



## IEEE ICCST2022: 55TH IEEE INTERNATIONAL CARNAHAN CONFERENCE ON SECURITY TECHNOLOGY

Hosted by Tomas Bata University in Zlín, Czech Republic .

### PROGRAMME

September 6<sup>th</sup> Tuesday, 18:00 welcome drink and snacks for participants and accompanying persons

**Days: September 7<sup>th</sup> Wednesday, September 8<sup>th</sup> Thursday, September 9<sup>th</sup> Friday,**

#### **09:30 - 16:00 Day 1**

Introduction: Gordon Thomas, Chair, Exec. Com; Martin Hromada, Chair, ICCST 2022: 09:30 - 09:40

Keynote Speech: Introduced by Martin Hromada: 09:40 – 10:10

**Martin Bajer, strategy director, TCC MARCONI s.r.o., Converged security - practical applications**

Topic 1: Security Technologies, Cybersecurity,

Chair: Assoc. Prof. Martin Hromada, PhD.

#### **10:20**

Yuri Beshpalov, Lyudmila Kovalchuk, Hanna Nelasa, Roman Oliynykov and Alberto Garoffolo

*Game Theory Analysis of Incentive Distribution for Prompt Deneration of the Proof Tree in zk-SNARK Based Sidechains*

#### **10:40**

Hemin Muhammad and Martin Hromada

Proposing an E-Government Stage Model in Terms of Personal Information Security in Developing Countries

#### **11:00 – 11:20 Coffee break**



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**11:20**

Wiktor Sedkowski and Karol Bierczyński

*Perceived severity of vulnerability in cybersecurity: cross linguistic variegation*

**11:40**

Mimi Enakome Oka and Martin Hromada

*Analysis of Current Preventive Approaches in the Context of Cybersecurity*

**12:00**

David Kohout and Petr Mlynek

*Testing Smart Meters with Custom Application*

### **12:20 – 13:20 Lunchtime**

Topic 1 continued: Security Technologies, Cybersecurity.

Chair: Dr. Milan Navrátil

**13:20**

Eva Holasova and Radek Fujdiak

*Deep Neural Networks for Industrial Protocol Recognition and Cipher Suite Used*

**13:40**

Fabio Garzia, Roberto Cusani and Andrea Chiarella

*A New Hybrid Steganographic Technique for Images*

**14:00**

Carrie Gardner and William Claycomb

*Applying Text Analytics to Insider Risk Analysis: A Case Study on Keyword Generation*

**14:20**

Petr Ilgner and Radek Fujdiak

*Fuzzing ICS Protocols: Modbus Fuzzer Framework*



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### **14:40 – 15:00 Coffee break**

Topic 1 continued: Security Technologies, Cyber Security

Chair: William Claycomb

### **15:00**

Kaspar Kaufmann, Thomas Wyssenbach and Adrian Schwaninger

*Exploring the Effects of Segmentation When Learning with Virtual Reality and 2D Displays: a Study With Airport Security Officers*

### **15:20**

Ashhadul Islam and Samir Brahim Belhaouari

*Analysing Keystroke Dynamics Using Wavelet Transforms*

### **15:40**

Michael Rhead, Soodamani Ramalingam, William Martin and Rob Gurney

*The Effect of Number Plate Layout and Design on Automated Recognition*

### **16:00 Day 1 End.**

**18:00 Banquet. Venue: Hotel Valec**



## IEEE ICST2022: 55TH IEEE INTERNATIONAL CARNAHAN CONFERENCE ON SECURITY TECHNOLOGY

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### **09:30 - 16:00 Day 2**

Topic 2: Security Management, Infrastructure systems protection

Introduction: G Thomas, Chair, Exec. Com; Martin Hromada, Chair 09:30 - 09:40

Keynote Speech: Introduced by Gordon Thomas: 09:40 – 10:10

### **Martin Hromada, Tomas Bata University in Zlín, Critical Infrastructure Protection and Resilience applications**

Chair: Dr Gordon Thomas

#### **10:20**

Lucie Flynnova, Frantisek Paulus and Jarmil Valasek

*Threats and Resilience: Methodology in the Area of Railway Infrastructure*

#### **10:40**

Tomáš Loveček, Katarína Kampová, Jakub Ďurica and Katarína Petrlová

*Biometric Identity Verification as Part of Physical Protection Systems*

### **11:00 – 11:20 Coffee break**

#### **11:20**

David Rehak and Alena Splichalova

*Application of Composite Indicator in Evaluation of Resilience in Critical Infrastructure System*

