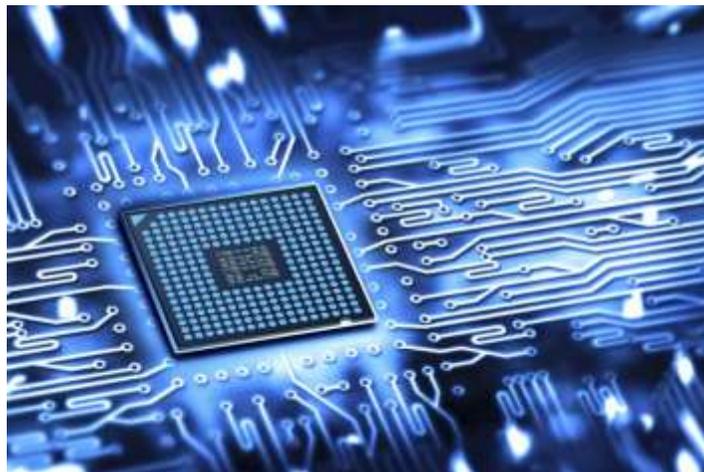




# PROGRAM



**ARAD,  
6-8 June 2017**

The International Students Scientific Communications Session of the Engineering Faculty of Aurel Vlaicu University from Arad is at its 19th edition.

As always, the main purpose is to offer the students the opportunity to demonstrate their knowledge and skills in different branches of engineering: automate control, automobiles, mechanics or IT, through original scientific papers resulting out of innovative and creative research.

This session of scientific communication is helping undergraduate, master or doctoral students from different universities from Romania or abroad to exchange opinions, knowledge, to link forthcoming collaborations, to make friends and get tips from the best in field. The participation diplomas and the prizes for the best works that will be awarded to the participants will be an added bonus in their resume. The participation and the competition is challenging and beneficial for the professional evolution of the students.

## Sponsors and partners



## Committees

### Advisory Committee:

- Rector: Ramona Lile
- Vice-Rector: Codruta Stoica
- Vice-Rector: Popa Alexandru
- Vice-Rector: Teodor Cilan
- Dean - Faculty of Engineering: Dan Glavan
- Vice-Dean: Doina Mortoiu
- Vice-Dean: Adina Bucevschi
- Director of department: Gheorghe Sima

### Scientific Committee:

- Valeriu Beiu (Romania)
- Michio Sugeno (Japonia)
- Lakhmi C. Jain (Australia)
- Anca Ralescu (USA)
- Dan Ralescu (USA)
- Bernadette Bouchon-Meunier (France)
- Salil Bose (USA)
- Ioan Dzitac (Romania)
- Octavian Prostean (Romania)
- Gheorghe Capatana (Republic of Moldova)
- Simona Dzitac (Romania)
- Gelu Ovidiu Tirian (Romania)
- Mohamed Salim Bouhleb (Tunisi)
- Rajeeb Dey (India)
- Seshadhri Srinivasan (India)
- Muhammad Waseem Ashraf (Pakistan)
- Ankur Gupta (India)
- Nilanjan Dey (India)
- Amira Ashour (Egypt)
- Fuqian Shi (China)
- Bhuvan Modi (USA)
- Muhammad Arif (Pakistan)
- Mohit Mittal (India)
- Barla Eva (Romania)
- Rob Raluca (Romania)
- Cornelia Victoria Anghel Drugarin (Romania)
- Roxana Beiu (Romania)
- Clara Rohatinovici (Romania)
- Kristijan Cincar (Republic of Serbia)
- Marius Buzera (Romania)
- Maria Petcut (Romania)
- Maria Muresan (Romania)

- Florina Pasculescu (Romania)
- Carmen Rus (Romania)

## **Organizing Committee:**

### **1. Electrical Engineering and Informatics section:**

- Marius M. Balas
- Valentina E. Balas
- Virgil F. Duma
- Valentin Muller
- Corina Mnerie
- Ioan Koles
- Cornel Barna
- Nicolae Popescu-Bodorin;
- Daniel Dragu
- Noemi Clara Rohatinovici

### **2. Mechanics section:**

- Ioan Radu
- Iosif Kaposta
- Liviu Sevastian Bocii
- Adriana Motica
- Gheorghe Hutiu
- Dorin Demian
- Lucian Gal
- Aurelia Tanasoiu
- Laurentiu Jitaru
- Mihai Sirb
- Stela Muncut
- Sorin Jurca
- Radu Negrila
- Theoharis Babanatsas
- Andrei Komjaty
- Lavinia Cilda
- Ioan Pernevan

