks your mind until you get back to another conference. Once you start this, you will never stop.

Since then, six years have passed, I have finished my PhD, I wrote 44 articles, I went to many conferences, but I could never forget where I started, I have started at Gyula, Hungary, with SIITME, this is why I have attended SIITME every year since. My presenting skills have improved, I realized that the speech does not need to be learnt at a conference, free speaking is better. All this was thanks to that few minutes of presentation at SIITME 2009, where I was in the center of the attention. Since then I have found out a really good way to fight my emotions. At a presentation, nobody wants to hurt you, they are all there to listen to you, you are presenting your research to the world, everyone is curious about what you want to say. At the presentation it's your moment, your moment to shine and you need to be eager for that moment, which after the presentation will give you a big dose of contentment and happiness.

SIITME is a very serious conference, where a lot of scientist gather together to share their work, it publishes scientific papers and indexes the papers in IEEE Xplore and as an icing on a cake, it indexes in ISI Web of Knowledge too.

SIITME opens the door to a new world, to the world of conferences; it is a new path, where the science is shared. SIITME is a good place to start for any young scientist, for me, it was the first step in this new world of conferences.

I wish many more editions to SIITME and I hope I will be able to say to my grandsons, be careful, if you go to SIITME you will end up a scientist with a PhD.

Roland SZABÓ, Ph. D.  
September 2015



## General Chair:

Paul SVASTA, "Politehnica" University of Bucharest, Romania

## General Academic Co-Chair:

Dan PITICĂ, Technical University of Cluj-Napoca, Romania

## General Industrial Co-Chair:

Hartmut HOHAUS, MIELE Tehnica, Braşov, Romania

## Conference Chair:

Carmen GERIGAN, "Transilvania" University of Braşov, Romania

## Conference Co-Chair:

Aurelia FLOREA, MIELE Tehnica, Braşov, Romania

## Technical Program Chair:

Detlef BONFERT, Fraunhofer EMFT, München, Germany

## Technical Program Co-Chair:

Norocel CODREANU, "Politehnica" University of Bucharest, Romania

## Awards Committee Chair:

Heinz WOHLRABE, Dresden University of Technology, Dresden, Germany

## Scientific Committee Chair:

Balázs ILLÉS, Budapest University of Technology and Economics, Hungary

## Scientific Co-Chairs:

Heinz WOHLRABE, Dresden University of Technology, Germany

Ciprian IONESCU, "Politehnica" University of Bucharest, Romania

## Human Resource Education and Training Committee Chair:

Aurelia FLOREA, MIELE Tehnica, Braşov, Romania

## Human Resource Education and Training Committee Co-Chair:

Cornelia GORDAN, University of Oradea

## Industrial Co-Chair:

Delia UNGUR, Euro Business Park Oradea

## Publication Chair:

Zsolt ILLYEFALVI-VITÉZ, Budapest University of Technology and Economics, Hungary

## Publication Co-Chairs:

Gabriel CHINDRIŞ, Technical University of Cluj- Napoca, Romania

Bogdan MIHĂILESCU, "Politehnica" University of Bucharest, Romania

## International Steering Committee

### Chaired by the General Chair:

Paul SVASTA, "Politehnica" University of Bucharest, Romania

Tiberiu ABRAHAM, ROEL, Romania

Dorel AIORDĂCHIOAIE "Dunărea de Jos" University of Galaţi, Romania

Karlheinz BOCK, Dresden University of Technology, Germany

Detlef BONFERT, Fraunhofer EMFT, Munich, Germany

Atila BONYÁR, Budapest University of Technology and Economics, Hungary

Alexandru BORCEA, ARIES, Romania

Paul Nicolae BORZA, "Transilvania" University of Braşov, Romania

Mihai BRÂNZEI, "Politehnica" University of Bucharest, Romania

Attila BUCHMAN, North University, Center of Baia Mare, Romania

Vlad CEHAN, "Gheorghe Asachi" Technical University of Iaşi, Romania

Emilian CEUCĂ, "1 Decembrie 1918" University of Alba Iulia, Romania

Norocel CODREANU, "Politehnica" University of Bucharest, Romania

Liviu COSERIANU, ACTTM Bucharest; AFCEA Bucharest chapter, Romania

Gabriel DIMA, "Politehnica" University of Bucharest, Romania

Petrin DRUMEA, Research Institute for Hydraulic & Pneumatics, Romania

Carmen GERIGAN, "Transilvania" University of Braşov, Romania

Aurel-Ştefan GONTEAN, "Politehnica" University of Timişoara, Romania

Cornelia GORDAN, University of Oradea, Romania

Adrian GRAUR, "Ştefan cel Mare" University of Suceava, Romania

Patrick HASPEL, Cadence Design Systems GmbH, Germany

Mihaela HNATIUC, Maritime University of Constanţa, Romania

Hartmut HOHAUS, MIELE Tehnica, Braşov, Romania

Balázs ILLÉS, Budapest University of Technology and Economics, Hungary

Zsolt ILLYEFALVI-VITÉZ, Budapest University of Technology and Economics, Hungary

Ciprian IONESCU, "Politehnica" University of Bucharest, Romania

Radu IONESCU, Radioconsult srl, Bucharest, Romania

Olivér KRAMMER, Budapest University of Technology and Economics, Hungary

Ioan LIȚĂ, University of Piteşti, Romania

Pavel MACH, Technical University of Prague, Czech Republic

Alexandru MARIN, "Politehnica" University of Bucharest, Romania

Bálint MEDGYES, Budapest University of Technology and Economics, Hungary

Ioan P. MIHU, "Lucian Blaga" University of Sibiu, Romania

Cosmin MOISA, Continental Automotive, Timisoara, Romania

James E. MORRIS, Portland State University, OR, USA

Johann NICOLICS, Vienna University of Technology, Austria

Petre OGRUȚAN, "Transilvania" University of Braşov, Romania  
 Gheorghe PANĂ, "Transilvania" University of Braşov, Romania  
 Alena PIETRIKOVA, Technical University of Kosice, Slovakia  
 Dorin PETREUŞ, Technical University of Cluj-Napoca, Romania  
 Dan PITICĂ, Technical University of Cluj- Napoca, Romania  
 Valentin POPA, "Ştefan cel Mare" University of Suceava, Romania  
 Jerzy POTENCKI, University of Technology, Rzesow, Poland  
 Marius RANGU, "Politehnica" University of Timişoara, Romania  
 Wilfried SAUER, Technical University of Dresden, Germany  
 Paul ŞCHIOPU, "Politehnica" University of Bucharest, Romania  
 Paul SVASTA, "Politehnica" University of Bucharest, Romania  
 Iuliu SZEKELY, „Sapientia” University of Târgu Mureş, Romania  
 Marius TOADER, ALFA TEST, Timişoara, Romania  
 Daniel TRIP, University of Oradea, Romania  
 Adrian TULBURE, „1 Decembrie 1918” University of Alba Iulia, Romania  
 Carmen TURCU, INTRAROM Bucharest, Romania  
 Slavka TZANOVA, Technical University of Sofia, Bulgaria  
 Daniel VIŞAN, University of Piteşti, Romania  
 Gabriel VLĂDUȚ, ARIES Oltenia, Romania  
 Dan VUZA, Institute of Mathematics of the Romanian Academy, Romania  
 Heinz WOHLRABE, Dresden University of Technology, Germany  
 Klaus WOLTER, Dresden University of Technology, Germany

## Scientific Committee

**Chair:** Balázs ILLÉS, Budapest University of Technology and Economics, Hungary

**Co-Chairs:** Heinz WOHLRABE, Dresden University of Technology, Dresden, Germany  
 Ciprian IONESCU, "Politehnica" University of Bucharest, Romania

Dorel AIORDACHIOAIE, "Dunărea de Jos" University of Galaţi , Romania  
 Detlef BONFERT, Fraunhofer EMFT, Munich, Germany  
 Radu BOZOMITU, "Gheorghe Asachi" Technical University of Iaşi, Romania  
 Mihai BRÂNZEI, "Politehnica" University of Bucharest, Romania  
 Ştefan CASTRAVETE, CAE – LYNX Europe, Craiova, Romania  
 Vlad CEHAN, "Gheorghe Asachi" Technical University of Iaşi, Romania  
 Gabriel CHINDRIŞ, Technical University of Cluj- Napoca, Romania  
 Eugen COCA, "Ştefan cel Mare" University of Suceava, Romania  
 Norocel CODREANU, "Politehnica" University of Bucharest, Romania

Gabriel DIMA, "Politehnica" University of Bucharest, Romania  
 Andrei DRUMEA, "Politehnica" University of Bucharest, Romania  
 Cristian FĂRCAŞ, Technical University of Cluj-Napoca, Romania  
 Laurenţiu FRANGU, "Dunărea de Jos" University of Galaţi , Romania  
 Carmen GERIGAN, "Transilvania" University of Braşov, Romania  
 Aurel-Ştefan GONTEAN, "Politehnica" University of Timişoara, Romania  
 Mihaela HNATIUC, Maritime University of Constanţa, Romania  
 Zsolt ILLYEFALVI-VITÉZ, Budapest University of Technology and Economics, Hungary  
 Olivér KRAMMER, Budapest University of Technology and Economics, Hungary  
 Emil LAZARCIUC, Continental Automotive Romania  
 Ioan LITA, University of Piteşti, Romania  
 Pavel MACH, Technical University of Prague, Czech Republic  
 Alexandru MARIN, "Politehnica" University of Bucharest, Romania  
 James E. MORRIS, Portland State University, OR, USA  
 Cătălin NEGREA, Continental Automotive Romania  
 Florin Codruţ NEMȚANU, "Politehnica" University of Bucharest, Romania  
 Johan NICOLICS, Vienna University of Technology, Austria  
 Dorin PETREUŞ, Technical University of Cluj Napoca, Romania  
 Alena PIETRIKOVA, Technical University of Kosice, Slovakia  
 Dan PITICĂ, Technical University of Cluj-Napoca, Romania  
 Ioan PLOTOG, "Politehnica" University of Bucharest, Romania  
 Marius RANGU, Politehnica University of Timişoara, Romania  
 Paul ŞCHIOPU, "Politehnica" University of Bucharest, Romania  
 Paul SVASTA, "Politehnica" University of Bucharest, Romania  
 Daniel VIŞAN, University of Piteşti, Romania  
 Marian VLĂDESCU, "Politehnica" University of Bucharest, Romania  
 Dan VUZA, Institute of Mathematics of the Romanian Academy, Bucharest, Romania

