

6. ISTE – the intelligent system for examination forms processing
Maciej Smiatacz, Witold Malina PL, s. 125-132

12.00-14.00 Modelling and identification

1. Stochastic change detection based on an active fault diagnosis approach
Niels Kjolstad Poulsen, Henrik Niemann ENG., s. 113-120
2. Trajectories detection in a distributed multi-sensor tracking system
Zdzisław Kowalczyk, Mariusz Domżański ENG, s. 95-104
3. Linear random projections for novelty detection in multidimensional data streams
Ewa Skubalska-Rafajłowicz ENG, s.137-144
4. Methods of the identification of models of slowly changing processes for technical diagnostics
Piotr Tomasik PL, s. 53-60
5. Methods of features selection in inverse model identification
Krzysztof Ciupke, Grzegorz Urbanek ENG, s. 145-152
6. Overview of problems in mathematics related analysis of capital markets
Andrzej Dyka, Janusz Petrykowski ENG, s. 363-373

12.00-14.00 Computational intelligence methods

1. Hybrid learning algorithm for locally recurrent neural networks
Piotr Przystalka ENG, s. 255-262
2. Change detection in chaotic time series based on RBF neural network
Mateusz Tykierko PL, s. 85-92
3. Robust fault detection with application of the multi-layer perceptron
Marcin Mrugalski PL, s. 77-84
4. The application of fuzzy systems for modelling static object characteristics with nonlinear description
Marcin Andrzejewski, Andrzej Pieczyński ENG, s. 247-254
5. System of safe ship steering at sea
Roman Śmierchalski ENG, s.355-362
6. Global optimisation-based estimation of model uncertainty for unknown input observers
Rafał Józefowicz, Marcin Witeczak, Andrzej Janczak ENG, s.129-136

15.00-15.45 Plenary session

- Fault oriented decomposition of symptom observation matrix with grey forecasting in vibration condition monitoring of machines
Czesław Cempel ENG, s. 51-66

16.00-17.00 Industrial applications I

1. Incipient fault tracking toolbox of the AMandD system
Paweł Rzepiejewski, Michał Syfert PL, s. 441-448
2. PExSim – the novel approach to process modelling for control, fault detection and isolation
Krzysztof Janiszowski, Paweł Wnuk PL, s. 449-456

3. Concept of a vision system for assessing welding process and joints
Marek Fidali, Anna Timofiejczuk, Anna Bzymek PL, s. 371-378

16.00-17.00 Industrial applications II

1. System of monitoring and leakage localization for local water supply networks
Ryszard Wyczółkowski PL, s. 307-314
2. Signals of weak interactions between objects in diagnosing of leakages from pipelines
Paweł Ostapowicz PL, s. 323-330
3. Application of neural network classifier for fault identification of water supply system
Bogdan Wysogład PL, s. 315-321

17.15-18.30 Occasional session – 15th anniversary of the Institute of Control and Computation Engineering

TUESDAY, 11 September 2007

9.00-9.45 Plenary session

Active fault-tolerant control systems: integration of fault diagnosis and reconfigurable control
Youmin Zhang ENG, s. 21-41

9.45-11.45 Fault-tolerant control

1. Sub-optimal fault-tolerant control with the use of discrete optimization
Zdzisław Kowalczyk, Krzysztof E. Olinski ENG, s.165-172
2. Active fault-tolerant control systems based on reconfigurable reference input
Didier Theilliol, Cédric Join, Youmin Zhang ENG, s. 153-164
3. Predictive controllers integrated with economic optimization tolerating actuator faults: application to a nonlinear plant
Piotr M. Marusak ENG, s. 173-185
4. PCA based fault-tolerant MPC
Krzysztof Mazur, Mieczysław Adam Brdyś ENG, s. 187-194
5. Reconfiguration algorithms of control surfaces actuators
Bogusław Dołęga, Paweł Rzuciło PL, s. 189-196
6. A fault-tolerant system for a cellulose production instalation
Piotr Wasiewicz, Marcin Leszczyński PL, s. 197-205

9.45-11.45 Diagnostics of technical processes I

1. PID loop diagnostics with gain correction
Leszek Trybus, Zbigniew Świder PL, s. 217-224
2. Application of the Virtual Power Plant for diagnostics of power generation machinery
Tomasz Barszcz, Tadeusz Uhl PL, s. 293-300

3. Infrared radiation measurements for combustion process diagnosing
Waldemar Wójcik, Sławomir Cieszczyk, Tomasz Golec, Paweł Komada, Andrzej Kotyra, Piotr Kisala PL, s. 271-276
4. System for diagnosing small DC motors with the use of the method of identification of electromechanical parameters
Wojciech Moczulski, Michał Hanzel PL, s. 251-262
5. Methodology of industrial grade software testing
Ireneusz J. Józwiak, Jakub Kozłowski PL, s. 411-416
6. Diagnosing the state of an object in a distributed control system
Wiesław Wajs, Marcin Skuba PL, s. 225-230

12.00-14.00

Analytical methods

1. Sensor placement and diagnosability
Abed Alrahim Yassine, Stéphane Ploix, Jean-Marie Flaus ENG, s. 87-94
2. Configuring a sensor network for fault detection in distributed parameter systems -Part I: Solution of a relaxed problem
Dariusz Uciński, Maciej Patan ENG, s. 67-76
3. Configuring a sensor network for fault detection in distributed parameter systems -Part II: Solution via branch-and-bound
Maciej Patan, Dariusz Uciński ENG, s. 77-86
4. Switching systems mode estimation using a model-based diagnosis method
Elom Ayih Domlan, José Ragot, Didier Maquin ENG, s.121-128
5. A general approach to increasing the convergence rate of an extended unknown observers
Przemysław Prętki, Marcin Witczak ENG, s. 105-112
6. Fault diagnosis in a water for injection system using enhanced structural isolation
Morten Laursen, Mogens Blanke, Dilek Dustegor ENG, s. 295-302

12.00-14.00

Diagnostics of technical processes II

1. A data analysis with kernel estimators for use in diagnosis of systems
Piotr Kulczycki PL, s. 231-238
2. The assist of diagnostic system design based on hierarchical description of the process components
Michał Syfert PL, s. 239-250
3. Diagnostics of distributed-parameter systems using mobile sensor networks
Michał Zajac, Dariusz Uciński, Andreas Paczyński PL, s. 37-44
4. Training kit for process diagnostics in the Department of Fundamentals of Machinery Design at Silesian University of Technology
Wojciech Moczulski, Marek Adamczyk, Marcin Puskarczyk PL, s. 277-284
5. Some issues on fault diagnosis for car powertrain
Jacek Korniak PL, s. 263-270
6. Application of Elman's recurrent neural network to driving style classification
Krzysztof Bartecki, Andrzej Augustynowicz PL, s. 417-424

15.00-15.45

Plenary session

Fault diagnosis & fault tolerant control of networked control systems

Dominique Sauter, Christophe Aubrun, Shanbin Li ENG, s. 1-19

16.00-18.00

Diagnostics systems

1. A new approach to multiple fault diagnosis. Combination of diagnostic matrices, graphs, algebraic and rule-based models. The case of two-layer models.
Antoni Ligęza, Jan Maciej Kościelny ENG, s. 219-230
2. Statement networks in expert systems for condition monitoring
Wojciech Cholewa ENG, s. 231-238
3. Expert knowledge formalization for aircraft turbine engine control systems diagnostics
Henryk Borowczyk, Paweł Lindstedt PL, s. 141-148
4. Double fault distinguishability in linear systems
Jan Maciej Kościelny, Zofia Łabęda PL, s. 45-52
5. Self diagnostic system and improved reliability systems in Intelligent buildings
Jerzy Mikulik, Marcin Pawlik PL, s. 395-402

16.00-18.00

Industrial applications III

1. Neural network steady-state modelling of a distillation column for economic optimization
Maciej Ławryńczuk, Piotr Tatjewski ENG, s. 319-328
2. Robust fault diagnosis in DC motor by means of artificial neural networks and model error modelling
Krzysztof Patan ENG, s. 338-346
3. Supportive diagnostic system of purifying fumes installation based on neural networks
Krzysztof Jaroszewski PL, s. 331-338
4. Monitoring and diagnosis of dynamics effects using Process Tomography
Zbigniew Chaniecki, Dominik Sankowski PL, s.387-394
5. On-line efficiency characteristics as symptoms of power units inefficient operation
Justyna Ślęzak-Żołna, Jerzy Głuch PL, s. 285-292
6. Conduct equipment diagnosis of the cement mill for the control needs
Gerard Bursy, Ryszard Rojek PL, s. 339-346

WEDNESDAY, 12 September 2007

9.00-9.45

Semi-plenary sessions

1. Gathering diagnostics patterns in computer-based analysis of the device efficiency
Jan Tadeusz Duda PL, s.1-16
2. Application of computer science in medical diagnostics
Robert Rudowski, Marcin Grabowski, Łukasz Kownacki,
Dorota Piotrowska-Kownacka PL, s.17-36

9.45-11.45

Principal component analysis

1. Fault detection and isolation with robust principal component analysis
Yvon Tharrault, Gilles Mourot, José Ragot, Didier Maquin ENG, s. 195-202
2. Nonlinear principal component analysis in fault diagnosis
Gracjan Głowacki, Krzysztof Patan, Józef Korbicz ENG, s. 211-218
3. Applying a singular value decomposition to the diagnostics of control objects
Jerzy Brzózka PL, s. 207-216
4. Multi-regional PCA for leakage detection and localisation in DWDS - approach
Borowa A., Mazur K., Grochowski M., Brdyś M.A., Jezior K. ENG, s. 203-210
5. MultiRegional PCA for leakage detection and localisation in DWDS
- Chojnice case study
Jezior K., Mazur K., Borowa A., Grochowski M., Brdyś M.A. ENG, s. 303-310
6. Use of the statistical methods to build the heuristic models of the complex technological process
Maciej Sarafin, Wiesław Moczulski PL, s. 69-76

9.45-11.45

Industrial applications IV

1. System monitor boiling water reactor. Application of intelligent methods of signal processing for monitoring and diagnostics tasks
Frank Drager, Andrzej Pieczyński, Rainer Hampel ENG, s. 329-336
2. Cross the section the shape of discharges crown
Marek Kurkowski PL, s. 301-306
3. Diagnostic of activation process of polyethylene foil
Paweł Czaja PL, s. 379-385
4. Model of service and repair planning system based on the state of the process
Adam Cholewa, Bartosz Chromczak PL, s. 149-156
5. Lab-stand of computer fan
Paweł Chrzanowski, