



Final Conference Programme

Friday, September 18th, 2020

15:30–16:30 Registration, connection link: <https://meet.google.com/xck-jyxr-gpb>

16:30–18:00 Roundtable discussion (on Serbian and English):

45 years of university education of technics/engineering teachers in Čačak

Education of technics and technology teachers – challenges and limitations: university-teacher cooperation

Speaker and moderator: Nataša Cvijović

Nebojša Mitrović, conference co-chairman, Ana Radović Firat, Dragana Bjekić

Participants: founders of FTS, former students, school teachers, university teachers, conference participants

Technical secretaries: Vojislav Vujičić, Lidija Paunović

Saturday, September 19th, 2020

9:00–10:00 Registration, connection link: <https://meet.google.com/yvz-egxt-bfw>

Technical secretaries of the conference plenary session

10:00–10:30 Opening ceremony / Welcome messages

Speaker and moderator: Nataša Cvijović

Nebojša Mitrović, conference co-chairman

Živadin Micić, conference co-chairman

Danijela Milošević, Dean of the Faculty of Technical Sciences Čačak, University of Kragujevac

Technical secretaries: Marko Šućurović, Mihajlo Tatović, Vojislav Vujičić



Saturday 10:30–12:30

Plenary lectures

link: <https://meet.google.com/yvz-eqxt-bfw>

Keynote speaker: **Prof. Tatijana Dlabač, University of Montenegro,
Faculty of Maritime Studies, Kotor, Montenegro**

Using Moodle Platform in Evaluating the Electrical Engineering Practices

Co-author: prof. Alenka Milovanović, University of Kragujevac, Faculty of Technical Sciences Čačak, Serbia

Keynote speaker: **Prof. Vladan Pantović, Faculty of Information Technology and Engineering, Belgrade,**

Chairman at IEEE Education Society Chapter Serbia and Montenegro, Belgrade, Serbia

The Role of International Standards in Education

Co-author: Prof. Dragorad Milovanović, Sports Academy AFB, Belgrade, Serbia

Keynote speaker: **Prof. Ljubica Kazi, University of Novi Sad,
Technical faculty "Mihajlo Pupin", Zrenjanin, Serbia**

Program Translators Higher Education and Application of PP Simulator Educational Tool

Co-authors: prof. Dragica Radosav, University of Novi Sad, Technical Faculty "Mihajlo Pupin" Zrenjanin

Prof. Ivana Berković, University of Novi Sad, Technical Faculty "Mihajlo Pupin" Zrenjanin

Prof. Narendra Chotaliya, Saurashtra University, Rajkot, Surendranagar, India

Prof. Madhusudan Bhatt, University of Mumbai, K.C. College, India (retired)

Technical secretaries: Marko Šučurović, Mihajlo Tatović, Vojislav Vujičić

12:30–13:00 Break

13:00–18:00 **Parallel Sessions: oral presentations** (next pages)



8th International Scientific Conference Technics and Informatics in Education

Faculty of Technical Sciences, Čačak, Serbia, 18-20 September 2020

TIE2020



Saturday 13:00–18:00

Parallel Sessions: oral presentations

13:00–14:30	Information Technology Education and Practice Sub-session 1 https://meet.google.com/txn-pskt-qcu	Simpozijum Tehničko i informatičko obrazovanje: nastavnici za nastavnike https://meet.google.com/dvz-aycw-qac	Engineering Education and Practice Sub-session 1 https://meet.google.com/geq-ynqo-bwi
14:45–16:15	ITEP Sub-session 2 https://meet.google.com/txn-pskt-qcu	Teacher professional Development and General Education Topics Sub-session 1: Higher Education and Lifelong Learning https://meet.google.com/avq-pwim-ntn	EEP Sub-session 2 https://meet.google.com/geq-ynqo-bwi
16:30–18:00	ITEP Sub-session 3 https://meet.google.com/txn-pskt-qcu	Teacher Professional Development and General Education Topics Sub-session 2: Learning language for specific purposes https://meet.google.com/avq-pwim-ntn	EEP Sub-session 3 https://meet.google.com/geq-ynqo-bwi

Some papers in the sessions will be presented on Serbian.