## Human Resource Education and Training Committee

**Chair:** Aurelia FLOREA, MIELE Tehnica, Braşov, Romania

**Co-Chair:** Cornelia GORDAN, University of Oradea  
**Industrial Co-Chair:** Delia UNGUR, Euro Business Park Oradea

Codruta BALA, Celestica, Oradea Romania  
 Andrei KECSEG-FONCE, Conect Group Oradea, Romania  
 Maria MARCOVICI, Continental Automotive, Timisoara, Romania  
 Cosmin MOISA, Continental Automotive Timisoara,

Romania

Diana NASTASE, Plexus, Oradea Romania

## Publication Committee

**Chair:** Zsolt ILLYEFALVI-VITÉZ, Budapest University of Technology and Economics, Hungary

**Co-Chairs:** Gabriel CHINDRIȘ, Technical University of Cluj-Napoca, Romania

Bogdan MIHĂILESCU, "Politehnica" University of Bucharest, Romania

Radu BOZOMITU, "Gheorghe Asachi" Technical University of Iași, Romania

Eugen COCA, „Ștefan cel Mare” University of Suceava, Romania

Radu COSĂCEANU, Cavallioti Publishers, Bucharest, Romania

Andrei DRUMEA, Politehnica University of Bucharest, Romania

Cristian FĂRCAȘ, Technical University of Cluj-Napoca, Romania

Olivér KRAMMER, Budapest University of Technology and Economics, Hungary

Cristina MARGHESCU, Politehnica University of Bucharest, Romania

## Technical Program Committee

**Chair:** Detlef BONFERT, Fraunhofer EMFT, München, Germany, Chair

**Co-Chair:** Norocel CODREANU, "Politehnica" University of Bucharest, Romania

Bogdan ANTON, "Politehnica" University of Bucharest, Romania

Réka BÁTORFI, Budapest University of Technology and Economics, Hungary

Alexandru BORCEA, ARIES, Romania

Gabriel CHINDRIȘ, Technical University of Cluj Napoca, Romania

Andrei DRUMEA, "Politehnica" University of Bucharest,

Romania

Rajmond JÁNÓ, Technical University of Cluj Napoca, Romania

Bogdan MARGINEAN, MIELE Tehnica, Brașov, Romania  
Cristina MARGHESCU, "Politehnica" University of Bucharest, Romania

Liliane MARGHESCU, APTE – Association for Promoting Electronic Technology

Ioan PLOTOG, "Politehnica" University of Bucharest, Romania

Paul SVASTA, "Politehnica" University of Bucharest, Romania

Alexandru VASILE, "Politehnica" University of Bucharest, Romania

Daniel VIȘAN, University of Pitești, Romania

## Local Organising Committee

Transilvania University of Brașov, Romania

**Chair:** Mihai ROMANCA

**Co-Chair:** Gheorghe PANĂ

Petre OGRUȚAN

Marius CARP

Radu COLIBAN

Diana THIERHEIMER

Mihaela MIHAI

Florin DUMITRACHE

Vlad LUPU

## Technical Secretariat

Delia LEPAȚU, "Politehnica" University of Bucharest, Romania

Mariana PĂȚULEANU, "Politehnica" University of Bucharest, Romania

Florentina STĂLINESCU, APTE, Bucharest, Romania

Rodica NEGROIU, "Politehnica" University of Bucharest, Romania

## Thursday, October 22

---

14:00 – 19:00	<b>Registration (Registration desk, Hotel Lobby)</b>
17:30 – 19:00	<b>Short Course: "Challenges in engineering profession", Ephraim Suhir, Ph.D., IEEE Distinguish Lecturer</b> (Transilvania University of Brasov, Building N, room N I.1)
19:30 – 21:30	<b>Welcome reception (Hotel Casa Mureșan restaurant)</b>
21:30 – 22:30	<b>Steering Committee Meeting (Steering Committee Room)</b>
22:00 – 23:00	<b>IEEE – CPMT Hu &amp; Ro Joint Chapter Meeting (Steering Committee Room)</b>

## Friday, October 23

---

07:00 – 08:00	<b>Breakfast (Hotel Casa Mureșan restaurant, 1<sup>st</sup> floor)</b>
08:00 – 12:00	<b>Registration (Registration desk, Hotel Lobby)</b>
08:30 – 09:00	<b>Opening ceremony, Welcome words (Silver Room)</b>
09:00 – 10:30	<b>Plenary Session - Keynote Speakers (Silver Room)</b>
10:30 – 11:00	<b>Coffee Break</b>
11:00 – 12:15	<b>Exhibition Opening - Industrial Session (Silver Room)</b>
12:20 – 13:00	<b>Oral Session 1 (Silver Room)</b>
13:00 – 14:00	<b>Lunch</b>
14:00 – 16:00	<b>Poster Session 1 (Platinum Room)</b>
16:00 – 16:30	<b>Coffee Break</b>
16:30 – 17:30	<b>Oral Session 2 (Silver Room)</b>
17:30 – 19:30	<b>Poster Session 2 (Platinum Room)</b>
19:30 – 21:00	<b>Dinner (Hotel Casa Mureșan restaurant, 1<sup>st</sup> floor)</b>
21:00 – 22:00	<b>AFCEA Romanian Student Club Meeting (Steering Committee Room)</b>

## Saturday: October 24

---

07:00 – 08:15	<b>Breakfast (Hotel Casa Mureșan restaurant, 1<sup>st</sup> floor)</b>
08:00 – 09:00	<b>Registration (Registration desk, Hotel Lobby)</b>
08:00 – 09:00	<b>Plenary Session - Keynote Speakers (Silver Room)</b>
09:00 – 10:00	<b>Industrial Session (Silver Room)</b>
10:00 – 11:00	<b>Oral Session 3 (Silver Room)</b>
11:00 – 11:30	<b>Coffee Break</b>



11:30 – 13:30	<b>Poster Session 3</b> (Platinum Room)
13:30 – 14:30	<b>Lunch</b>
14:30 – 15:30	<b>Oral Session 4</b> (Silver Room)
15:45 – 19:30	<b>Cultural Program</b>
19:00 – 19:30	<b>Steering Committee Meeting</b> (Hotel Bucegi Portile Regatului, Predeal Paraul- Rece)
19:30 – 23:00	<b>Conference Dinner and Awarding session</b> (Hotel Bucegi Portile Regatului, Predeal Paraul- Rece)

### Sunday: October 25

---

07:30 – 09:00	<b>Breakfast</b> (Hotel Casa Mureşan restaurant)
09:00 – 10:00	<b>Closing ceremony, looking forward to SIITME 2016</b> (Conference Room)
10:00 – 11:00	<b>Farewell coffee, End of Symposium</b>

Workshop Agenda			
<i>“Strategic partnership between the University and the electronics industry”</i>			
October 22,2015 Miele Tehnica			
Time	Title	Autors/ Presenters	Key note speakers
13:30-14:00	Welcome and introduction to Workshop	<b>Sesion chairs:</b> Aurelia Florea Cornelia Gordan	Hartmut Hohaus - General Manager Miele - General Industrial Co-Chair Paul Svasta - General Chair SIITME
14:00 -15:00	The role of Universities, Industry and Politics in creating the „Strategic partnership”	<b>Sesion chairs:</b> Aurelia Florea Cornelia Gordan	Industry representatives -20 min. Academic representatives -20 min. Politics -20 min.
<b>15:00-15:15</b>	<b>Networking Refresment Break</b>		
15:00-16:00	<b>Objective of this sesion</b> Finding a structure and a set of programs for an active partnership between Academic & Industry & Politics	<b>Sesion chairs:</b>  Aurelia Florea Cosmin Moisa	Industry representatives -20 min. Academic representatives -20 min. Politics -20 min. Promising Out-of-School Time (OST) Programs/Initiatives to Engage Adolescents in Academic, Career, and Life Skill Development
<b>16:00-16:15</b>	<b>Networking Refresment Break</b>		
16:15-17:30	Continuing the discussions and action plan - Working Groups for the next steps	<b>Sesion chair:</b> Aurelia Florea	Industry representatives -20 min. Academic representatives -20 min. Politics -20 min.
17:30-18:00	Conclusions of the workshop	<b>Sesion chair:</b> Aurelia Florea	

**Topics:**

“Strategy” = the art of **planning, organizing** and **leading** operations so as **to attain a goal** – or more, if need be.