### **3. Textiles section:**

- Ionel Barbu
- Cecilia Sirghie
- Monica Szabo
- Magdalena Fogorasi
- Monica Pustianu
- Erzsebet Airinei

# PROGRAM

## **6 June:**

- Reception and accommodation of external participants
- 20:00 - Dinner for external participants

## **7 June:**

- 07:00-09:00 Breakfast for external participants
- 09:00-10:00 Registration of participants
- 10:00-10:15 Opening Ceremony
- 10:00-10:45 Plenary Conference - Prof. Valeriu Beiu
- 10:45-11:45 Presentation of partner companies
- 11:45-12:45 Skype Session I
- 12:45-13:15 Visit to the Institute for Research, Development, Innovation in Technical and Natural Sciences in UAV
- 13:15-14:00 Lunch
- 14:00-16:00 Parallel Sessions and Skype Session II
- 16:00-18:00 Visit Arad City
- 20:00 Banquet and prize award for best papers

## **8 June:**

- 07:00-09:00 Breakfast for external participants
- Departure of participants

## Section: Energetic and Renewable Energies

**Evaluation Commission: President: Conf.dr.ing. Valentin Muller**

**Members: Conf.dr.ing. Simona Dzitac**

**Asist.Prof. drd. Marius Lolea**

**Secretary: Ing. Petru Hudacov**

- E1.** Ahmad Khalifeh, DzitacDomnica-Ioana , **OPERATION AND PLANNING OF ENERGY SYSTEMS AND SMART METERS APPLICATION IN SMART GRIDS**, (coord. conf. univ. dr. ing. Dzitac Simona, ing. Mortan Sorin), University of Oradea, Struer Stats gymnasium – Denmark, SC Ciucleatex SRL Beiuș
- E2.** DzitacDomnica-Ioana, Ahmad Khalifeh, Șandro Cristian, CozmaHorațiu , **EFFECTS OF HIGH FREQUENCY ELECTROMAGNETICAL FIELD ON BIOLOGICAL SYSTEMS**, (coord. asis. drd. ing. Lolea Marius, conf. univ. dr. ing. Dzitac Simona), Struer Stats gymnasium - Denmark, University of Oradea
- E3.** Filip Iuliu Florian, Tocai Dorina,**METHODS DEDICATED TO THE OPTIMIZATION OF THE LEVEL OF REDUNDANCY**,(coord. conf. univ. dr. ing. Dzitac Simona, șef lucr. dr. ing. Barla Eva), University of Oradea
- E4.** Ahmad Khalifeh, Dzitac Domnica-Ioana,Vălean Mărioara, **PRACTICAL ASSESSMENT AND ANALISYS OF THE EXPOSURE LEVEL IN ELECTRICOMAGNETIC FIELD OF HUMAN BODY**, (coord.asis. drd. ing. Lolea Marius, conf. univ. dr. ing. Dzitac Simona), University of Oradea, Struer Stats gymnasium – Denmark
- E5.** drd.ing. Ias Gheorghe, drd. ing. Lolea Marius, **POSSIBLE INCIDENTS AND RISKS WHICH AFFECTING THE CONNECTION OF THE EOLIEN ENERGY SYSTEMS AND THEIR MINIMIZATION TECHNIQUES**, (coord. prof. univ.dr.ing. Felea Ioan, conf. univ. dr. ing. Dzitac Simona), University of Oradea
- E6.** drd. ing. Lolea Marius, drd.ing. Ias Gheorghe, **INCERTITUDES AND APPROXIMATIONS IN THE APPRECIATION OF EXPOSURE EFFECTS IN ELECTROMAGNETIC FIELD**,(coord. prof. univ.dr.ing. Felea Ioan, conf. univ. dr. ing. Dzitac Simona), University of Oradea
- E7.** Ing. PetruHudacov, Cornel Mot, Valentin Timis, **INTELLIGENT HOUSE CONTROL**, (coord. Prof.univ.dr.ing. Valentina Emilia Bălaș), Aurel Vlaicu University of Arad
- E8.** Vesa Bogdan Raul, Mot Andrei, **ECO HOUSE OF THE FUTURE**, (coord. Prof.univ.dr.ing. Valentina Emilia Bălaș), Aurel Vlaicu University of Arad

