

1st World Symposium on Digital Intelligence for Systems and Machines

ALMOST FINAL Programme



Organizers

TU Košice

IEEE Czech and Slovak Society

IEEE CS Computational Intelligence Society Chapter

Partners

Exclusive Golden Partner: Microsoft Czech and Slovak Republic

Diamond partner : IBM Slovakia

Diamond partner : Tatrabanka a.s. Bratislava, Slovakia

Wednesday (22.8.2018)

15:00 – 19:00

Registration (we encourage all DISA participants to arrive to Košice on August 22, 2018 & REGISTER on 22nd of August 2018)

Thursday (23.8.2018)

9:00

Conference Opening

9:20 – 10:20

I1: Invited lectures

chair: prof. Ján Paralič

1 Cindy L. Bethel

Therabot-An Adaptive Therapeutic Support Robot

2 Takahiro Yamanoi

Elucidation of Brain Activities by Electroencephalograms and its Application to Brain Computer Interface

10:50 – 12:00

Ceremonial Dr.h.c. for prof. Kaoru Hirota

12:00 – 13:30

Lunch

13:30 – 15:00

I2: Invited lecture

chair: prof. Peter Sinčák

1 Kaoru Hirota

Visualization and Measurement of Emotional Intelligence based on Fuzzy Inference

2. Napoleon Reyes

Autonomous Navigation in Partially Known
Confounding Maze-like Terrains Using D*Lite with
Poisoned Reverse

3 Yuan-Fu Liao

Some Experiences on Applying Deep Learning to Speech Signal and
Natural Language Processing

15:00 - 15:15

Coffee break

15:15 – 16.45

P1: Digital Intelligence for Systems and Machines

chair: assoc.prof. Marek Bundzel

1. Ján Magyar, Gergely Magyar, Peter Sinčák

A Cloud-based Voting System for Emotion Recognition in Human-Computer Interaction

2. Irina Makarova, Polina Buyvol, Ksenia Shubenkova,
Anton Pashkevich

Automotive enterprises flow production improvement based on
the management process intellectualization

3. Peter Šulaj, Renát Haluška, Ľuboš Ovseník, Stanislav
Marchevský, Petri Pulli, Vadim Kramar

UAV Management System for the Smart City

4. Dorota Belanova, Marián Mach, Peter Sinčák, Kaori
Yoshida

Path Planning on Robot Based on D* Lite Algorithm

5. David Vincze

Parallelization by vectorization in Fuzzy Rule Interpolation adapted to FRIQ-learning

6.	<i>Christopher Hudson, Chris Goodin, Matthew Doude, and Daniel W. Carruth</i>	Analysis of Dual LIDAR Placement for Off-Road Autonomy using MAVS
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16:45 - 17:00

Coffee break

17:00 - 18:30		P2: Intelligent Data Analysis	<i>chair: assoc.prof. Peter Butka</i>
1.	<i>Miroslav Blšták, Viera Rozinajová</i>	Building an Agent for Factual Question Generation Task	
2.	<i>Kristína Machová, Marián Mach</i>	Genetic Programming in the Authority of a Web Discussion Identification	
3.	<i>Michal Hucko, Peter Gaspar, Matus Pikuliak, Vasileios Triglianios, Cesare Pautasso, Maria Bielikova</i>	Short Texts Analysis for Teacher Assistance during Live Interactive Classroom Presentations	
4.	<i>Laszlo Kovacs, Erika B Varga, Laszlo Rostas</i>	Ontology Extraction from Compound Sentences in Hungarian Language	
5.	<i>Michal Kvet, Karol Matiaško</i>	Analysis of temporal data management in the intelligent transport system	
6.	<i>Samuel Pecár, Marián Šimko, Mária Bieliková</i>	Sentiment Analysis of Customer Reviews for Slovak: Impact of Text Pre-processing	

19:30

Dinner in the downtown

Friday (24.8.2018)

8:30 – 10:00		I3: Invited lectures	<i>chair: prof. Kristína Machová</i>
1.	<i>Andreas Holzinger</i>	From Machine Learning to Explainable AI	
2.	<i>XingFu Wang</i>	MINI-FLOW: A Heuristic Routing Mechanism for Software Defined Wireless Sensor Network	
3.	<i>Daniel W. Carruth</i>	Simulation for Training and Testing Intelligent Systems	

10:00 - 10:30

Coffee break

10:30 – 12:00		I4: Invited lectures	<i>chair: prof. Mária Bieliková</i>
1.	<i>Pitoyo Hartono</i>	Topographical Internal Representation in Deep Neural Networks	
2.	<i>Takashi Minato</i>	Development of an autonomous android that can naturally talk with people	
3.	<i>Petri Pulli</i>	Improving presentation skill through gamified application - Gamification in practice	