**Aims:** (1) educate & trained students; (2) Industry & Universities partnership; (3) Common research projects

**Participants:** Prof. **Carmen Buzea**, Ph.D., Vice-rector, Transilvania University of Braşov; Prof. **Vlad Cehan**, Ph.D., Tehnical University "Gh. Asachi" Iaşi; **Bogdan Centea**, HR Manager Continental Automotive Systems Brasov; Prof. **Emilian Ceuca**, Ph.D., „1 Decembrie 1918” University of Alba Iulia; **Mihai Aurel Donţu**, member of the Romanian Parliament; **Mihaela Forgaciu**, General Manager, PREH Romania; **Cosmina Georgescu**, High school Students activities Manager, APTE; Prof. **Carmen Gerigan**, Ph.D., Dean, Transilvania University Braşov; Prof. **Aurel Gontean**, Ph.D., Politehnica University of Timişoara; Prof. **Cornelia Gordan**, Ph.D., Electronics Department Manager, University of Oradea; **Hartmut Hohaus**, General Manager, Miele Tehnica; **Mihai Lugojanu**, Quality & Technology Manager, Steinell; **Cosmin Moisa**, Head of EE Development, Continental Automotive Systems Timişoara; **Lucia Molniceanu**, HR Director, Benchmark; **Florin Mureşan**, Engineering Manager, Celestica Oradea; **Diana Năstase**, HR Director, Plexus Oradea; **Gabriel Neagu**, CEO, Electronica-azi; **Marius Neculoiu**, member of the Romanian Parliament; Prof. **Cristian Negrescu**, Ph.D., Dean, Politehnica University of Bucharest; **Alice Nistor**, HR Team Leader, Continental Automotive Systems Sibiu; **Alexandra Olteanu**, HR Manager, CELESTICA Oradea; **Dan Peter**, Manager, Children and High school Students Palace of Oradea, Prof. **Dan Pitićă**, Ph.D., Dean, Tehnical University of Cluj-Napoca; **Eugen Revici**, Engineering Manager, Benchmark; Prof. **Paul Svasta**, Ph.D., Politehnica University of Bucharest; Prof. **Nistor Daniel Trip**, Ph.D., Vice-dean, University of Oradea; **Delia Ungur**, General Manager, Industrial Eurobusiness Park III Oradea; Prof. **Doru Ursuţiu**, Ph.D., Transilvania University of Braşov.



**Keynote speaker:**

**Dipl.-Ing. (Univ.) Norbert Heilmann**

ASM AS GmbH & Co. KG, München, Germany

Tel.: 089 – 20800-21364

e-mail: [norbert.heilmann@asmpt.com](mailto:norbert.heilmann@asmpt.com)

**Presentation:**

**"Miniaturization – Design for Manufacturing - in each Process Step"**

Mr. Heilmann got his Diploma as an Engineer in Materials Science at the Friedrich-Alexander University in Erlangen in 1983.

He has been working for 31 years now in the field of SMT (Surface Mount Technology), for 27 years at Siemens AG and since January 2011 at ASM Assembly Systems GmbH & Co. KG, better known under the product name SIPLACE.

Since 2005 he is working in Product Management as a Technology Scout. He is responsible for collecting information about new process technologies, new materials, SMD and innovative ideas in the field of electronics assembly. He encourages new developments in R&D and new products in Product Management. When new products and processes are available for the customers he is introducing them and supporting the customers in implementing them in their manufacturing.



**Keynote speaker:**

**Dr. Eugen Pavel**

Storex Technologies, Bucharest, Romania

Tel.: 0040-722690644

e-mail: [eugenp@rdslink.ro](mailto:eugenp@rdslink.ro)

**Presentation:**

**"Micro- and Nanofabrication by 3D Quantum Optical Lithography"**

Dr. Pavel has graduated as Physicist in Materials Science at University of Bucharest in 1976 and received his PhD from Institute of Atomic Physics in 1992.

He is now working in the field of materials science with optical applications: Quantum Optical Lithography and Petabyte Optical Disc.

Since 2004 he is CEO at Storex Technologies. The many awards received by Dr. Pavel include: Prize of the Romanian Academy of Sciences for Physics, "The WIPO Award for the Best Inventor", granted by World Intellectual Property Organization, Prize of the World Periodical Press Organization, Gold Medal at Brussels Eureka: "48th World Exhibition of Innovation, Research and New Technology" and Gold Medal at: "32nd International Exhibition of Inventions, New Techniques and Products of Geneva".

Dr. Pavel has industrial and technological experience in the field of semiconductor devices and optical materials.

**Keynote speaker:**

**Dr. Ephraim Suhir,**  
 Portland State University, Portland, OR, USA ,  
 Bell Laboratories, Physical Sciences and Engineering  
 Research Division, Murray Hill, NJ (ret),  
 Technical University, Vienna, Austria, and  
 ERS Co. , 727 Alvina Ct., Los Altos, CA

**Presentation:**

**"Probabilistic Design for Reliability of Electronic  
 Devices and Packages"**

Dr. Suhir is Life Fellow of IEEE; Fellow of the American Society of Mechanical Engineers (ASME), American Physical Society (APS), Institute of Physics (UK), Society of Optical Engineers (SPIE), International Microelectronics and Packaging Society (IMAPS), the Society of Plastics Engineers (SPE); Associate Fellow of the American Institute of Aeronautic and Astronautic (AIAA); and Foreign Full Member (Academician) of the National Academy of Engineering, Ukraine, the country where he was born.

Dr. Suhir has authored about 300 publications (patents, books, book chapters, papers), presented many keynote and invited talks worldwide and received numerous professional awards, including 1996 Bell Labs Distinguished Member of Technical Staff Award for developing methods to predict the reliability of AT&T and Lucent Technologies products; 2000 IEEE-CPMT Outstanding Sustained Technical Contribution Award for outstanding and continuing contributions to the technologies in fields encompassed by the CPMT Society; and 2004 ASME Worcester Read Warner Medal for outstanding contributions to the permanent literature of engineering. He is the third Russian American, after Steven Timoshenko and Igor Sikorsky, who received this prestigious award.


**Keynote speaker:**
**Prof. Borza Paul Nicolae, Ph.D.**

Transilvania University of Braşov, Romania

Tel.: +40735532211

 e-mails: [borzapn@gmail.com](mailto:borzapn@gmail.com); [borzapn@unitbv.ro](mailto:borzapn@unitbv.ro)
**Presentation:**
**"Review of Actual Technologies for Autonomous and for Perpetuity Smart Sensors"**

Prof. Borza, was born on 15<sup>th</sup> of March 1955 in Brasov, Romania. Is graduate of the Transilvania University of Brasov in Electrical Engineering 1980, and he is doctor on Bioengineering of "Politehnica" University, Bucharest since 1994. He is professor at Transilvania University of Brasov, teaching Architecture of Computers, Embedded Systems, and Medical Electronics. Dr. Borza was invited professor in France at Poitiers, Bordeaux 1, and Nantes universities, in Ireland at National University of Ireland and in Greece at Technological and Educational Institute Patra.

Professor Borza has collaborated for eight years with Siemens, being member of Corporate Technology Group and, Siemens PSE as head of "Energie & Information" department. He was awarded as VIP Siemens Austria in 2007. Professor Borza is author or co-author of more than 50 papers published in various publications and author of several courses. The research focus is related to embedded systems, energy and information especially on electric hybrid storage solutions, sensors and medical instrumentation. For a long period, professor Borza has lead different international projects in frame of COST and Erasmus and participated as a speaker at numerous international training schools in Romania, Greece, France, Norway, etc.

The research activities was focused on technological development in industrial automation, energy management and measurement systems. Currently, his works are focused on areas of energy applications with a special interest on electric hybrid storage solutions, new materials and technologies applied in computers, other embedded systems, and sensors.



## Friday, October 23

---

09:00 – 10:30 Plenary session **Keynote speakers**

**Session Chairs:**

Hartmut HOHAUS, MIELE Tehnica, Braşov, Romania

Dan PITICĂ, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

***K1 "Miniaturization – Design for Manufacturing - in each Process Step"***

Norbert HEILMANN

***K2 "Micro- and Nanofabrication by 3D Quantum Optical Lithography"***

Eugen PAVEL

## Friday, October 23

---

11:00 – 12:15 **Exhibition Opening - Industrial Session**

---

**Chaired by:**

Paul SVASTA, APTE, Romania

Ciprian IONESCU, "Politehnica" University of Bucharest, Romania

## Friday, October 23

---

12:20 – 13:00 **Oral Session I – Advanced Materials**

***NOTE: Each author must deliver a 20 minutes slide show presentation of his/her work.***

**Session Chairs:**

Pavel MACH, Technical University of Prague, Czech Republic

Mihai BRÂNZEI, "Politehnica" University of Bucharest, Romania

***Application of Localization Factor for the Detection of Tin Oxidation with AFM***

Bonyár, Attila

***Metal Particle Filled, Thermally Conductive Polymer Composites for Electronic Packaging Applications***

Tavman, Ismail, Tuba Evgin

## Friday, October 23

---

### 16:30 – 17:30 Oral Session II - Assembling Technology

***NOTE: Each author must deliver a 20 minutes slide show presentation of his/her work.***

**Session Chairs:**

Heinz WOHLRABE, Dresden University of Technology, Dresden, Germany

Nistor Daniel TRIP, University of Oradea, Romania

***Typical Defects Caused by Untypical Situations from Assembly Lines in Electronic Industry***

M. Branzei, I. Plotog and B. Marginean

***Dependence of Condensate Thickness on the Substrate Properties during Vapour Phase Soldering***

Illés, Balázs

***Nondestructive Optical Inspection System for the Dicing Street Quality of Copper/Low-k Wafer***

Lin, Sheng-feng, Cheng-Huan Chen, and Cheng-Yao Lo

## Saturday, October 24

---

08:00 – 09:00 Plenary session **Keynote speakers**

**NOTE: Each author must deliver a 20 minutes slide show presentation of his/her work.**

**Session Chairs:**

Zsolt ILLYEFALVI-VITÉZ, Budapest University of Technology and Economics, Hungary

Ciprian IONESCU, “Politehnica” University of Bucharest, Romania

***K3 “Probabilistic Design for Reliability of Electronic Devices and Packages”***

Ebrahim SUHIR

***K4 “Review of Actual Technologies for Autonomous and for Perpetuity Smart Sensors”***

Paul Nicolae BORZA

## Saturday, October 24

09:00 – 10:00 - **Industrial Session**

---

**Chaired by:**

Alexandru BORCEA, ARIES, Romania

Bogdan MIHAILESCU, APTE, Romania

## Saturday, October 24

---

10:00 – 11:00 **Oral Session III - Challenge in Education; Applied Reliability**

**NOTE: Each author must deliver a 20 minutes slide show presentation of his/her work.**

**Session Chairs:**

Carmen GERIGAN, Transilvania University of Braşov, Romania

Mihaela HNATIUC, Maritime University of Constanţa, Romania

***Fuzzy Parameter Estimator for Complex Shape Clustering Algorithms in Predictive Diagnosis***

Nicolau, Viorel

***Electrical Behaviour of Flip-Chip Bonded Thin Silicon Chip-on-Foil Assembly during Bending***

Palavesam, Nagarajan, Detlef Bonfert, Waltraud Hell, Christof Landesberger, Horst Gieser, Christoph Kutter and Karlheinz Bock

***Using GitHub in the Classroom - a Collaborative Learning Experience***

Kertész, Csaba-Zoltán

## **Saturday, October 24**

---

### **14:30 – 15:30 Oral Session IV - Electronics Simulation & Modelling**

***NOTE: Each author must deliver a 20 minutes slide show presentation of his/her work.***

**Session Chairs:**

Ismail TAVMAN, Dokuz Eylul University

Ioan LIȚĂ, University of Pitesti, Pitesti, Romania

***Real time PCB diagnosis using FPGA - implemented video analysing tool***

Berechet, Vasilica, Alin Laurențiu M. Ionescu, Adrian-Ioan Liță, Alin Gh. Mazăre, Ioan Liță

***Real – time system for shape extraction from an image***

Ionescu, Laurentiu, Adrian I. Liță, Alin Gh. Mazăre, Vasilica A. Berechet, Ioan Liță

***Compensation of the Connection Wires Influence for a Behavioural Model of a Power BAW Filter***

Ovidiu Taus, Florin Constantinescu, Alexandru Gabriel Gheorghe

## Posters Assessor Committee:

---

### General Poster Session Chair: Heinz Wohlrabe, TU Dresden

Atila BONYÁR, Budapest University of Technology and Economics, Hungary  
 Detlef BONFERT, Fraunhofer EMFT, Munich, Germany  
 Radu BOZOMITU, "Gheorghe Asachi" Technical University of Iași, Romania  
 Mihai BRÂNZEI, "Politehnica" University of Bucharest, Romania  
 Iulian BUSU, "Politehnica" University of Bucharest, Romania  
 Vlad CEHAN, "Gheorghe Asachi" Technical University of Iași, Romania  
 Ioan CIASCAI, Technical University of Cluj- Napoca, Romania  
 Norocel CODREANU, "Politehnica" University of Bucharest, Romania  
 Andrei DRUMEA, "Politehnica" University of Bucharest, Romania  
 Cristian FĂRCAȘ, Technical University of Cluj-Napoca, Romania  
 Cornelia GORDAN, University of Oradea, Romania  
 Mihaela HNATIUC, Maritime University of Constanța, Romania  
 Balázs ILLÉS, Budapest University of Technology and Economics, Hungary  
 Zsolt ILLYEFALVI-VITÉZ, Budapest University of Technology and Economics, Hungary  
 Ciprian IONESCU, "Politehnica" University of Bucharest, Romania  
 Laurențiu IONESCU, University of Pitești, Romania  
 Olivér KRAMMER, Budapest University of Technology and Economics, Hungary  
 Ioan LITA, University of Pitești, Romania  
 Pavel MACH, Technical University of Prague, Czech Republic  
 Radu MATEESCU, COMTEST SRL, Romania  
 Bogdan MARGINEAN, MIELE Tehnica, Brașov, Romania  
 Alin MAZĂRE, University of Pitești, Romania  
 Bálint MEDGYES, Budapest University of Technology and Economics, Hungary  
 Cosmin MOISA, Continental Automotive, Timisoara, Romania  
 Viorel NICOLAU, "Dunarea de Jos" University of Galati  
 Dan PITICĂ, Technical University of Cluj-Napoca, Romania  
 Ioan PLOTOG, "Politehnica" University of Bucharest, Romania  
 Gabriel POPESCU, GIGA ELECTRONIC INTERNATIONAL, Romania  
 Mihai RAINER, GIGA ELECTRONIC INTERNATIONAL, Romania  
 Ismail TAVMAN, Dokuz Eylul University, Turkey  
 Daniel TRIP, University of Oradea, Romania  
 Alexandru VASILE, "Politehnica" University of Bucharest, Romania  
 Marian VLĂDESCU, "Politehnica" University of Bucharest, Romania

## Friday, October 23      Presenter: Stick- up poster before session !

---

14:00– 16:00 **Poster Session I** (Conference and Poster Room)

**NOTE:** Each author must deliver a 3 minutes slide show presentation of his/her work.

**Session Chair:** Vlad CEHAN, Technical University “Gheorghe Asachi” Iași, Romania

**Session Co-Chair:** Balázs ILLÉS, Budapest University of Technology and Economics, Hungary

### ***P1.1 Advances in Time Domain Reflectometry Characterisation for High Speed Interconnects***

D. Antonovici

### ***P1.2 Guidelines on Thermal Management Solutions for Modern Packaging***

A. Fodor, G. Chindris, D. Pitica, R. Jano

### ***P1.3 Investigating Mechanical Performance of Biodegradable Printed Circuit Boards***

A. Geczy, D. Nagy, A. Kmetty, B. Szolnoki, I. Hajdu

### ***P1.4 Investigation of Mechanical Properties of the Generated Surface Structures on a Chalcogenide Thin Film with AFM***

J. Kámán, A. Bonyár, I. Csarnovics, C. Cserhádi

### ***P1.5 Face Recognition Using Radon Transform***

R.-D. Albu

### ***P1.6 Novel microwave band-pass filter with dual-mode triangular resonators***

M. Alkafaji

### ***P1.7 Determining the Movements of an Underground Hydroelectric Power Station***

L. Viman, I. Ciascai, M. Dabacan, S. Pop

### ***P1.8 A FG-MOS Implementation for Low Supply Voltage Applications of Translinear Networks for Polynomial Approximated Functions***

E. Doicaru



***P1.9 Multi-media environment for development of PCB electronic modules***

M. C. Dumitrescu, N.Codreanu

***P1.10 Weekly Electronic Pills Dispenser with Circular***

C. Farcas, I. Ciocan, N. Palaghita, R. Fizesan

***P1.11 Portable I2C Monitor and Debugger***

C. Grecu, C. Iordache

***P1.12 Designing of Microcontroller based Syringe Pump with Variable and Low Delivery Rates for the Administration of Small Volumes***

M. A. Khan

***P1.13 A Real-time webcam based Eye Ball Tracking System using MATLAB***

M. A. Khan

***P1.14 Hardware and Software Designing of USB based plug n play Data Acquisition Device with C# and National Instruments LabView compatibility***

M. A. Khan

***P1.15 SCADA Development for an Islanded Microgrid***

E. Lazar, R. Etz, D. Petreus, T. Patarau

***P1.16 Bio-signals investigation platform for academic research and education laboratories***

A. Marcu, N. Codreanu, D. Taralunga

***P1.17 Comparative Assessment of Maxwell and Helmholtz Coils Magnetic Field for Biotechnological Applications***

B. Mihailescu, M. Velcea, I. Plotog

***P1.18 Pupil detection algorithms for eye tracking applications***

A. Pasarica, R. Bozomitu, V. Cehan, R. G. Lupu, C. Rotariu

***P1.19 Contribution to charging of battery with pulses***

L. Szabo

***P1.20 Creating an RS-232 Microchip for Controlling the Lynxmotion AL5 Type Robotic Arms***

R. Szabo, A. Gontean

***P1.21 The development process of an UART Chip on FPGA for Driving Embedded Devices***

R. Szabo, A. Gontean

***P1.22 The influence of charging-discharging current on supercapacitor's storage capacity***

M. Vidrascu

***P1.23 Monitoring the Earthquake Impact on Hydro-energetic Building using Digital Sensors***

L. Viman, I. Ciascai, S. Pop, M. Dabacan

***P1.24 Testing a current sensor based on optical fibers***

A. Vintea, O. M. Ghita, P. Schiopu

***P1.25 Automatic Characterization of the Angular Dependence of RFID Communications***

D. T. Vuza, M. Vladescu

***P1.26 Designing and Trajectory Performing of a Mobile Robot That Service to the Patients in Hospitals***

S. Yildirim, Sertac Savas

## Friday, October 23

---

17:30 – 19:30 **Poster Session II** (Conference and Poster Room)

**NOTE: Each author must deliver a 3 minutes slide show presentation of his/her work.**

**Session Chair:** Aurel-Stefan GONTEAN, “Politehnica” University of Timișoara, Romania

**Session Co-Chair:** Detlef BONFERT, Fraunhofer EMFT, München, Germany

***P2.1 Study of Thermal Ageing of Polypropylene Film Capacitors***

P. Mach, M. Horák

***P2.2 High-Frequency Power Loss Investigation of a Planar Ferrite Core Transformer***

C. Ropoteanu, P. Svasta, I. Buşu

***P2.3 Mathematical model for a quasi-resonant converter***

I. Baci, A. Taut, G. Chindris

***P2.4 Method of measuring and sorting coils using frequency synthesizer***

V. Cehan, R. Bozomitu, E. Coca

***P2.5 Comparison between Fixed and Solar Oriented PV Modules' Energy Production using a Simplified PSIM Model***

I. Ciocan, C. Farcas, D. Petreus, N. Palaghita

***P2.6 Communications architecture with applications on the road transportation system***

I. M. Costea, A. G. Banica, P. A. Tanasa, C. V. Banu

***P2.7 Monitoring System with Applications in Air Transport***

I. M. Costea, C. V. Banu, G. S. Banu, A. G. Banica

***P2.8 Centralized server application for air transportation security systems***

I. M. Costea, C. V. Banu, G. S. Banu, A. G. Banica

***P2.9 VIBROGEN - An experimental system to study vibration waveforms generated by faults under arbitrary load conditions and faults***