#### **11:40**

Adam Malatinský and Martin Hromada

*Evaluation of the Most Important Fire Threats of the Building*

#### **12:00**

Katarína Kampová, Katarína Mäkká and Katarína Petrlová

*Economic Evaluation of Cost and Benefits of Implementing Monitoring and Tracking System of Persons in Medical Facilities*



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### **12:20 – 13:20 Lunchtime**

Topic 2 continued: Security Management, Infrastructure systems protection

Chair: Fabio Garzia

### **13:20**

Mike Rhead, Rob Gurney, William Martin and Dr Soodamani Ramalingam

*Electronic Number Plate Generation for Performance Evaluation*

### **13:40**

Lindemberg Naffah Ferreira, Rogério Zupo Braga, Bruno Meira Tenório D'Albuquerque, Bruno Eduardo Abreu de Oliveira, Carlos Augusto Lisboa da Silva, Guilherme Couto Soares, Alex Discacciati Neves, Pierre Julião Pimentel, Marcelo Maximiliano Maciel, Eufrásio Alves Cambuí Júnior, Carlos Renato Machado Confar, Aline Chevrand Campos, Osvaldo Lage Scavazza and Luiz Cláudio Fernandes Lourenço Gomes

*Tax Safe State Line: a Brazilian State Platform for Monitoring Roads, Designed to Support Tax Enforcement and Compliance*

### **14:00**

Andrej Velas, Zuzana Zvakova and Martin Boros

*Physical Protection and Guarding Service in the Company during the Pandemic – Human Resource Management*

### **14:20**

Gabriela Králíčková and Petra Dostálová

*Analysis of Insurance Conditions as a Tool to Ensure Physical Protection in the Czech Republic*

### **14:40 – 15:00 Coffee break**



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Topic 2 continued: Security Management, Infrastructure systems protection

Chair: Dr. Milan Navrátil

**15:00**

Fabio Garzia, Francesco Borghini, Mara Lombardi, Ekaterina Makshanova and Soodamani Ramalingam

*Emotional Analysis of Safeness and Risk Perception of Cybersecurity Attacks during the COVID-19 Pandemic*

**15:20**

Dora Kotková, Lukas Kotek and Martin Hromada

*Educational Platform for Personal and Community Protection Situations from the Perspective of Soft Targets – Self-defense part*

**15:40**

Michael Coole, Deborah Evans and David Brooks

*A Framework for the Analysis of Security Technology Vulnerabilities: Defeat Evaluation of an Electronic Access Control Locking System*

**16:00 Day 2 End.**



## IEEE ICST2022: 55TH IEEE INTERNATIONAL CARNAHAN CONFERENCE ON SECURITY TECHNOLOGY

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### **09:30 - 16:00 Day 3**

Topic 2 continued: Security Management, Infrastructure systems protection

Chair: Assoc. Prof. Martin Hromada, PhD.

09:30 – 11:40 Day 3

Introduction: G Thomas, Chair, Exec. Com; Martin Hromada, Chair ICCST 2022 09:30 - 09:40

Keynote Speech: Introduced by Soodamani Ramalingam: 09:40 – 10:10

**Gordon Thomas, History of the IEEE International Carnahan Conference on Security Technology**

**10:20**

Stanislav Kovář, Jan Valouch and Jan Němec

*Objective Method for Object Security Evaluation*

**10:40**

Lukáš Kotek, Martin Hromada and Dora Kotkova

*Online Interactive Education of People in the Field of Protection of Soft Targets*

**11:00**

*Final speech and location for 56<sup>th</sup> IEEE INTERNATIONAL CARNAHAN CONFERENCE ON SECURITY TECHNOLOGY introduction*

**11:20 – 11:40 End of the Conference**