



# **International conference on High Technology for Sustainable Development**

## **HiTECH 2023**

## **PROGRAMME**

**12-13 October 2023  
Sofia**



# **International conference on High Technology for Sustainable Development HiTECH 2023**

**Organized by:**

**Federation of the Scientific and Technical Unions in Bulgaria**

**(FSTU)**

**IEEE Bulgarian Section**

**The Union of Electronics, Electrical Engineering and**

**Communications (CEEC)**



**Technical University of Sofia (TU-Sofia)**

**Knowledge Society Institute**

**University of Technology of Troyes**

**University of Lome -CERME**

# International conference on High Technology for Sustainable Development HiTECH 2023

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# General Programme

Day	Hour	Event
<b>Wednesday 11 October</b>	<i>16.00 – 18.00</i>	<b>Online Registration of participants</b>
<b>Thursday 12 October</b>	<i>08.00 – 10.00</i>	<b>Registration of participants - MS Teams –</b> <a href="https://teams.microsoft.com/l/team/19%3a1f7Hh8yADJFw_vpyvDehDDKBYGAFjc7AvHcvi9XD_LQ1%40thread.tacv2/conversations?groupId=96767844-6b4c-4ce4-a32a-d1f0b36e3a5f&amp;tenantId=7feeb5c0-34f4-4a4b-8cc0-e59f06920156">https://teams.microsoft.com/l/team/19%3a1f7Hh8yADJFw_vpyvDehDDKBYGAFjc7AvHcvi9XD_LQ1%40thread.tacv2/conversations?groupId=96767844-6b4c-4ce4-a32a-d1f0b36e3a5f&amp;tenantId=7feeb5c0-34f4-4a4b-8cc0-e59f06920156</a>
	<i>11.00 – 11.15</i>	<b>Opening Session FNTS</b>
	<i>11.15 – 12.30</i>	<b>Invited Papers FNTS</b>
	<i>12.30– 14.30</i>	<b>Session 1 FNTS</b>
	<i>14.30 – 15.00</i>	<b>COFE BREAK</b>
	<i>15.00 – 18.00</i>	<b>Session 2 FNTS</b>
<b>Friday 13 October</b>	<i>09.00 – 11.00</i>	<b>Session 3</b>
	<i>11.00 – 11.30</i>	<b>COFE BREAK</b>
	<i>13.30 – 13.00</i>	<b>Session 4</b>
	<i>13.00</i>	<b>Debate and Closing Session</b>
	<i>14.30-19.00</i>	<b>SCOCIAL AND CULTURAL EVENTS</b>

## **Opening Session**

**Tuesday 12 October, 11.00 - 11.15**

**11.00 - Opening Session**

## **Invited Papers**

**Tuesday 12 October, 11.15 – 12.30**

### **1. METHODOLOGY FOR STRATEGIC PLANNING OF THE NATIONAL ENERGY INDUSTRY**

Dimo Stoilov

### **2. IMPLEMENTATION OF EUROPEAN STANDARDS FOR THE BENEFIT OF ENGINEERING TRAINING IN TOGO AND SENEGAL**

Kiril Anguelov, Adekunlé Akim Salami

### **3. OPTIMAL ELECTRIFICATION PLANNING AT SHORT AND LONG TERM-STUDY CASE OF TOGO**

Kabe Moyème, Bokovi Yao, Kwami Senam Sedzro, Lare Yendoubé

### **4. CONCEPT FOR PRE – ALARMING SYSTEM OF MULTIPLE TYPES OF NATURAL HAZARDS**

Zoran Zlatev, Mirjana Kocaleva Vitanova, Nikolay Hinov

## **Session 1**

**Tuesday 12 October, 12.30 - 14.30**

***Chairpersons: Nikolay HINOV, Dimo STOILOV***

### **1. MODEL FOR STRUCTURE OPTIMIZATION OF THE ENERGY SYSTEM BALANCE IN BULGARIA**

Konstantin-Kiril Savov, Dimo Stoilov, Kristina Hadzhiyska

### **2. REVIEW OF METHODS FOR DETECTING CYBERATTACKS IN SMART GRID SCADA SYSTEMS.**

Eyouléki Tchéyi Gnadi Palanga, Abasse Kpegouni, Debola Mikemina, Adekunlé Akim SALAMI