S. Epure, B. Dumitrascu, D. Aiordachioaie

***P2.10 Why the mounting inductance is important in designing a PDN?***

R. Fizesan, O. Pop, A. Taut

***P2.11 Energy-Saving Strategies in monitoring for Wireless Sensor Networks***

M. Rosu, Y. Hamed, Marius Rosu

***P2.12 Modelling of intelligent sensors used in transport systems***

F. Nemtanu, I. M. Costea, V. Iordache

***P2.13 Comparison between CFA and modern VFA***

G. Pana, I. Suci, P. L. Ogrutan

***P2.14 The Mathematical Analysis to Control Power Transfer in Resonant Power Converters***

A. Taut, G. Chindris, M. Daraban, O. Pop, R. Fizesan

***P2.15 Study Concerning the Optimization of the Fuzzy Controllers Used for the Resonant Inverters Command***

M. Tomșe

***P2.16 Optoelectronic Module for Quantification of Biomarkers Based on Fluorescence***

M. Vladescu, V. Feies, P. Schiopu, A. Craciun, N. Grosu

***P2.17 Whisker Formation from SnAgCu Alloys and Tin Platings - Review on the Latest Results***

R. Batorfi, B. Illés, O. Krammer

***P2.18 Electrochemical migration of Ag in Na<sub>2</sub>SO<sub>4</sub> environment***

B. Medgyes, S. Ádám, B. Szikora, L. Gál

***P2.19 Measures to increase the reliability of intelligent transport systems***

F. Nemtanu, I. M. Costea, D. Buretea

***P2.20 EMC Education with Environmental and Electronics Technology Orientation***

L. E. Aciu, P. L. Ogrutan, C. Stanca

***P2.21 Ad-hoc Lab Computer Network Configuration using Remote Resources***

T. C. Balan, D. N. Robu, F. Sandu

***P2.22 Graphical System Design Approach in Photovoltaic Energy Laboratories***

P. A. Cotfas, D. T. Cotfas

***P2.23 An Educational Tool to Analyze the Electromagnetic Radiation***

M. Daraban, D. Pitica, A. Taut

***P2.24 Semantic Data Aggregation in Heterogeneous Learning Environments***

F. Sandu, C. Costache

## Saturday, October 24

---

**11:30 – 13:30 Poster Session III** (Conference and Poster Room)

**NOTE:** *Each author must deliver a 3 minutes slide show presentation of his/her work.*

**Session Chair:** Norocel CODREANU, “Politehnica” University of Bucharest, Romania

**Session Co-Chair:** Oliver KRAMMER, Budapest University of Technology and Economics, Budapest, Hungary

***P3.1 Aspects on thermophysical properties of interconnection structures for power LEDs applications***

M. Branzei, M. Vladescu

***P3.2 Effect of Solder Joint Volume on its Shear Fracture Mode***

T. Garami, O. Krammer

***P3.3 Research Performance of Materials Used by EDLC in Their Construction***

R. Negroiu, N. Badalan(Draghici), A. Vasile

***P3.4 Nitrogen Influence on the Reflow Process Optimization***

D. Trip, A. Burca, C. Gordan, A. Schiop

***P3.5 Constant Current vs. Pulse Current for Power Supplies on High Power LED***

N. Badalan (Draghici), P. Svasta, F.Draghici

***P3.6 Electronics for electro-hydraulic actuation system***

M. Blejan, I. Ilie, C. Cristescu, R. Radoi

***P3.7 EEG Pattern Recognition Techniques Review***

S. Bularka, A. Gontean

***P3.8 A portable device for intercepting and retransmission the infrared modulated signals***

C. Cherciu, C. Cherciu, I. Nastac

***P3.9 A Low-Cost Car Vibration Acquisition System***

C. Chiculita, L. Frangu

***P3.10 One Glass Solution Projected Capacitive Touch Screen Structure According to ESD Requirements***

H. Cutlac

***P3.11 Low Computational Method for Siren Detection***

R. Dobre, V. Niță, A. Ciobanu, C. Negrescu, D. Stanomir

***P3.12 The Influence of Vibrations on Time Reference Signals Generated Using Quartz Crystals***

R. Dobre, A. Drumea, A. Marcu, I. Plotog

***P3.13 Analysis of Current Carrying Capacity of Silver-based Conductive Pastes for PCB Repair***

A. Drumea, C. Marghescu

***P3.14 Accurate Modeling of Supercapacitors for DC Operation Regime***

C. Ionescu, A. Vasile, R. Negroiu

***P3.15 Inhomogeneity Errors Compensation on LCD Displays***

C. Jeberean, A. Pasca

***P3.16 Modelling and implementation of intelligent sensor networks with applications in emergency situations management***

C. Lung, S. Sabou, A. Buchman

***P3.17 Into Generating True Random Numbers - a Practical Approach using FPGA***

A. Marghescu, P. Svasta

***P3.18 High Speed and Secure Variable Probability Pseudo/True Random Number Generator using FPGA***

A. Marghescu, P. Svasta, S. Emil

***P3.19 Intelligent System with Remote Transmission for Monitoring Telecommunication Equipment Parameters***

A. Naaji, M. C. Popescu

***P3.20 Activity recognition using an e-Textile data acquisition system***

I. Orha, S. Oniga

***P3.21 Microcontroller IMU Sensor Fusion***

S. Sabou, C. Lung

***P3.22 Algorithms for Thermoelectric Harvesting System Control***

A.Sfirat, A.Gontean

***P3.23 Pseudo-random generator using PUF circuits and Salsa stream cipher***

A. Stanciu, F. Moldoveanu, A. Craciun

***P3.24 Challenges and Solutions for Advanced Sensing of Water Infrastructures in Urban Environments***

G. Suci, A. Vintea, S.C. Arseni, C. Butca, V. Suci

***P3.25 Research and Development of a System for Measuring Electrical Parameters of EDLC***

A. Vasile, R. Negroiu, N. Badalan (Draghici)

**ELINCLUS** Electronic INnovation CLUSter

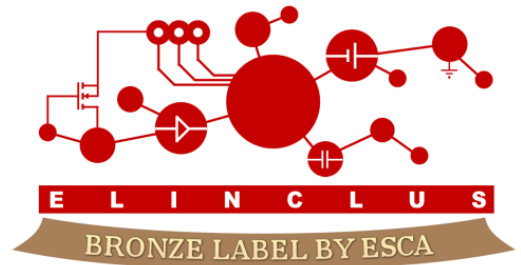
**EMC:** Association for Promoting Electronic Technology (APTE)

Founded 2011; 52 registered members

**President:** Prof.DHC. mult. Paul SVASTA, Ph.D.

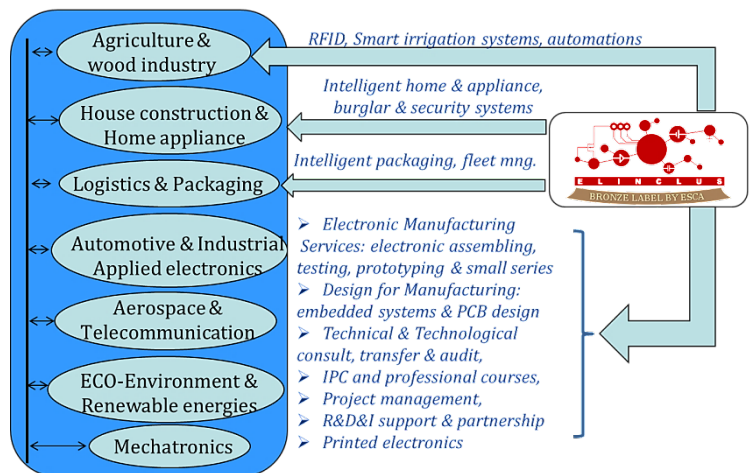
**Technical Manager:** Assoc. Prof. Ioan PLOTOG, Ph.D.

**Project Manager:** Assist. Prof. Eng. Bogdan Mihăilescu, Ph.D.



- Founding member of Cluster Association from Romania - [www.clustero.eu](http://www.clustero.eu)
- Member of Adriatic Danube Mechatronics Cluster Network
- International collaboration with Mecatech Cluster Wallonie and Wallonie Export Agency
- International collaboration with Omnipack Cluster Hungary (<http://omnipack.hu/>)
- European Cluster Excellence Initiative Bronze Label Certificate from ESCA in 2013

## ELINCLUS – CLUSTER COMPETENCES



### Sector of activity:

- Mechatronics, Automotive electronics, Aerospace electronics, Renewable energies, Communications, Agriculture and wood industry, Home appliance and consumer goods, ECO – environment

### Cluster strengths:

- Research & Development of innovative new electronics products in area of mechatronics, aerospace, automotive and s.o.; Technical and technological support for prototyping and small series; IP technology transfer;



***Main Profiles of members:***

- **Original Equipment Manufacturers:** ROEL Electronics, Samway Electronics, Seletron Software & Automatization, Giga Electronic International, Elarom, Pro Optica, CETTI
- **Electronic Manufacturing Services:** ROEL Electronics, Mibatron, , CETTI
- **Industrial automation:** Antrice, Luca Electric, Seletron Software si Automatizari
- **System integrators:** Antrice, BEIA Consult International, Electro Optic Components, Electrorm Impex, Radio Consult, Rond Electric, 2NCOMM Design
- **Research Centers:** IPE, CCA-AOS, CEMS, CETTI, CCO, ECOMET, IHP, Pro Optica
- **Training & Education:** L&G Advice Serv, UPB
- **Consulting:** Alma Engineering, Elinktron, Magnum CCC
- **Logistics:** ECAS, Elsix, IDEMA Consult, DVB Research, CSC Transmetal SRL, EuroStandard Press,
- **Automated systems for measurements and monitoring (telemetry):** *Top GEOCART*

***On-going projects:***

Operational Sectorial Program “Growth of Economic Competitiveness (POS CCE) 2007-2013” – co-financed from European Regional Development Fond – Priority Axis 1 “An innovative and eco-efficient production system”; Major intervention domain D1.3 “Long term development of entrepreneurship” Operation “Support for companies for integration in supply chains and clusters”.