**E9.** Rus Roland Eduard, Laza Dana Anamaria, **SCADA SYSTEM FOR RENEWABLE ENERGIES**, (coord. Prof.univ.dr.ing. Valentina Emilia Bălaș), Aurel Vlaicu University of Arad

### **Section: Informatics**

**Evaluation Commission: President: S.l.dr.ing. Corina Mnerie**

**Member: Dr. psychologist Dana Balas Timar**

**Secretary: Drd.Ing. Noemi Clara Rohatinovici**

- I1.** Emanuiel Bunceanu, On Alin, Birău Laura, **ETHICAL HACKING: SECURITY FOR FUTURE**, (coord. S.l.dr.ing. Cornelia Victoria Anghel Drugărin), Eftimie Murgu University from Resita
- I2.** Dr. psiholog Dana Balas Timar, master an I ASI, **INTERVIEW SCORING AND DECISION MAKING WITH FUZZY LOGIC - TECHNIQUE FOR SCORING COMPETENCY BASED BEHAVIOURAL INTERVIEWS: A FUZZY APPROACH**, (coord. Prof. dr. ing. Valentina Emilia Balas), Aurel Vlaicu University of Arad
- I3.** Drd.ing. Rohatinovici Noemi, PhD student, 1<sup>st</sup> year, **THE EVALUATION OF COMPLEX NETWORKS**, (coord. Prof. dr. ing. Valentina Emilia Balas), Politehnica University Timisoara, Aurel Vlaicu University of Arad
- I4.** Munteanu Liviu, Munteanu Emma, Dzițac Domnica-Ioana, **THE ART OF GENERATING CODE**, (coord. Prof. univ.dr. Dzițac Ioan), "Aurel Vlaicu" University of Arad, Seek&Partners SpA, Struer Stats gymnasium – Denmark
- I5.** Toser Alexandru, **IMAGE DETECTION ALGORITHM**, (coord. S.l.dr.ing. Corina Mnerie), Aurel Vlaicu University of Arad
- I6.** Talpes Raul, **REAL TIME INFORMATION PROCESSING AND IDENTIFICATION**, (coord. Prof.univ.dr.ing. Marius M. Balas), Aurel Vlaicu University of Arad

### **Section: Automatic Control, Computers, Electronics**

**Evaluation Commission: President: Prof.univ.dr.ing. Marius M. Balas**

**Member: S.l.dr.ing. Ioan Koles**

**Secretary: S.l.dr.ing. Cornel Barna**

- A1.** Todor Cornel, **AUTOMATED CLOSING / OPENING SYSTEM CONTROLLED BY THE 32U4 ATMEGA MICROCONTROLLER**, (coord. S.l.dr.Ing. Raluca Rob), Politehnica University Timisoara, Faculty of Engineering Hunedoara
- A2.** Ilie Octavian, **AMBILIGHT PROJECT WITH ARDUINO**, (coord. Conf.univ.dr.ing. Gelu Ovidiu Tirian), Politehnica University Timisoara, Faculty of Engineering Hunedoara
- A3.** Sergiu Daniel ZAHARIA, **REALIZAREA UNEI INSTALAȚII DE DETECTARE A GAZULUI METAN DINTR-O ÎNCĂPERE**, (coord. Conf.dr.ing. Gabriel Nicolae Popa, Conf.

dr. ing. Tirian Gelu–Ovidiu), Politehnica University Timisoara, Faculty of Engineering Hunedoara