### **3. NEURAL NETWORK, LSTM, ARIMA AND MONTE CARLO APPROACHES FOR PREDICTIVE MAINTENANCE IN POWER DISTRIBUTION: A CASE STUDY**

Koffi Teenhin WOROU, Kodjovi Fo Remi Djoumato, Adekunlé Akim Salami

### **4. ISSUES WITH FLICKER DETECTION AND ELIMINATION FOR POWER DISTRIBUTION NETWORKS IN BULGARIA**

Velichko Atanasov, Dimo Stoilov

### **5. OPTIMAL ELECTRIFICATION PLANNING AT SHORT AND LONG TERM-STUDY CASE OF TOGO**

Kabe Moyème, Bokovi Yao, Kwami Senam Sedzro, Lare Yendoubé

**6. INTEGRATING ICT INTO ELECTRO-ENERGY SYSTEMS: WHAT NETWORK TOPOLOGY FOR RELIABLE INTERDEPENDENCE WITH THE POWER GRID IN THE CONTEXT OF SMART GRIDS?**

Mohamed BARATE, Eypuleki Tchhei Gnadi PALANGA, Moctor Sidi BOHARI MAIDAWAKI, Akoda Senah AJAVON

**7. PYTHON-BASED MODELING AND SIMULATION OF TRANSFORMERLESS DC/DC CONVERTERS**

Stoyan Popov and Nikolay Hinov

**8. A PLATFORM FOR THE DEVELOPMENT OF SOFTWARE APPLICATIONS FOR THE CONTROL OF POWER ELECTRONIC DEVICES**

Kiril Genev, Gergana Vacheva and Nikolay Hinov

**9. THE INTERNET OF ENERGY AND POWER ELECTRONICS - NEW OPPORTUNITIES FOR A GREEN TRANSITION**

Nikolay Hinov

**10. COSIMULATION: WHAT APPROACH FOR POWER GRIDS AND ICT NETWORKS**

Mohamed BARATE, Eypuleki Tchhei Gnadi PALANGA, Mokpokpo Yao

**11. DATASET AND ELECTRIC LOAD FORECASTING AT RESIDENTIAL LEVEL: CASE OF THE CITY OF LOMÉ**

Yéloiti N'poh Babikou, Adekunlé Akim Salami, Koffi Mawugno Kodjo

**12. THE IMPACT OF URBAN POPULATION ON ELECTRICITY CONSUMPTION: CASE STUDY OF THE GRAND LOME REGION**

Ayaovi Agbétoméfa KPETO Eyouléki Tchéyi Gnadi Palanga Koffi Mawugno KODJO

**Session 2**

**Tuesday 12 October, 15.00 – 18.00**

***Chairpersons: Adekunlé Akim SALAMI, Kiril ANGUELOV***

**1. CREATING A WEB-BASED PLATFORM FOR PROGRAMMING HUMANOID ROBOTS**

Ventsislav Nachev, Daniela Gotseva

**2. EXTENDED REALITY AND EXTENDED CONTROL FOR SURGERIES**

Roumiana Ilieva, Antoni Angelov

**3. UNIVARIATE & MULTIVARIATE FORECASTING OF TIME SERIES THROUGH A CONTEMPORARY MANNER**

Kiril Koparanov, Daniela Minkovska, Elena Antonova

**4. TECHNICAL CHALLENGES OF CYBERSECURITY IN E-COMMERCE**

Roumiana Ilieva, Gloria Landsberg-Stoilova

**5. DETERMINING THE QUALITIES OF TESTS DESIGNED FOR STUDENTS' KNOWLEDGE ASSESSMENT**

Daniela Minkovska, Elena Antonova, Kiril Koparanov, Krasin Georgiev, Pamela Minkovska

**6. RISK AND SECURITY ANALYSIS IN INDUSTRY 4.0. IOT ATTACKS AND PREVENTION**

Ivan Stankov

**7. RESEARCH METHODOLOGY FOR EVALUATING THE IMPACT OF LOGISTICS ACTIVITIES OUTSOURCING ON LOGISTICS SERVICE PERFORMANCE IN THE BULGARIAN CONTEXT**

Ivan Dimitrov, Andrey Runchev

**8. CRITERIA FOR EVALUATION OF 3 PLS' PERFORMANCE FOR OUTSOURCING DECISION-MAKING OF BULGARIAN SMES**

Emanuila Antonova, Andrey Runchev, Ivan Dimitrov

**9. A RESEARCH METHODOLOGY FOR INVESTIGATING THE IMPACT OF RECRUITMENT PRACTICES ON ORGANIZATIONAL OUTCOMES IN THE BULGARIAN ICT SECTOR**

Yoana Krumova, Ivan Dimitrov, Adile Dimitrova

**10. A RESEARCH METHODOLOGY FOR INVESTIGATING THE RELATIONSHIP BETWEEN RECRUITMENT STRATEGIES AND EMPLOYEE PERFORMANCE IN THE BULGARIAN ICT SECTOR**

Yoana Krumova, Ivan Dimitrov, Adile Dimitrova

**11. ANALYSIS OF THE BIOGAS POTENTIAL IN BULGARIA - POSSIBILITIES AND DEVELOPMENT**

Ivelina Hinova, Silvia Baeva

**12. METHODOLOGICAL APPROACH FOR IMPACT AND PREVENTION OF CYBERBULLYING IN COMPANIES FOR TELECOMMUNICATION SERVICES**

Ivajlo Stoyanov

**13. TECHNICAL AND MANAGERIAL PREREQUISITES FOR INCREASE EFFECTIVENESS OF COMMUNICATION OF SALES PROMOTION WITH ADVANCED INFORMATION TECHNOLOGIES**

Alexander Fichter

**14. CIRCULAR ECONOMY IN BULGARIAN MUNICIPALITIES - THE WAY FORWARD**

Sylvia Goranova

**Session 3**

**Friday 13 October, 09.00 – 11.00**

***Chairpersons: Ivan DIMITROV, Kiril ANGUELOV***

**1. RESEARCH METHODOLOGY FOR EVALUATING THE IMPACT OF GAMES IN CORPORATE E-EDUCATION**

Miglena Angelova

**2. METODOLOGY FOR DIGITAL TRAINING OF STUDENTS TO WORK IN A HOSTING COMPANY**

Kiril Anguelov, Evelyn Ivanova,

**3. DIGITIZED TRAINING ON AUTOMOTIVE SOFTWARE TESTING**

Kiril Anguelov, Silvia Pencheva,

**4. A HEURISTIC MODEL FOR SMART MANAGEMENT**

Iliyan Bakalov

**5. THE ROLE AND IMPORTANCE OF BUSINESS INFORMATION SYSTEMS IN RETAIL COMPANIES**

Kiril Petrov

**6. MAIN CHALLENGES IN THE INFORMATION SYSTEMS OF HOSPITALS**

Kiril Petrov

**7. BPMN MODELLING BUSINESS PROCESSES IN A HOSPITAL**

Kiril Petrov

**8. HIGH-TECH RESOURCES FOR SUSTAINABLE DEVELOPMENT OF NATIONAL SECURITY**

Vladislav Lazarov

**Session 4**

**Friday 13 October, 11.30 – 13.00**

***Chairpersons: Dimo STOILOV, Kiril ANGUELOV***

**1. MODERN E-TRAINING OF CORPORATE SOCIAL RESPONSIBILITY WITH ELECTRONIC GAMES**

Filip Stoyanov

**2. CHALLENGES TO ENSURING INFORMATION SECURITY AND THE ROLE OF ARTIFICIAL INTELLIGENCE**

Alexander Zhekov

**3. MODELS FOR EFFECTIVE COOPERATION OF VIRTUAL TEAMS IN IT COMPANIES IN BULGARIA**

Ivo Hristov

**4. MODELS FOR THE DEVELOPMENT OF THE LOGISTICS NETWORK IN THE REPUBLIC OF BULGARIA**

Kremena Tranakieva

**5. MODELS FOR EFFECTIVE MANAGEMENT OF INNOVATION PROCESSES IN THE CONDITIONS OF IT COMPANIES**

Marin Simeonov

**6. METHODOLOGY FOR DETERMINING THE OPTIMAL PROJECT PORTFOLIO OF A BULGARIAN HIGH-TECH ENTERPRISE**

Kiril Evtimov

**7. E-MANAGEMENT OF INNOVATION PORTFOLIOS**

Nikolay Todorov

**DEBATE and Closure of HITECH 2023**

**Friday 13 October, 14.30 – 19.00  
SOCIAL AND CULTURAL EVENTS**





## INFORMATION

HiTECH 2023 is technically Co-Sponsored by IEEE.

The presented papers will be submitted for inclusion in the IEEE Xplore on-line digital library.

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