**ELINCLUS Headquarters:** Bucharest, Bd. Iuliu Maniu nr.1- 3

**E-mail:** [elinclus@elinclus.ro](mailto:elinclus@elinclus.ro)

**Web page:** [www.elinclus.ro](http://www.elinclus.ro)



# ANTRICE

SC ANTRICE SA was founded in the fall of 1994, by the Research Institute of Electronics Bucharest in association with Italian companies in the field of professional electronics Antresud Rome (later the Omicron Industriale) and OSAE Turin. After an initial period of management and technological assistance provided by OMICRON Industriale, SC ANTRICE SA has become a leading manufacturer of power supply equipment mainly for the professional telecommunication. Due to competitive prices and promptness in delivery of services and products, SC ANTRICE SA gained in just a few years the full confidence of Romtelecom as well as of a large number of operators TLC that operates in Romania, but not only, becoming a leader in telecommunications power systems for both mobile networks and the fixed ones. SC ANTRICE SA has over 75 employees that work in flexible teams tailored to customer requirements. Company employees frequently attend trainings organized with the Italian side, so that the products obtained correspond to the latest standards and technologies used in the telecommunications industry. Average turnover recorded by SC ANTRICE SA in the last three years is 4-5 million EURO/year.

The main activities of ANTRICE are:

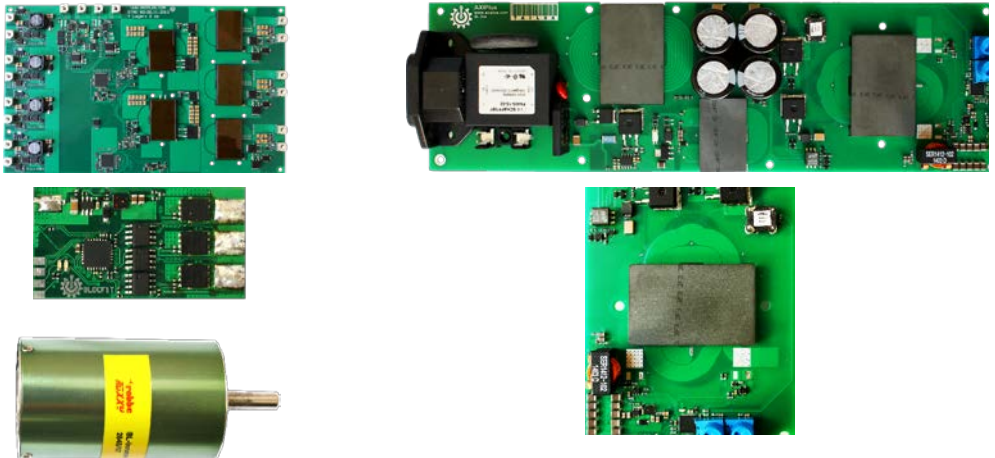
- 1) Production of industrial goods in telecommunication and professional electronics or consumer electronics;
- 2) The research, development, design, production, installation, commissioning and service in equipment and telecommunication networks;
- 3) Engineering services, consulting, expertise, staff training, technical assistance and service;
- 4) Import / export, brokering and / or representatives and other commercial operations including marketing and selling of products and services resulting from its own activity or indigenous and foreign suppliers.



Our company offer the best engineering services for electronic industry. Our expertise include:

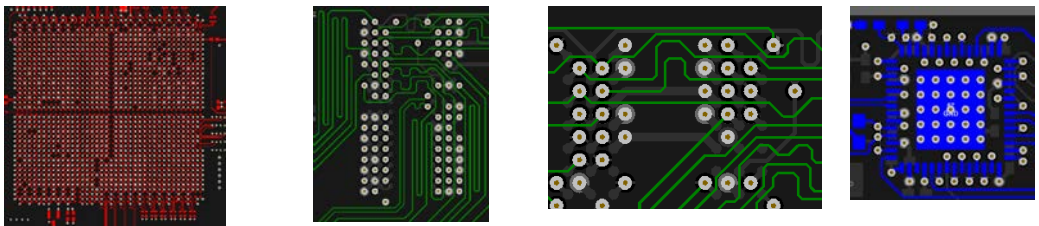
### Power electronic designs

We've dealt a lot with power when it comes to PCB. Up to 1KV in voltage, up to 500A in current.



### High density Layout

We have 5+ years of expertise in dealing with DDR and FPGA high speed signals, up to 24 layers.



More on [www.axiplus.com](http://www.axiplus.com)



[www.beia.ro](http://www.beia.ro)

Tel: 021 332 3006

E-mail: [office@beia.ro](mailto:office@beia.ro)

Approved Partner  
Siemens Enterprise  
Communications

SIEMENS

CENTRALE TELEFONICE PRIVATE



CALL CENTER

Security solutions

PABX, VoIP, DECT, ISDN

WorkForceManagement

Service & Maintenance

Consultancy and IT&C solutions

CRM/ERP integration

Telemonitoring Solutions

solutii si echipamente pentru

**Contact Center**

aspect

UNIFY

Panasonic

EXALEAD

ADCON  
TELEMETRY

VOXTRON

tiptel

LANCOM  
Systems

Dialogic

IVR  
Voice-Mail  
SMS server  
FAX server  
Recording

snom  
VoIP phones



Gigaset

JPL  
EUROPE

[www.beiamag.ro](http://www.beiamag.ro)  
[www.beia-telemetrie.ro](http://www.beia-telemetrie.ro)

Comtest distribuie în România echipamente HP, actualmente Keysight Technologies, pentru:

#### Domeniul educațional

- Aplicații Soft de proiectare EDA și ADS gratuite
- Cursuri universitare „Dream Catcher”

#### Domeniul de cercetare dezvoltare

- Analizatoare de semnal și de comunicații
- Analizatoare de spectru
- Analizatoare de rețele până la 1,1 THz
- Power-metre
- Generatoare analogice de semnal
- Generatoare vectoriale de semnal
- Analizatoare de impedanță
- Dispozitive de test pentru măsurarea materialelor

#### Cercetare și producție electronică,

- Osciloscopae 2 – 4 canale analogice
- Cu bandă: 20 MHz la 63 GHz
- Rată de eșantionare în timp real până la 160 GS/s
- Memorie de canal până la 2Gpuncte
- 16 canale digitale opțional
- Sonde pasive și active până la 30 GHz
- Aplicații software pentru comunicații digitale
- Aplicații software pentru protocoale seriale

#### Laboratoare și producție electronică

- Multimetre digitale de laborator și portabile
- Frecvențmetre
- Surse de alimentare de curent continuu și alternativ
- Digitizoare și multiplexoare de măsură

#### Producție electronică

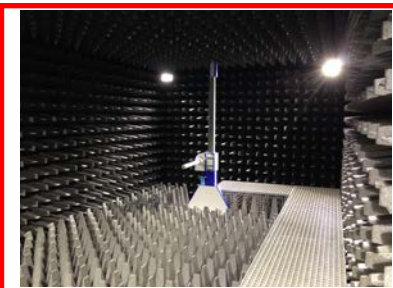
- Analizatoare logice
- LCR metre
- Camere IR și senzori de temperatură



AR ofera instrumentatie de RF și Microunde pentru: imunitate și susceptibilitate EMI și aplicații soft EMC și accesorii microunde

Comtest ofera echipamente și în alte domenii:

- Camere semi anecoice
- Scule și echipamente de producție







# DESIGN AND PRODUCTION SERVICES FOR ELECTRONIC MEDICAL DEVICES

## Products made:

- electromagnetic device to reduce back pain ROSTAB01;
- electromagnetic device for reducing the vertigo ROSTAB02;
- electromagnetic device for acupuncture ROSTAB03;
- medical insoles Doctortech with ROSTAB01/ROSTAB02;
- medical insoles multinumber Doctortech with ROSTAB01/ROSTAB02;
- medical miniinsoles Doctortech with ROSTAB01/ROSTAB02.

## National and international awards:



**SC DOCTOR TECH SRL**

tel.: +40723.20.50.48; +40788.88.53.52

e-mail: doctortech2000@yahoo.com

website: www.doctortech.ro

<https://www.youtube.com/watch?v=QCHGoHhTyqQ>



## ELSIX SRL

**ELSIX** has been established in 1992 and is currently based in Bucharest, Romania. Our ultimate goal is to provide the latest technologies and the most efficient solutions for electronic design.

Starting as a design bureau, **ELSIX** developed for its customers a large variety of products, from power supplies with high efficiency to opto-electronic sensors, and also designed a wide range of PCB's.

Later on, using the experience in this field, **ELSIX** became the distributor and VAR of well-known EDA software brands (MicroSim, OrCAD, Cadence, EMA Design Automation, Cimmetry Systems, Quantic-EMC, Flomerics, and others).

Dedicated especially to the EDA marketplace, **ELSIX** is now a full service VAR, providing to the electronics industry a wide range of software solutions for analysis and simulation, design and manufacturing.

Among these solutions there are OrCAD, PSpice and Allegro from Cadence Design Systems, GerbTool and VisualCAM from Wise Software Solutions, XFDTD, Wireless InSite and XGTD from Remcom, AutoVue from Oracle, MATLAB from Mathworks, COMSOL Multiphysics from COMSOL, and CASPOC from Simulation Research.

Our team of experienced engineers provides consulting for developing electronic modules and designing PCB's, and also training for a quick start up using the EDA software.

These solutions are offered by **ELSIX** not only in Romania, but also in the South-Eastern Europe.

In addition, we offer universal and dedicated programmers from Xeltek and RK-Systems.

Recently we have established a co-operation with EDIBON, which is a manufacturer of technical teaching equipment addressed especially to universities.



## GIGA ELECTRONIC INTERNAȚIONAL srl.

București, Opanez 6

R.C. J40/5479/1996; C.U.I. RO 8585300

Tel/Fax: 021-2420081, 021-2420082

[www.gigaelectronic.ro](http://www.gigaelectronic.ro) [office@gigaelectronic.ro](mailto:office@gigaelectronic.ro)

---

### Custom controllers for vending machines manufacturers

- Change machines;
- Souvenir machines;
- Machines for the automatic distribution of tokens;
- Universal products/liquid dispensers;
- Machines for electronic recharge;
- Machines for automatic cash-based access control at fairs, markets, events.