- A4. Moale Bogdan, an IV AIA, **MODELING THE MOTION OF A ROBOT. THE DIFFERENTIAL DRIVE MODEL**, (coord. S.I. dr. ing. Mnerie Corina), Aurel Vlaicu University of Arad
- A5. Stanciu Mihai Vlăduț, an III AIA, **SOLUȚIE ȘI VEHICUL PENTRU EXPLORAREA LOCURILOR CU OBIECTE PERICULOASE**, (coord. Ș.L.Dr.Ing. IoanEmeric KÖLES), Aurel Vlaicu University of Arad
- A6. Haidu Anda Silvia, Muresan Luana, an III AIA, **VEHICLE DYNAMICS MODELING IN SIMULINK**. (coord. Prof.univ.dr.ing. Marius M. Balas), Aurel Vlaicu University of Arad
- A7. Trif Cristian-Gheorghe, an IV AIA, **ARDUINO ROBOT CONTROL VIA BLUETOOTH, USING VOICE COMMAND**, (coord. Prof.univ.dr.ing. Marius M. Balas, UniversitateaAurelVlaicu, Arad
- A8. Bacleseanu Adrian, master ASI an I, Vesa Bogdan, an III AIA, **SENZOR DE PROXIMITATE CU ULTRASUNETE – SISTEM DE SEMNALIZARE A DISTANȚEI**, (coord. Prof.univ.dr.ing. Valentina E. Balas), Aurel Vlaicu University of Arad
- A9. Lucuta Daniel Traian, Sipa Alexandru, an II AIA, **BRAT ROBOTIC**, (coordonator: Prof.univ.dr.ing. Valentina E. Balas), Aurel Vlaicu University of Arad
- A10. Jurj Vlad-Andrei, Roxana Săcălean, an II AIA, **ELECTRICAL MODEL STUDY OF A MECHANICAL SUSPENSION AND SIMULATING ITS FUNCTIONALITY**, (Coord. Prof.univ.dr.ing. Valentina E. Balas), Aurel Vlaicu University of Arad
- A11. Nadaban Radu, **MICROSTEPPING FOR STEPPER MOTOR. MATLAB SIMULATION**, (coord. S.I. dr. ing. Mnerie Corina), Aurel Vlaicu University of Arad
- A12. Mihai Vladut Stanciu, an III AIA, **SOLUTIE SI VEHICUL PENTRU EXPLOATAREA LOCURILOR PERICULOASE**, (coord. S.I.dr.ing. Ioan Koles), Aurel Vlaicu University of Arad
- A13. Andrei Mot, Vesa Bogdan, an III AIA, **SIMULATOR CNC CU MICROCONTROLLER ARDUINO R3**, (coord. S.I.dr.ing. Ioan Koles), Aurel Vlaicu University of Arad
- A14. Madalin-Dorin Pop, master an II, **SIMULAREA SISTEMELOR INTELIGENTE DE TRAFIC RUTIER UTILIZÂND ANYLOGIC**, (coord. Prof.univ.dr.ing. Octavian Prostean), Politehnica University Timisoara.

## Section: Mechanics

**Evaluation Commission: President: Prof.univ.dr.ing. Doina Mortoiu**

**Member: S.I.dr.ing. Aurelia Tanasoiu**

**Secretary: S.I.dr.ing. Stela Muncut**

- M1.** Dimb Alexandru Lucian, **APPLICATIONS OF THE OPTICAL COHERENCE TOMOGRAPHY IN THE MEASUREMENT OF SURFACE ROUGHNESS** (coord. Prof. dr. ing. Duma Virgil, Conf.univ.dr.ing. Gheorghe Hutiu), Aurel Vlaicu University of Arad
- M2.** Costea Daniel, **RECONDITIONING AN ARO M-461 TO CERTIFY IT AS HISTORICAL VEHICLE**, (coord. Sl.dr.ing. Aurelia Tănăsioiu, Sl.dr.ing. Stela Muncuț), Aurel Vlaicu University of Arad
- M3.** ing. IosifSpir, **TEHNOLOGII CONVENTIONALE VERSUS TEHNOLOGII MODERNE**, (coord. Prof.univ.dr.ing. Doina Mortoiu), Aurel Vlaicu University of Arad
- M4.** ing. Cosmin Farcas, **STUDIUL PRIVIND SCULE ASCHIETOARE UTILIZATE IN PROCESUL DE ELECTROEROZIUNE**, (coord. Prof.univ.dr.ing. Doina Mortoiu), Aurel Vlaicu University of Arad
- M5.** ec. Daniel Vaduva, **SISTEMUL DE MANAGEMENT AL CALITATII SI PROCESELE SALE**, (coord. Prof.univ.dr. ing. Doina Mortoiu), Aurel Vlaicu University of Arad
- M6.** Boros Vlad, Diaconovici Romica, **METODE DE OBTINERE A REPERELOR DIN POLIETILENA** (coord. Prof.univ.dr.ing.Doina Mortoiu, S.l.dr.ing.Aurelia Tanasoiu), Aurel Vlaicu University of Arad
- M7.** Turcu Daniel Cristian, Vlasin Crina, **PROBLEMS APPEARED IN WIG WELDING** (cood. Conf.univ.dr.ing. Valentin Muller, S.l.dr.ing. Stela Muncut), Aurel Vlaicu University of Arad
- M8.** Sergiu Bodarlau, Vinicius Mila, **PROCESUL DE FABRICARE A CADRULUI DE BOGHIU**, (coord. S.l.dr.ing. Aurelia Tanasoiu, S.l.dr.ing. Stela Muncut), Aurel Vlaicu University of Arad
- M9.** Giurgiu Marina, **TEHNOLOGIA DE FABRICATIE IN FLUX**, (coord. Prof.dr.ing. Radu Ioan, S.l.dr.ing. Gal Lucian), Aurel Vlaicu University of Arad
- M10.** Paul Vărșendan, Ana Maria Matei, **MASINI UNELTE CU COMANDA NUMERICA SI PRELUCRARILE MECANICE SPECIFICE**, (coord. Prof.dr.ing. Doina Mortoiu, S.l.dr.ing. Aurelia Tanasoiu), Aurel Vlaicu University of Arad
- M11.** Boboi Cristian, Stancu Adrian, an III TCM, **MANAGEMENTUL PERFORMANT DE PRELUCRARE A BOLTURILOR**, (coord. Prof.dr.ing. Doina Mortoiu, S.l.dr.ing. Gal Lucian), Aurel Vlaicu University of Arad

