

**The 22th Edition of the International Students Scientific
Communications Session of the Engineering Faculty of
Aurel Vlaicu University from Arad**

June 27 2020, ARAD, ROMANIA

Meeting room: <https://aurelvlaicuuniversityofarad.my.webex.com/meet/balas>

Section: Energetics, Automatic Control, Computers, Electronics

Evaluation Commission: President: Prof. Marius M. Balas

Members: Prof. Valeriu Beiu

Prof. Valentina E. Balas

Assoc. Prof. Simona Dziţac

Assoc. Prof. Angela Egri

Assoc. Prof. Gelu-Ovidiu Tirian

Lecturer Cornelia Victoria Anghel-Drugarin

Secretary: Lecturer Mnerie Corina

10:00 - 10:10

Prof. Valentina E. Balas, Aurel Vlaicu University of Arad, Romania – WELCOME

Rector Prof. Ramona Lile, Aurel Vlaicu University of Arad, Romania - WELCOME

10:10 - 10:30

Prof. Valeriu Beiu, Aurel Vlaicu University of Arad, Romania

„Rise of the AI Chips”

10:30 – 10:40

**Prof. Soumya Banerjee, Senior Collaborative Researcher & Professor, INRIA-EVA, Paris and
CNAM-Paris, France**

Chief Technical Consultant (AI& ML) Start –Up Book, Paris.

Director, Innovation, Workz, Arcklow-Irish Govt. Research,

CONNECT Program

Research Consultant Netflix, Youtube

“Must Virtual Exhibition tour with JoJo”

10:40 – 10:50

Associate Professor Angela Egri, University of Petrosani, Romania

“Voice Assistant in the Intelligent Room”

10:50 – 11:00

Associate Professor Gelu-Ovidiu Tirian, Politechnica University of Timisoara, Romania
Faculty of Engineering, Hunedoara
“Advanced Research in Engineering at Faculty of Engineering Hunedoara”

11:00 – 11:15

1. *The Problem of Renewable Sources and Prosumers on the Energy Market. Case Study*

Szfura Claudiu

University of Oradea, Faculty of Energy Engineering, and Industrial Management,
Centre of Scientific and Innovation Creation of Oradea Energy Engineering Students &
Association Cluster of Scientific Research, Innovation and European Studies from Oradea

Scientific coordinator: Assoc. Prof. Dziţac Simona

11:15 – 11:30

2. *Efficiency of Using Alternative Energy Solutions. Case study*

Vadoş Alexandru

University of Oradea, Faculty of Energy Engineering and Industrial Management,
Centre of Scientific and Innovation Creation of Oradea Energy Engineering Students &
Association Cluster of Scientific Research, Innovation and European Studies from Oradea

Scientific coordinator: Assoc. Prof. Dziţac Simona

11:30 – 11:45

3. *Operation Diagrams of a Gas Turbine Installation. Case Study*

Beschiu Valentin

University of Oradea, Faculty of Energy Engineering and Industrial Management,
Centre of Scientific and Innovation Creation of Oradea Energy Engineering Students &
Association Cluster of Scientific Research, Innovation and European Studies from Oradea

Scientific coordinator: Assoc. Prof. Dziţac Simona

11:45 – 12:00

4. *Case Study Regarding the Power Supply of an Isolated Consumer*

Recean Codruţ, Dume Antonia

University of Oradea, Faculty of Energy Engineering and Industrial Management,
Centre of Scientific and Innovation Creation of Oradea Energy Engineering Students &
Association Cluster of Scientific Research, Innovation and European Studies from Oradea

Scientific coordinator: Assoc. Prof. Dziţac Simona

12:00 – 12:15

5. *Elements of Mathematical Statistics Applied in Energy Engineering. Case Study*

Mustea Rareş

University of Oradea, Faculty of Energy Engineering and Industrial Management

Scientific coordinator: Assoc. Prof. Dziţac Simona

12:15 – 12:30

6. *Integration of the automation pyramid in the Industry 4.0 concept*

Luciana -Cristina Mărginean

Politechnica University of Timisoara, Faculty of Engineering Hunedoara

Scientific coordinator: Assoc. Prof. Gelu-Ovidiu Tirian

12:30 – 12:45

7. Automatic pet food

Cristina Anamaria SERBAN

Politechnica University of Timisoara, Faculty of Engineering Hunedoara

Scientific coordinator: Assoc. Prof. Gelu-Ovidiu Tirian

12:45 – 13:00

7. Autonomous Irrigation System

Daniel Durbacă, Daniel Haneş, Eduard Bumbu

Aurel Vlaicu University of Arad

Scientific coordinator: Prof. Valentina Emilia Balas

13:00 – 13:15

8. Self-Balancing Robot with Ardiono

Bucur Radu, Pavoni Shari, Lungu Daniel, Neamţ Timotei, An II AIA

Aurel Vlaicu University of Arad

Scientific coordinator: Prof. Marius Mircea Balas

13:15 – 13:30

9. Automatic bottle opener

Kurunczi Cristian, Tamas Marius, Zsambok Zoltan, An III AIA

Aurel Vlaicu University of Arad

Scientific coordinator: Prof. Balas Valentina Emilia and Prof. Balas Marius Mircea