### Interfaces and control modules

- MDB ↔ computer/SBC—**upgrade kit with touchscreen and Automated-telemetry;**
- MDB ↔ Executive;
- MDB ↔ Parallel;
- Innovative Technologies ↔ Executive/MDB;
- MDB ↔ RS232/USB;
- MDB/Executive ↔ GSM (online payment/SMS);
- Telemetry and data-logger online/offline.

### ATMBUS – prototyping system

ATMBUS is a proprietary system that allows interconnection of modules with different destinations, obtaining a prototype vending systems. Modules available include features such as MDB master MDB slave sources, multiplexers, I / O modules, communication modules GSM / GPRS / SMS.





# Ideama Consult SRL

**Ideama Consult SRL (Ltd.) is a small private company located in Bucharest, joining skilled and creative people strongly focused in supporting industrial customers with expertise for:**

- ☐ Bonding solutions (tapes & adhesives) for industrial applications
- ☐ PCB protection and encapsulating materials and technologies including overmolding
- ☐ ESD protection - materials, tools, equipment
- ☐ Marking, label printing and other print-outs
- ☐ Surface cleaning and restoration systems
- ☐ Technical assistance and ideas originator for various projects

**We also cover product selling and servicing, such as:**

- ☐ Materials, consumables, tools, equipment, for electronic industry including SMT assembling and rework
- ☐ Equipment installation, fit-in and servicing
- ☐ Upgrading solutions for materials and equipment
- ☐ MRO activities

**Our customers are:**

- ☐ Electronic industry for: bonding, encapsulating, coating, sealing
- ☐ Automotive and transportation industry for: bonding, lubricating
- ☐ General industry for: bonding and sealing metal confections
- ☐ Advertising and signs production for: bonding and sealing
- ☐ Communications, military, marine for: specialty applications



## L & G Advice Serv SRL

L & G Advice Serv SRL is a member of IPC-Association Connecting Electronics Industries, the largest and representative international association, based in USA, which stands for electronics, v. <http://www.ipc.org> for more information. L & G Advice Serv SRL is an IPC authorized for Romania distributor for all IPC standards and documentations.

L & G Advice Serv SRL is a company authorized by the IPC to support and provide all training programs and certification / recertification training for instructors and /or specialists as follows:

- IPC-A-610F "Acceptability of Electronic Assemblies"
- IPC J-STD-001F "Requirements for Soldered Electric and Electronic Assemblies"
- IPC-A-600H "Acceptability of Printed Boards"
- IPC 7711/7721B "Rework, Repair and Modification of Electronic Assemblies"
- IPC/WHMA-A-620B "Requirements and Acceptance for Cable and Wire Harness Assemblies".
- Designer Certification Programs:
  - Certified Interconnect Designer Basic – CID
  - Certified Interconnect Designer Advance – CID+

Personnel of L & G Advice Serv SRL are member of IPC –A-610 Task Group (7-31B) and IPC J-STD-001 Task Group (5-22A).



**Miele Tehnica Braşov** is a subsidiary of Miele & Cie. KG, Germany. It was established in 2009 as a second electronics factory in the group, after the plant in Gütersloh.

The Miele plant in Braşov currently has 200 employees and produces electronic components for a wide range of Miele appliances, such as washing machines, tumble dryers, vacuum cleaners, ovens and others. The products Miele offers to its customers set the standards for durability, performance, ease of use, energy efficiency, design and service products.

The facility in Braşov is equipped with state-of-the-art technology and all quality requirements are respected according to the Miele Group's standards. This fact is acknowledged by all the certifications currently in place: ISO 9001, ISO 14001, ISO 50001, OHSAS 18001 and SA 8000.



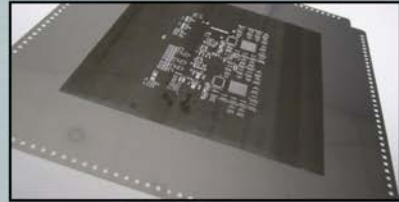
Address: No.1 Carl Miele Street, 507065 Feldioara, Braşov, Romania

Phone: 0040-268-402800, Fax: 0040-268-402810

Email: [office@ro.miele.com](mailto:office@ro.miele.com), [recrutare@ro.miele.com](mailto:recrutare@ro.miele.com)

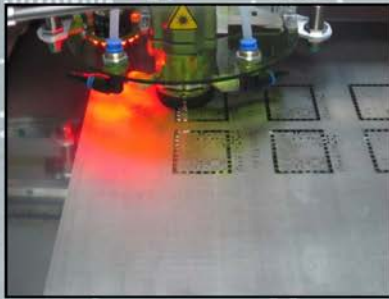


## NET DIGITAL SERVICE



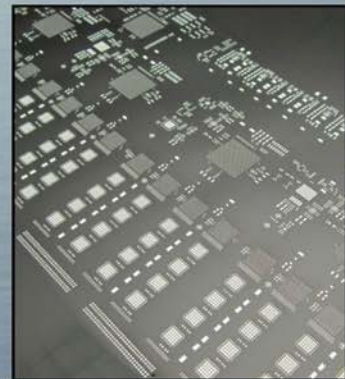
Net Digital Service S.R.L. was established in 2007, its main activities being photographic film printing of very high resolutions and very large dimensions for glass industry (automotive industry) and various electronic applications, SMT laser stencil production and CAD design.

Net Digital Service is part of the STV Group, which has the necessary know-how and the capability for producing stencils, both laser cutting and by electroforming and photochemical etching (double thickness stencil), being active on the West Europe market for over 15 years.



We have a fully functional LPKF last generation laser, capable of producing laser stencils at the highest quality standards. The machine is one of the most performant system on the market, produced by the over 15 years world leader in production of stencil cutting equipments, LPKF Laser & Electronics.

Our competences regarding the processing of CAD drawings received from clients and also the quality of the latest generation laser equipment that we have, allow us to provide high quality products. We can offer a great variety of stencils, any type of self tensioning stencil frame, double or triple thickness stencils (made in photochemical etching, with a minimum step of 30 microns) or glued stencils on tissue frames.



NET DIGITAL SERVICE

STR. BORSULUI NR. 37 ORADEA, ROMANIA

TEL. + 40 (0) 359 192 820 FAX + 40 (0) 359 192 819

Email: [office@nds-service.com](mailto:office@nds-service.com); Web: [www.nds-service.com](http://www.nds-service.com)

# SunCommunication SRL



61 Dionisie Lupu

Bucharest

+40 021 3110460 tel

+40 722 303 817 mobil

+40 021 3110442 fax

[www.suncommunication.ro](http://www.suncommunication.ro)

**SunCommunication SRL** operates on the Romanian IT&C market. The company has a wide range of services based on a long term experience with designs, prototypes, manufacturing custom projects, offering custom made software and hardware products, engineered specifically to our clients' needs. The assessment and QA is done using professional methods for measurements and testing services in areas like: acoustics, thermography and electromagnetic radiation, embedded, electronics, software engineering and software debugging.



## Thermal analysis

- Essential diagnosis tool for energy consultancy
- Applications in constructions, industrial maintenance and quality management



## Spectral analysis

- Detection of signals and radio waves
- Quality control for electronic applications and electromagnetic safety




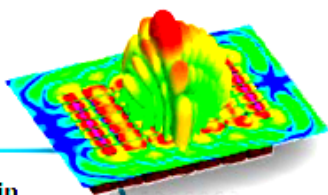
## Acoustical analysis

- Verification tests to determine the level of noise in various locations
- We ensure that noise levels are not harmful to your health

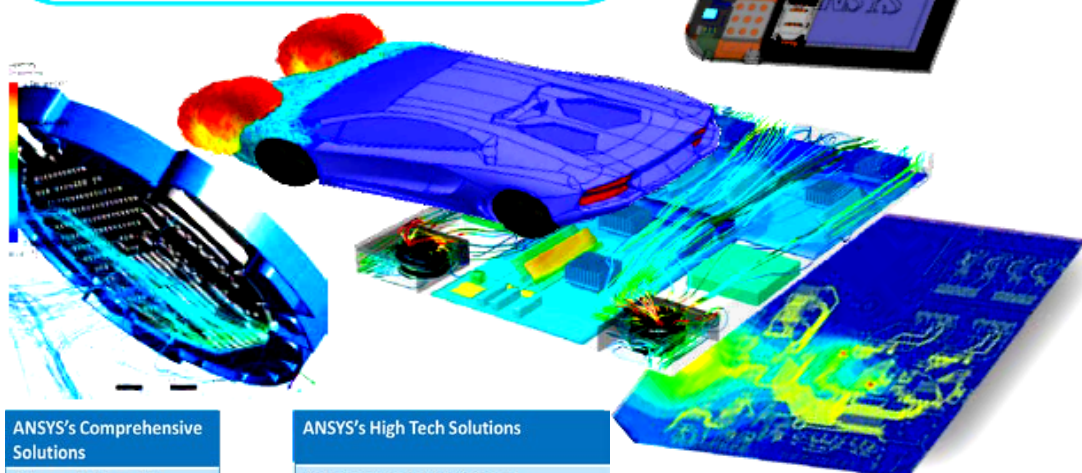
Our specialists provide a vast area of services with proven experience in different fields/sectors of technology like: OEM development, PCB development (design, prototyping and low volume manufacturing), embedded devices, mobile applications and terminals, video image processing (streaming, face, edge and object recognition), Automotive related applications (CAN, sensors, infotainment (IVI), data collection/log, data transmission, tracking devices and mechanisms (online, offline and data logs), sleeping detection system, 360 human body awareness as well as 360 vehicle body awareness.

Some of the operating systems used by the company's engineers: Android, iOS, Tizen, RTOS, QNX, Linux and others.