## Section: Skype I

Evaluation Commission: President: Prof.univ.dr.ing. Valeriu Beiu

**Member: Prof.univ.dr.ing. Valentina E. Balas**

- SS1.** Alireza Barzegar, Ali Sadollah, Seshadhri Srinivasan, Leila Rajabpour, Su Rong, **SOLVING OPTIMAL POWER FLOW PROBLEM USING WATER CYCLE ALGORITHM**, Singapore
- SS2.** Mekhla Sharma, Ankur Gupta, Jaiteg Singh, **INTERCLOUD RESOURCE DISCOVERY AND FUTURE PERSPECTIVES**, Model Institute of Engineering and Technology, Jammu, Chitkara Unviersity, Chandigarh, India
- SS3.** Mohit Mittal, Marwa Sharawi, Robin Singh Bhadoria, **NETWORK LIFETIME ANALYSIS OF HIERARCHICAL SENSOR PROTOCOL BASED ON NEURAL NETWORK & FUZZY CLUSTERING TECHNIQUES USING CRAWDAD TEMPORAL DATA**, India
- SS4.** Purnendu Prahbat, Ankur Gupta, **SDN FOR TRAFFIC ENGINEERING IN IOT**, India
- SS5.** Muhammad Javaid Afzal, Shahzadi Tayyaba, Muhammad Waseem Ashraf, Fazal-e-Aleemand Nitin Afzulpurkar, **FLUIDIC SIMULATION OF J SHAPED CHANNEL**, Pakistan

## **Section: Skype II**

**Evaluation Commission: President: Prof.univ.dr.ing. Valeriu Beiu**

**Member: Prof.univ.dr.ing. Valentina E. Balas**

- S1.** Suruchi Sinha, V.K. Panchal, **ROUGH-SETS FOR SOLVING MIXED PIXEL PROBLEM IN SATELLITE IMAGING**, CIRG India
- S2.** Imen Trabelsi, **EMOTIONAL HUMAN-COMPUTER INTERACTION**, (coord. Prof. Mohamed Salim Bouhlel), Unité de Recherche SETIT ISBS Sfax, Institut Supérieur de Biotechnologie de Sfax, Tunisia
- S3.** Nessrine Elloumi, Habiba Loukil, Hadj Kacem, **A COMPARATIVE STUDY OF THE 3D QUALITY METRICS: APPLICATION TO MASKING DATABASE**, (coord. Prof. Mohamed Salim Bouhlel), ISITCOM, Hammam Sousse, University of Sousse, Tunisia, Research Unit: Sciences and Technologies of Image and Telecommunications, Higher Institute of Biotechnology, University of Sfax, Sfax – Tunisia
- S4.** Mourad Rahali, Habiba Loukil, **IMPROVEMENT OF THE STANDARD JPEG 2000 USING DYNAMIC QUANTIZATION AND HUMAN VISUAL SYSTEM (HVS)**, (coord. Prof. Mohamed Salim Bouhlel), University of Sfax, Tunisia
- S5.** Bilel Daoud, Leila Farhat, Hedi AMRI, Wafa Mnejja, Ali Khalfallah, Ken'ichi Morooka, Jamel Daoud, **DETECTION OF CAVUM CANCER FROM CT IMAGES BY USING K-MEANS**