Saturday 13:00–14:30

13:00–14:30 Information Technology Education and Practice – Sub-session 1

Moderators: Marija Blagojević and Olga Ristić Technical secretary: Katarina Mitrović
link: <https://meet.google.com/txn-pskt-gcu>

- ITEP 1.1. Multilingual Conversational Communication Tools for Distance Learning
Dimos Charidimou, Dionysios Politis and Veljko Aleksić
- ITEP 1.2. A Rubric-Based Evaluation of Video Conferencing Services for Educational Use
Dimitrios Margounakis, Theodore Pachidis and Dionysios Politis
- ITEP 1.3. Broadcasting Education – National & Transnational: A Heuristic Evaluation
Anastasios Nikiforos, Rafail Tzimas, Dionysios Politis and Nektarios-Kyriakos Paris
- ITEP 1.4. Machine learning applications in education
Ivana Čavor, Tatijana Dlabač, Martin Čalasan and Branko Koprivica
- ITEP 1.5. Expert System as a Mean in Detecting Tax Evasion
Dalibor Bogdanović and Elmir Babović
- ITEP 1.6. Game-Based Learning of Software Testing
Stefan Šošić, Olga Ristić and Marjan Milošević
- ITEP 1.7. Maritime Single Window and possibility of improving port for business
Ana Radulović

13:00–14:30 Simpozijum: Nastavnici za nastavnike (Simposium: School teachers for teachers)

Moderator: Miloš Papić Technical secretary: Nebojša Stanković
link: <https://meet.google.com/dvz-aycw-gac>

- Simp. 1.1. Samovrednovanje oblasti „Nastava i učenje” u nastavi izbornih programa
Katarina Dunjić Mandić i Ivan Ružičić
- Simp. 1.2. Upotreba IKT alata u nastavi na daljinu
Jelena Teofilović i Vera Isailović
- Simp. 1.3. Upis učenika u srednje škole za vreme pandemije COVID-19
Miloratka Simeunović
- Simp. 1.4. Onlajn nastava u mlađim razredima osnovne škole
Vesna Milojević, Žanka Selaković, Katarina Radosavljević i Zorica Vukajlović
- Simp. 1.5. Digitalne igre kao način učenja programiranja
Vesna Bujić



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13:00–14:30

Engineering Education and Practice – Sub-session 1

Moderators: Uroš Pešović and Marko Popović

Technical secretary: Djordje Damnjanović

link: <https://meet.google.com/qeq-ynqo-bwi>

- EEP 1.1. Educational Trends in Computing – Blockchain concept
Dejan Vujičić and Siniša Randić
- EEP 1.2. Analysing of software tools for designing and simulating of digital circuits
Nataša Nikolić and Vanja Luković
- EEP 1.3. Information Technology skills level of Students at Electrical Faculty in East Sarajevo
Srdjan Nogo, Elmir Babović and Dragan Manjak
- EEP1.4. Use of Merlin system and recorded instructions in Engine Room Simulator training
Karlo Bratić, Frane Vidović and Ladislav Stazić
- EEP 1.5. Implementation of GNU Octave in a University Course of General Physics
Vera P. Pavlović and Jelena T. Ilić
- EEP 1.6. Educational setup for power cable loading and temperature measurement
Marko Šučurović and Momčilo Vujičić

Saturday 14:45–16:15

14:45–16:15

Information Technology Education and Practice – Sub-session 2

Moderators: Olga Ristić and Marija Blagojević

Technical secretary: Katarina Mitrović

link: <https://meet.google.com/txn-pskt-gcu>

- ITEP 2.1. Data Analysis and Artificial Neural Network Modelling of COVID-19 Patients
Dijana Stojić, Dejan Vujičić, Đorđe Damnjanović and Željko Jovanović
- ITEP 2.2. Analysis of term “Web” using opinion mining techniques
Jelena Plašić, Andrijana Jovičić and Marija Blagojević
- ITEP 2.3. Adaptivity of Web Applications – Case of Preschool Web Portal for Interinstitutional Data Integration and Analysis
Ljubica Kazi, Dijana Karuović, Dragica Radosav, Tatjana Lojović, Aleksandra Kalezić Vignjević and Olga Lakićević
- ITEP 2.4. Operating Systems course modeling through 12 aspects and ISO/IEC standardization
Milica Tufegdžić and Živadina Micić
- ITEP 2.5. Development and evaluation of CATAPEX tutorial for the Database practice course
Katarina Karić, Maja Radović and Katarina Mitrović
- ITEP 2.6. On-line programming course model for students in IT
Milorad Murić and Žarko Bogićević
- ITEP 2.7. Alternative software solutions for ensuring the continuity of the teaching process in emergency situations
Predrag Stolić and Danijela Milošević
- ITEP 2.8. Building the Payroll Information System for High Education Institutions using UML
Stefan Pitulić, Siniša Ilić and Julijana Lekić