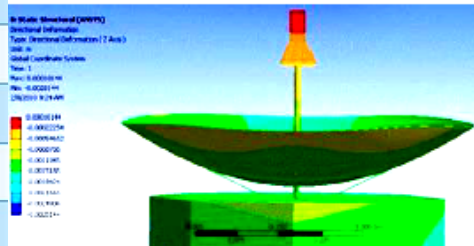




A 3D perspective view of a printed circuit board (PCB) assembly. The board is dark green and populated with numerous components, including blue cylindrical capacitors, gold-colored integrated circuits (chips), and various gold-colored connectors and traces. The components are arranged in a complex, organized layout.



ANSYS's Comprehensive Solutions	ANSYS's High Tech Solutions
Advanced Materials Systems Design	Advanced materials for high-performance electronics
Robust Electronic Systems Design	High-speed, high-bandwidth, communication systems design
Fluid-Mechanical Systems Design	Low-power, high-performance system design
Electric Machine and Drive Systems Design	Wireless spectrum and electromagnetics management
Fluid-Thermal Systems Design	



office@tensor.ro, 0744.310.929



# Top GEOCART

## Fields of activity:

### 1. GEOMATICS

**Geodesy, topography, GIS activities and Monitoring** - Total Stations, GNSS systems, GPS for GIS systems, land Laser Scanner, complete monitoring and alert systems, precision digital levels, accessories, processing and analysis software, etc.

### 2. METROLOGY & INDUSTRIAL MEASUREMENTS

**Industrial measurements such as those in shipbuilding, aviation, robotics** - Laser Station, Industrial Theodolites, Laser Tracker, Arm Tracker, accessories, processing and analysis software, etc.

### 3. CONSTRUCTION & PRECISION TOOLS.

**Measurements in the fields of civil engineering, forestry, architecture and others** - optical and electronic levels, rotating laser detection systems, electronic theodolites, GPS equipment for construction work, Lasermeter, applications for data download and data processing, etc.

### 4. UAV, REMOTE DETECTION, PHOTOGRAMMETRY .

**Measurements in the field of aerophotogrammetry and to remote sensing** - complete systems for photogrammetry: Photogrammetric Cameras, GPS and software for acquisition and processing of satellite images.



**CSC TRANS METAL S.R.L** offers the widest and most advanced selection of services in precision sheet metal work, stamping and tooling.

The **CSC TRANS METAL's outstanding technical** capabilities allow us, upon request, to undertake the tasks of design, manufacturing, assembly and joining of mechanical and electronic components of specific devices. Our work is complementary to the following sectors: Telecommunications, Defence, Informatics, Electronics, Electricity, Electro Medicine, Aerospace, Urban equipment, Railways, etc. But also honoring projects in other sectors on request.

Among metal products manufactured by **C.S.C. Trans Metal**, we list: chassis, panels, consoles, desks, racks, computer housing, metal cabinets, vending machines, turnstiles, signposts, etc.

We have developed a number of Services available to our clients on request, among them listing: Design 3D (SolidEdge), Laser cutting (Bistronic Byspeed), Bending (Trumabend Trumf), Mechanical welding (MIG-MAG and WIT-TIG), Electrostatic powder coating and Liquid painting.



### **C.S.C. TRANS METAL S.R.L.**

19 Macului Street, Rudeni, Chitila, Ilfov,  
Romania

Phone: +4.021.206.33.80

Mobil: +40730.094.441

Email: [mircea.falan@csc-transmetal.ro](mailto:mircea.falan@csc-transmetal.ro)

Website: [www.transmetal.ro](http://www.transmetal.ro)



## Brasov



Fringed by the peaks of the Southern Carpathian Mountains and resplendent with gothic, baroque and renaissance architecture, as well as a wealth of historical attractions, Brasov is one of the most visited places in Romania.

Founded by the Teutonic Knights in 1211 on an ancient Dacian site and settled by the Saxons as one of the seven walled citadels, Brasov exudes a distinct medieval ambiance and has been used as backdrop in many recent period films.

The location of the city at the intersection of trade routes linking the Ottoman Empire and western Europe, together with certain tax exemptions, allowed Saxon merchants to obtain considerable wealth and exert a strong political influence in the region. This was reflected in the city's German name, **Kronstadt**, as well as in its Latin name, *Corona*, meaning Crown City (hence, the coat of arms of the city which is a crown with oak roots). Fortifications were erected around the city and continually expanded, with several towers maintained by different craft guilds, according to medieval custom.

Stroll around the old **Town Hall Square** (*Piata Sfatului*) where you can admire colorfully painted and ornately trimmed baroque structures. Take a peek inside the **Black Church** (*Biserica Neagra*), the largest gothic church in Romania not only in Romania, but also in South - Eastern Europe. Its name derives from damage caused by the Great Fire of 1689, when flames and smoke blackened its walls. The interior is impressive and well-kept and houses one of the largest organs in Eastern Europe.

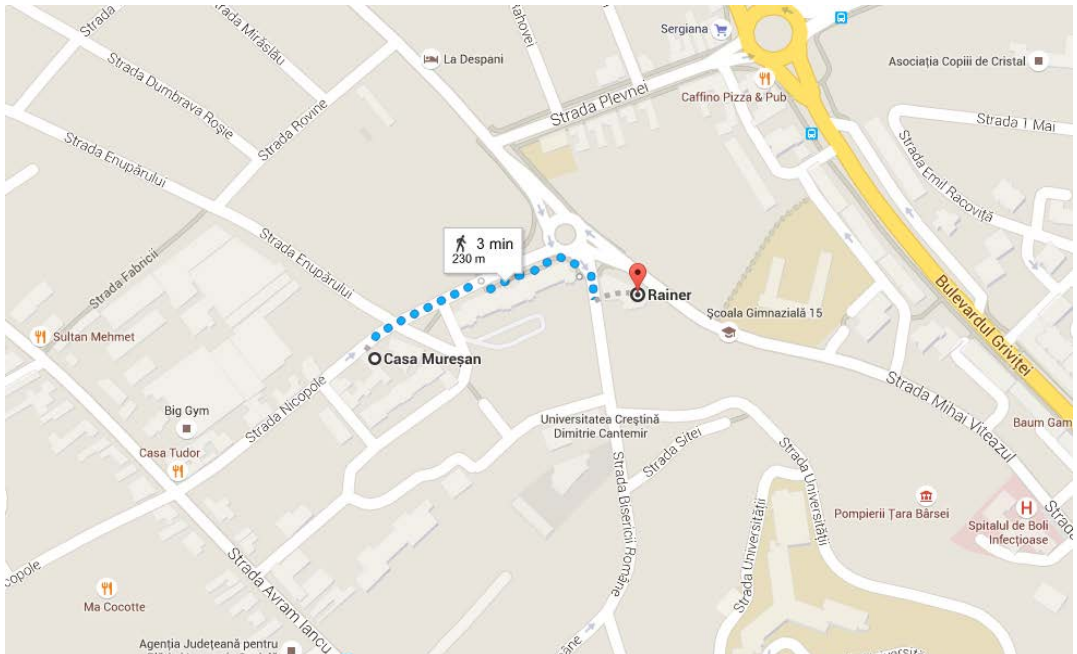
Nearby are towering mountains, rolling fields, thick forests and villages with fortified churches.

(source: <http://romaniatourism.com/brasov.html>)

## Location:

The conference and exhibition takes place at:

Hotel Casa Muresan, Brasov, Romania (see the map below).



The Registration is at:

Hotel Casa Muresan, Strada Nicopole 54, Brasov 500063, Romania

For more information and access: <http://www.casamuresan.ro/>

## CONFERENCE REGISTRATION

The conference fee includes the opening ceremony and welcome reception, full access to all technical (oral and poster) sessions, exhibition area, all meals (breakfasts, coffee breaks, lunches and dinners), three nights accommodation, printed abstracts proceedings, conference proceedings on memory stick, conference kit (conference bag, badge, booklet, pen, and other related objects), and participation to the cultural programme.

## CONTACT INFORMATION

**Registration Officer:** Delia Lepădatu  
0040.720.093.945  
0040.769.247.904

**Travel Advisor:** Gheorghe Pană  
0040.743.047.999

**Multimedia:** Bogdan Mihăilescu  
0040.723.077.221



## Oradea welcomes SIITME Conference 2016!

I'm pleased and honored, on behalf of the local organizing committee, to welcome you all to Oradea, for the 22<sup>nd</sup> Edition of SIITME conference.

Oradea is a north-west border Romanian city, a multicultural town which is highly appreciated by the different ethnic groups living on the banks of the Crișul Repede River. Because the Romanian industry must cope with a fierce global competition, Oradea City Hall developed the Euro Business Industrial Park containing some important companies involved in electronic industry and manufacturing.

University of Oradea is aware that a very important target in near future is to develop a network that promotes the development of human resources for innovation. So, the Electronics and Telecommunication Department is deeply involved in developing a strong connection between industry and technical academic courses and has a growing interest for electronic packaging.

Our local organizing committee is confident that SIITME 2016 will be a special chance for companies involved in electronics industry and Romanian technical academic schools to unite their interests and activities.

Therefore we invite you all to Oradea, a north-west border Romanian city, a multicultural town which is highly appreciated by the different ethnic groups living on the banks on the Crișul Repede River.

See you in Oradea!

**Prof. Cornelia GORDAN, Ph.D.**

Head of Electronics and Telecommunications Department  
University of Oradea, Romania





University of  
Oradea



Center for Technological  
Electronics and  
Interconnection Techniques  
UPB-CETTI



Association for  
Promoting Electronic  
Technology - APTE

## *Call for Papers*

# **SIITME 2016** **October 20<sup>th</sup> – 23<sup>rd</sup>, 2016** **22<sup>nd</sup> IEEE International** **Symposium for Design and** **Technology in** **Electronic Packaging**

**Oradea, Romania**  
**[www.siitme.ro](http://www.siitme.ro)**







MINISTERUL  
EDUCAȚIEI  
NAȚIONALE

**Miele**

TRANSILVANIA  
UNIVERSITY  
OF BRAȘOV