13:30 – 13:45

10. 3D Printer

Sandu Ghinga, Nechiforel Samuel, Raducu Norbert and Sandu Ghinga, an III AIA

Aurel Vlaicu University of Arad

Scientific coordinator: Prof. Balas Valentina Emilia

13:45 – 14:00

11. Dynamic Modeling of biological and chemical systems with Petri nets

Csillag Attila, An III AIA

Aurel Vlaicu University of Arad

Scientific coordinator: Prof. Valentina Emilia Balas

14:00 – 14:20

Acad. Florin Gheorghe Filip, Academia Romana

“The Birth of The Romanian I&CT Sector; A Tribute to Acad. Mihai Drăgănescu”

14:20 – 14:40

**Prof. Dumitru Băleanu, Department of Mathematics, Cankaya University, Ankara, Turkey and
Institute of Space Sciences, Magurele-Bucharest, Romania**

“The Beauty of the Fractional Calculus: Theory and Applications”

14:40 – 14:50

Associate Professor Vijender Kumar Solanki, Associate Professor at CRM Institute of

Technology, Hyderabad, India
“Recent Advances on Big Data Analysis”

14:50 – 15:00

Associate Professor Simona Dzitac, University of Oradea, Romania
“Computational intelligence methods for power engineering”

15:00 - 15:10

Lecturer Cornelia Victoria Anghel-Drugarin, Eftimie Murgu University of Resita, Romania
“Some aspects of Research Activities at Eftimie Murgu University of Resita”

15:10 – 15:20

Prof. Cincar Kristijan, SC Nikola Tesla, Vrsac, Serbia and PhD Student at West University of Timisoara, Romania

Presentation of the online learning platform Petlja.org, Serbia

15:20 – 15:30

12. Software for a Banking Machine

Stoianov Ana, Computers, An II
University of Petrosani

Scientific coordinator: Assoc. Prof. Egri Angela

15:30 – 15:45

13. Autonomus Car

Berindei Andreea-Anamaria, Buzgau Claudia-Lea, An III AIA
Aurel Vlaicu University of Arad, Romania

Scientific coordinators: Prof. Valentina E. Balas and Prof. Marius M. Balas

15:45 – 16:00

14. Plotter with two Coordinates with Arduino

Deian Ardeljan, An III Industrial Informatics and Pomian Amalia An I Industrial Informatics,
Faculty of Engineering, Eftimie Murgu University of Resita, Romania

Scientific coordinator: Lecturer Cornelia-Victoria Anghel Drugărin

16:00 – 16:15

15. Creating Image with GAN (Generative Adversarial Network)

Sampurna Mandal

School of Engineering and Applied Sciences, The Neotia University, India

Scientific coordinator: Dr. Ankush Ghosh

16:15 – 16:30

16. MANN And SVM based Fault Forecasting of Power Transformer using DGA data

Ahmad Hasan, B. Tech student

School of Electrical, Electronics and Communication Engineering, Galgotias University, India

Scientific coordinator: Assistant Professor Saravanan D

16:30 – 16:45

18. Conveyor belt sorting parts by color

Cătălin - Adrian Alexa, Radu – Daniel Țăranu, Ioan Rusu
Aurel Vlaicu University of Arad, Romania

Scientific coordinators: Lecturer Micșa Adriana-Elena and Lecturer Dragu Daniel

16:45 – 17:00

19. *Humidity measurement device new approach*

Dusan Mucibabic

SC Nikola Tesla, Vrsac, Serbia

Scientific coordinator: Prof.Nenad Cvetkovic and Prof.Kristijan Cincar

17:00 – 17:15

20. *Reliability Coefficients*

Ph.D.Student. Rohatinovici Noemi-Clara

Politehnica University of Timisoara

Scientific coordinators: Prof. Proștean Octavian and Prof. Balas Valentina Emilia

Section: Papers of students from High Schools

Paralel Session

Evaluation Commission:

President: Prof. dr.ing. Valentina Emilia Balas

Members: Rohatinovici Clara-Ecaterina

Deac Florin

Petcut Maria

Deac Lucica

Bors Monica

Pacurariu Anca

Muresan Maria

Chirilas Corina

Dusan Mucibabic

Kristijan Cincar

Lascoi Alexandru

Secretary: drd. ing. Mihaela Popa

drd.ing Noemi-Clara Rohatinovici

Nr.crt.	Titlu Lucrare	Date profesori si elevi
1.	Masurarea timpului	Profesori coordonatori: Deac Florian Elevi: Barbu Albert Clasa: a XI-a A - Liceul Tehnologic de Electronica si Automatizari "Caius Iacob" Arad
2.	Sursa de tensiune continua reglabila	Profesori coordonatori: Deac Florian Elevi: Barbu Albert Clasa: a XI-a A - Liceul Tehnologic de Electronica si Automatizari "Caius Iacob" Arad
3.	Aparat electrogravura pe metal	Profesori coordonatori: Deac Florian Elevi: Cociuban Darius Clasa: a XI-a A - Liceul Tehnologic de Electronica si Automatizari "Caius Iacob" Arad
4.	Amulete electronice	Profesori coordonatori: Bors Monica, Petcut Maria Elevi: Vrabuuta Andrei, Ciobanu Vlad Clasa: a XII-a B - Liceul Tehnologic de Electronica si Automatizari "Caius Iacob" Arad
5.	Joc de noroc electronic	Profesori coordonatori: Petcut Maria Elevi: Boroica Vasile, Ciobanu Vlad Clasa: a XII-a A, a XII-a B - Liceul Tehnologic de Electronica si Automatizari "Caius Iacob" Arad
6.	Solar Factory	Profesori coordonatori: Pacurariu Anca Elevi: Kiraly Erik, Szabo Darius, Sipos Emanuel Clasa: a X-a F, a X-a F, a X-a A - Liceul Tehnologic de Electronica si Automatizari "Caius Iacob" Arad

7.	Sistem de semnalizare acustica electronic	Profesori coordonatori: Petcut Maria Elevi: Tonta Adrian Clasa: a XI-a B - Liceul Tehnologic de Electronica si Automatizari "Caius Iacob" Arad
8	Macara	Profesori coordonatori: Lascoi Alexandru Elevi: Ciordari Ovidiu Gheorghe Clasa: a X-a F - Liceul Tehnologic de Electronica si Automatizari "Caius Iacob" Arad
9.	Sistem de pompare cu circuit inchis	Profesori coordonatori: Lascoi Alexandru, Craivan Vasile Elevi: Grozav Noemi Rebeca Clasa: a X-a F- Liceul Tehnologic de Electronica si Automatizari "Caius Iacob" Arad
10.	Masinuta cu propulsie	Profesori coordonatori: Rohatinovici Clara Elevi: Stepan Catalin Clasa: a X-a C - Liceul Tehnologic de Electronica si Automatizari "Caius Iacob" Arad
11.	Aplicatiile legii lui Faraday	Profesori coordonatori: Rohatinovici Clara, Muresan Maria Elevi: Burcusel Daniel Clasa: a X-a C - Liceul Tehnologic de Electronica si Automatizari "Caius Iacob" Arad
12.	Aplicatii ale electronicii pentru amuzament	Profesori coordonatori: Rohatinovici Clara, Muresan Maria Elevi: Celmare Valentin Clasa: a XI-a B - Liceul Tehnologic de Electronica si Automatizari "Caius Iacob" Arad
13.	Casa verde	Profesori coordonatori: Rohatinovici Clara Elevi: Ciupe Maria Mădălina Clasa: a XI-a B - Liceul Tehnologic de Electronica si Automatizari "Caius Iacob" Arad
14	Proiectarea si constructia unei case independente energetice	Profesori coordonatori: Rohatinovici Clara, Ienasescu Eugenia Elevi: Kiss Alexandra, Copil Marius, Ban Lorant Clasa: a XI-a C, a XI-a C, a XI-a C - Liceul Tehnologic de Electronica si Automatizari "Caius Iacob" Arad
15	Aplicatii ale fenomenului Joule	Profesori coordonatori: Rohatinovici Clara, Deac Lucica Elevi: Stan Denis Clasa: a XI-a B - Liceul Tehnologic de Electronica si Automatizari "Caius Iacob" Arad
16	Ventilator cu pedala	Profesori coordonatori: Rohatinovici Clara, Chirilas Corina Elevi: Stan Denis Clasa: a XI-a B - Liceul Tehnologic de Electronica si Automatizari "Caius Iacob" Arad
17	Dispozitiv de detectare a luminii	Profesori coordonatori: Rohatinovici Clara Elevi: Cojocariu Gabriel Stelian Clasa: a X-a C - Liceul Tehnologic de Electronica si Automatizari "Caius Iacob" Arad

Section: Mechanical Engineering

(To be announced)