**ALGORITHM**, (coord. Prof. Mohamed Salim Bouhlel), University of Sfax, Tunisia, University Hospital of Sfax,–TUNISIA, Image Information and robotics, Kyushu University, Fukuoka-JAPAN

- S6. Imen Jdey, **INTERACTIVE DATA MINING TECHNIQUES FOR AUTOMATIC RADAR TARGET RECOGNITION SYSTEM**, (coord. Prof. Mohamed Salim Bouhlel), University of Sfax, Tunisia
- S7. Arijant Jain, Arpan Chattaraj, Anchal Tibrewal, **MONARCH BUTTERFLY ALGORITHM FOR IMAGE SEGMENTATION**, (coord. Nelanja Dey), Techno India College of Technology, Kolkata, India
- S8. Boran Robert, **ARTIFICIAL PANCREAS MATLAB GUI SIMULATOR**, (coord. Tsung-Chih Lin), Taiwan
- S9. Erfan Babae Tirkolae, Ali Asghar Rahmani Hosseinabadi, **A TWO ECHELON MULTI-COMMODITY LOCATION-ROUTING PROBLEM WITH HARD TIME WINDOWS: A CASE STUDY IN IRAN PETROLEUM INDUSTRY**, (coord. Javad Vahidi), University of Iran
- S10. Mihail Matenco, **PRELUCRAREA ȘI VIZUALIZAREA IMAGINILOR ÎN STANDARDUL “DICOM”**, (coord. Prof. Gheorghe Capatana), Republica Moldova

## **Section: Papers of students from High Schools**

**Evaluation Commission: President: S.I.dr.ing. Roxana Beiu**

**Members: dr.ing. Marius Buzera  
Prof. Clara Rohatinovici  
Prof. Lavinia Milos  
Prof. Florina Pasculescu  
Prof. Carmen Rus**

**Secretary: Prof. Maria Muresan**

**SE1.** Mona Alexandru Sebastian, Șofrone Ciprian Marian, **TRADUCTOR DE TURATIE OPTIC**, (coord. Prof. Clara Rohatinovici), Liceul Tehnologic de Electronica si Automatizari “Caius Iacob” Arad

**SE2.** GOVÂJDEAN RĂZVAN ANDREI, **MASINUTA CU TELECOMANDA**, (coord. Prof. Clara Rohatinovici, Prof. Maria Muresan), Liceul Tehnologic de Electronica si Automatizari “Caius Iacob” Arad

**SE3.** Sipica Nicolaie Ioan, **MOTOPLANOR**, (coord. Prof. Clara Rohatinovici), Liceul Tehnologic de Electronica si Automatizari “Caius Iacob” Arad

- SE4.** Stoica Alexandru Valentin, Grozav Razvan, **FANTANA ARTEZIANA SOLARA**, (coord. Prof. Lucica Deac, Prof. Lavinia Milos, Prof. Maria Muresan), Liceul Tehnologic de Electronica si Automatizari “Caius Iacob” Arad
- SE5.** Simon Ramiro cls. XII B, Ciorba Rica cls.XIA, **SENSOR CAR**, (coord. Prof. Maria Petcut, Prof. Maria Muresan), Liceul Tehnologic de Electronica și Automatizări “Caius Iacob” Arad
- SE6.** Eduard Ohriniuc, Denisa Timat, **RENEWABLE ENERGY**, Coordonatori Prof. Florina Pasculescu, Prof. Carmen Rus, Liceul National de Informatica Arad
- SE7.** Niță Andrei Aurelian, Bușe Andrei Eduard, **ONLINE PLATFORM JOBS 4 STUDENTS**, (coord. Prof.dr.ing. Marius Buzera), Colegiul Tehnic General Gheorghe Magheru, Târgu Jiu
- SE8.** Bușe Alin, **MODERN METHODS BASED ICT USED IN ENGLISH LANGUAGE LEARNING**, (coord. Prof.dr.ing. Marius Buzera), Colegiul Tehnic General Gheorghe Magheru, Târgu Jiu