Program at a Glance

September 21 (Monday)	
Time	Session
8:45-9:00	Opening ceremony
9:00-9:45	Plenary lecture MoPL1 **Hybrid Health-Aware Supervisory Control Framework with a Prognostic Decision-Making** Prof. Jérôme Cieslak
9:50-11:10	Session MoS1 **Fault-tolerant control**
11:20-12:05	Plenary lecture MoPL2 **Industry 4.0: Challenges and opportunities for fault detection and diagnosis in avionic systems** Dr Philippe Goupil
12:10-14:10	Session MoS2 **Fault diagnosis I**

September 22 (Tuesday)	
Time	Session
9:00-9:45	Plenary lecture TuPL1 **Dynamic systems modelling using fractional order calculus** Prof. Andrzej Dzieliński
9:50-11:30	Session TuS1 **Fault diagnosis II**
11:40-13:40	Session TuS2 **Medical and technical applications**
13:45-14:00	Closing ceremony

Detailed programe

Conference opening ceremony, Mon. Sep. 21, 8:45-9:00	
Plenary lecture MoPL1 **Hybrid Health-Aware Supervisory Control Framework with a Prognostic Decision-Making** Prof. Jérôme Cieslak, University of Bordeaux, France Mon. Sep. 21, 9:00-9:45 chair: prof. Józef Korbicz	
Session MoS1 **Fault-tolerant control** Mon. Sep. 21, 9:50-11:10 chairs: prof. Marcin Witczak, prof. Dusan Krokavec	
9:50-10:10	Reconfiguration of nonlinear faulty systems via linear methods *Alexey Zhirabok, Evgeny Bobko and Artur Filatov*
10:10-10:30	Tri-valued evaluation of residuals as a method of addressing the problem of fault compensation effect *Jan Maciej Kościelny, Michał Bartyś and Zofia Łabęda-Grudziak*
10:30-10:50	Leader-following formation control for networked multi-agent systems under communication faults/failures *Juan Vazquez, Didier Theilliol, Manuel Adam Medina, Daniel Garcia and Marcin Witczak*
10:50-11:10	Robust actuator and sensor fault estimation: Application to a DC motor system *Norbert Kukurowski, Marcin Pazera and Marcin Witczak*
Plenary lecture MoPL2 **Industry 4.0: Challenges and opportunities for fault detection and diagnosis in avionic systems** Dr Philippe Goupil Mon. Sep. 21, 11:20-12:05 chair: prof. Krzysztof Patan	
Session MoS2 **Fault diagnosis I** Mon. Sep. 21, 12:10-14:10 chairs: prof. Didier Theillol, prof. Michał Syfert	
12:10-12:30	Descriptor principle in residual filter design for strictly Metzler linear systems

	Dusan Krokavec, Anna Filasova
12:30-12:50	Fault isolation based on multiple-valued evaluation of residuals and elementary symptoms sequence *Michał Syfert, Jan Maciej Kościelny*
12:50-13:10	Combining FFT and pattern-based approach to isolate irregular periodic disturbances in rolling mills *Pavel Ettler*
13:10-13:30	Diagnostics of rotary vane vacuum pumps using signal processing, analysis and clustering methods *Paweł Łój and Wojciech Cholewa*
13:30-13:50	Remaining useful life estimation of ball bearings system described by fuzzy logic *Bogdan Lipiec and Marcin Mrugalski*
13:50-14:10	Learning diagnostic decisions based on classifying whole image sequences *Ewaryst Rafajłowicz and Wojciech Rafajłowicz*
Plenary lecture TuPL1 **Dynamic systems modelling using fractional order calculus** Prof. Andrzej Dzieliński, Warsaw University of Technology, Poland Tue. Sep. 22, 9:00-9:45 chair: prof. Jérôme Cieslak	
Session TuS1 **Fault diagnosis II** Tue. Sep. 22, 9:50-11:30 chairs: prof. Ewaryst Rafajłowicz, dr Paweł Wnuk	
9:50-10:10	Hierarchical model for testing a distributed computer system *Alexander Gruzlikov and Nikolay Kolesov*
10:10-10:30	Regular approach to additive fault detection in discrete-time linear descriptor systems *Dusan Krokavec, Anna Filasova*
10:30-10:50	Diagnostic of calfs body temperature by using thermal imaging camera and correction of camera errors *Wojciech Rafajłowicz, Anna Rząsa and Paulina Jawor*

10:50-11:10	Detection of damage and errors in the microscope section collections *Ewa Skubalska-Rafajłowicz and Aneta Górniak*
11:10-11:30	Distributed system for mobile object monitoring and analysis with diagnostics elements *Paweł Wnuk, Michał Syfert, Bartłomiej Nowak and Bartosz Cabaj*
Session TuS2 **Medical and technical applications** Tue. Sep. 22, 11:40-13:40 chairs: prof. Michał Bartyś, prof. Marcin Mrugalski	
11:40-12:00	Application of deep learning to seizure classification *Krzysztof Patan and Grzegorz Rutkowski*
12:00-12:20	Patient managed patient health record based on blockchain technology *Konrad Zaworski and Marcin Szpyrka*
12:20-12:40	Convolution neural network in breast cancer microscopic images classification *Marcin Skobel, Marek Kowal and Józef Korbicz*
12:40-13:00	Intruder detection on mobile phones using keystroke dynamic and application usage patterns *Michał Szczepanik and Ireneusz Jóźwiak*
13:00-13:20	Neural modelling of steam turbine control stage *Jerzy Głuch and Marta Drosińska-Komor*
13:20-13:40	Hybrid profiling tree based on quantum methods in recommendation systems *Marek Wróblewski*
Conference closing ceremony, Tue. Sep. 22, 13:45-14:00	