14:45–16:15

Teacher Professional Development and General Education Topics
Sub-session 1: Specificities of HE and lifelong learning

Moderators: Vesna Ružičić and Ana Radović Firat Technical secretary: Vladan Paunović
link: <https://meet.google.com/avq-pwim-ntn>

- TPDGE 1.1. Empowering Teachers' Digital Competence Through the Implementation of the "Digital Classroom" Project
Daniela Minić Aleksić and Ivan Savić
- TPDGE 1.2. Logistics education in universities in 21st century: new trends and challenges
Riste Temjanovski and Monika Arsova
- TPDGE 1.3. A chance for engineers – technology entrepreneurship
Milena Damnjanović
- TPDGE 1.4. An impact of the application of the Lean concept to improving Industrial Engineering Education
Vladan Paunović, Jasmina Vesić Vasović and Sanja Puzović
- TPDGE 1.5. Reliable and Automated Recognition of HE qualifications and more - a new IT approach
Tatjana Atanasova Pachemska and Riste Timovski
- TPDGE 1.6. Lifelong Learning in Pandemic Situation – Challenge and Need
Gordana Rendulić Davidović

14:45–16:15

Engineering Education and Practice – Sub-session 2

Moderators: Uroš Pešović and Marko Popović Technical secretary: Djordje Damnjanović
link: <https://meet.google.com/qeq-ynqo-bwi>

- EEP 2.1. System for Automatic License Plate Recognition in Digital Image
Ana Lazović, Mihailo Bjekić and Aleksandra Marjanović
- EEP 2.2. Induction machine control algorithm implementation with MSK28335 digital platform
Aleksandar Radusin, Marko Rosić and Branko Koprivica
- EEP 2.3. Laboratory DC machine test bench with Siemens DCM drive
Vasilije Ojdanić, Marko Rosić and Miroslav Bjekić
- EEP 2.4. Cyber Security of Multi-vector Energy System with Demonstration of Tap Changer Position Estimation
Muchu Qiu, Dragan Četenović and Vladimir Terzija
- EEP 2.5. Simulation and analysis of multi-vector energy systems and relevant ICT networks
Zelong Liao, Dragan Četenović and Vladimir Terzija
- EEP 2.6. Activation Time Dependent Magnetization of the Fe/BaTiO₃ System with Varying Constituent Mass Ratios
Aleksandra Kalezić-Glišović, Nemanja Stojanović, Aco Janićević and Aleksa Maričić
- EEP 2.7. The application of microalloyed alumo-silicate ceramics, as a multifunctional agent for distilled water passivation and H₂O₂ aqueous solution decomposition
Jelena Purenović, Marjan Ranđelović, Milovan Purenović and Michele Guida



Saturday 16:30–18:00

16:30–18:00 Information Technology Education and Practice – Sub-session 3

Moderators: Marija Blagojević and Olga Ristić Technical secretary: Katarina Mitrović

link: <https://meet.google.com/txn-pskt-qcu>

- ITEP 3.1. The role of PLM academic platforms in education of the „engineers of the future”
Sanja Puzović, Jasmina Vesić Vasović and Vladan Paunović
- ITEP 3.2. The effects of using the Moodle platform in High Technical School of Vocational Studies from Urosevac in Leposavić
Nenad Marković, Dejan Živković and Filip Marković
- ITEP 3.3. Application of new software tools in online teaching
Nebojša Stanković and Vesna Ružičić
- ITEP 3.4. Smartphone application for evaluation of jumping rope exercise in physical education
Uroš Pešović, Milentije Luković, Slađana Đurašević and Marina Jevremović
- ITEP 3.5. A Methodological Approach to Computer Support of SWOT Analysis in Strategic Orientation
Neda Nikolić, Zoran Nešić, Miodrag Zečević and Aleksandar Dragašević
- ITEP 3.6. Qualitative Analysis of Problem-Solving Process in the Field of Programming in Primary Education
Biljana Đorić and Dragan Lambić
- ITEP 3.7. EUTEKA Corner and Online Learning
Vladimir Radovanović, Bojana Marinčić and Biljana Davidovski
- ITEP 3.8. The secondary school student’s interest in virtual reality
Đorđe Đurković and Veljko Aleksić