12:00 - 13:00

Lunch

13.00 – 14.15		2 special sessions running in parallel	
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13.00 – 14.15	S1: Speech, language and linguistic issues for Human Computer Interactions	<i>chair: prof. Jozef Juhár</i>
1. <i>Sakhia Darjaa, Róbert Sabo, Marián Trnka, Milan Rusko, Gabriela Múcsková</i>	Automatic Recognition of Slovak Regional Dialects	
2. <i>Christopher R. Hudson, Cindy L. Bethel, Daniel W. Carruth, Matus Pleva, Stanislav Ondas, Jozef Juhar</i>	Implementation of a Speech Enabled Virtual Reality Training Tool for Human-Robot Interaction	
3. <i>Ondrej Such, Santiago Barreda, Martin Klimo, Peter Tarabek, Andrea Tinajova</i>	Comparing frame posteriors via isolated vowel classification	
4. <i>Asmaa Salem, Abdulwahed Almarimi, Gabriela Andrejkova</i>	Text Dissimilarities Predictions using Convolutional Neural	
5. <i>Róbert Sabo, Jakub Rajčáni, Marian Ritomský</i>	Designing database of speech under stress using a simulation in virtual reality	
13.00 – 14.15	S2: Intelligent Socio-Cyber-Physical Systems and Internet of Things in Interconnected World	<i>chair: assoc.prof. Ján Vaščák</i>
1. <i>Reza Hamzeh, Ray Zhong, Xun W. Xu, Erik Kajáti, Iveta Zolotova</i>	A technology selection framework for manufacturing companies in the context of Industry 4.0	
2. <i>Subhas Chakraborty, Avinandan Bandyopadhyay, Ramesh Yechangunja</i>	A Two Stage Data Compression and Decompression Technique for Point Cloud Data	
3. <i>Ján Vaščák, Igor Savko</i>	Radio Beacons in Indoor Navigation	
4. <i>Daniel Lorenčík, Iveta Zolotová</i>	Object recognition in traffic monitoring systems	
5. <i>Peter Papcun, Erik Kajáti, Jiří Koziorek</i>	Human Machine Interface in Concept of Industry 4.0	
14:15 - 14:30	Coffee break	
14:30 – 16:00	2 industrial sessions running in parallel	
14:30 – 16:00	A1: Microsoft	
14:30 – 16:00	A2: IBM	
16:00 - 16:20	Coffee break	

16:20 – 17:30	Digital Intelligence for Systems and Machines	Poster session
1. <i>Martin Čertický, Martin Sarnovský, Tomáš Varga</i>	Use of Machine Learning Techniques in Real-time Strategy Games	
2. <i>Peter Bednar, Radoslav Delina</i>	Towards the Semantic platform for Digital Single Market	
3. <i>Stanislav Ondáš, Matúš Pleva, Radovan Krištan, Rastislav Husovský, Jozef Juhár</i>	VoMIS – the VoiceXML-based multimodal interactive system for NAO robot	
4. <i>Zuzana Pella, Peter Milkovič, Ján Paralič</i>	Application for Text Processing of Cardiology Medical Records	
5. <i>Jakub Hrabovský, Martin Kontšek, Pavel Segeč, Ondrej Šuch</i>	Influence of positive additive noise on classification performance of convolutional neural networks	
6. <i>Marianna Kocúrová</i>	An overview of BCI-based speech recognition methods	
7. <i>Peter Šulaj, Renát Haluška, Ľuboš Ovseník, Stanislav Marchevský, Aryan Firouzian, Vadim Kramar</i>	An Example of Li-Fi Technology Implementation for Home Automation	
8. <i>Nayden Chivarov, Denis Chikurtev, Matus Pleva, Stanislav Ondas</i>	Exploring Human Robot Interfaces for Cost-Oriented Mobile Robots	
9. <i>Miroslav Smatana, Peter Butka</i>	Formal Concept Analysis Reduction Method based on Modified Hamming Distance	
10. <i>Andrej Hucko, Peter Lacko</i>	Diacritics Restoration using Deep Neural Networks	
11. <i>Norbert Danisik, Peter Lacko, Michal Farkas</i>	Football Match Prediction using Players Attributes	
12. <i>Patrik Sabol, Peter Sinčák</i>	AI Bricks: A Microservices-based Software for a Usage in the Cloud Robotics	
13. <i>Péter Kiss, Dávid Fonyó, Tomáš Horváth</i>	BlaBoO: A Lightweight Black Box Optimizer Framework	
14. <i>Marin Čertický, Michal Čertický, Peter Sinčák</i>	Modeling User Experience in Electronic Entertainment using Psychophysiological Measurements	
15. <i>Michal Farkas, Peter Lacko</i>	Linguistic Regularities Between Words and Their Definitions	
16. <i>Eva Kíktova, Julius Zimmermann</i>	Detection of Anticipation Nucleus from Speech using HMM and Fuzzy based Approaches	
17. <i>Martin Klimo, Ondrej Škvarek, Peter Tarábek, Ondrej Šuch, Jakub Hrabovský</i>	Nearest Neighbor Classification in Minkowski Quasi-Metric Space	
18. <i>Norbert Ferencik, Miroslav Jascur, Marek Bundzel</i>	Computer assisted rehabilitation	

18.30

Banquet – closing ceremony