16:30–18:00 Teacher Professional Development and General Education Topics

Sub-session 2: Teaching languages for specific purposes

Moderators: Ana Radović Firat and Vesna Ružičić Technical secretary: Vladan Paunović

Link: <https://meet.google.com/avq-pwim-ntn>

- TPDGE 2.1. The Use of Anglicisms in Speaking and Writing Among IT Students
Miloš Papić, Biljana Đorić and Marija Blagojević
- TPDGE 2.2. Foreign Language Learning (FLL) as Influenced by Social Media platforms: Facebook, Twitter, and YouTube
Lidija Palurović, Lena Tica and Ana Radović Firat
- TPDGE 2.3. Some Corpus Linguistics Tools for Adequate Reading Comprehension of Instruction Books for Electro Technical Officers
Zorica Đurović and Nikola Mavručić
- TPDGE 2.4. Application of textual analysis in the context of vocabulary teaching for the marine electrotechnics students
Milena Dževerdanović Pejović
- TPDGE 2.5. Developing Summary Writing Skills in ESP
Ana Radović Firat, Lena Tica, Lidija Palurović and Mladen Radulović
- TPDGE 2.6. The challenges for teachers: augmented reality as educational technology for teaching students with dyslexia
Dragana Bjekić, Svetlana Obradović and Milevica Bojović



16:30–18:00	Engineering Education and Practice – Sub-session 3	
	Moderators: Marko Popović and Uroš Pešović	Technical secretary: Djordje Damnjanović
	link: https://meet.google.com/qeq-ynqo-bwi	
EEP 3.1.	Evaluation of Energy Performance of School Building Snežana Dragičević, Brankica Šutić and Milan Marjanović	
EEP 3.2.	Programming of an Industrial Robot and Optimization of its Path Using the PSO Algorithm Zvonko Petrović, Vladeta Jevremović and Slobodan Aleksandrov	
EEP 3.3.	Design and Simulation of Electro-Pneumatic Motion Control System Vojislav Vujičić, Snežana Dragičević, Dragana Ocočoljić, Ivan Milićević and Marko Popović	
EEP 3.4.	Training and Development of Mechatronics and Micro- and Nanosystems Technology in Technical University of Gabrovo Bulgaria Stefan Kartunov	
EEP 3.5.	Simulations of temperatures in the cutting zone and cutting forces Jelena Baralić, Nedeljko Dučić and Aleksandra Stakić	
EEP 3.6.	Load Analysis for the Design of Cutting Teeth for Bucket Chain Excavators Marko Popović, Ivan Milićević, Goran Marković, Milan Marjanović and Vojislav Vujičić	

Technical secretaries

EEP1, EEP2, EEP3

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Roundtable (Friday)

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ITEP1, ITEP2, ITEP3

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Plenary session (Saturday)

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Simpozijum

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Roundtable (Sunday)

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TPDGE1, TPDGE2

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Sunday, September 20th, 2020

- 9:30–10:00 registration, connection link: <https://meet.google.com/ojn-ywfb-ubm>
- 10:00– 11:15 Round table and open discussion: 'Higher Education Development (HED) in the realm of technics and technology'. Results of HED projects 2017–2020, programme activities supported by the Ministry of Education, Science and Technological Development of the Republic of Serbia
- Moderators: Jelena Purenović and Aleksandra Kalezić Glišović
- Participants: project-managers of the HED projects, conference participants, students, guests.
- Technical secretaries: Mihajlo Tatović, Marko Šućurović.
- 11:15 – 11:30 Break
- 11:30 – 14:00 **Final activities** link: <https://meet.google.com/ojn-ywfb-ubm>
- Reports of chairpersons on sessions activities
- Promotion of the best Conference papers
- Presentation of *Proceedings TIE2020* and *Book of Abstracts TIE2020*
- Closing remarks
- Conference closing
- Moderator: Nebojša Mitrović, conference co-chairman, vice-dean for science and international cooperation, Ivan Milićević, editor of the conference publications
- Participants: session moderators and chairpersons, authors of the papers, conference participants.
- Technical secretaries: Lidija Paunović, Mihajlo Tatović, Marko Šućurović, Vojislav Vujičić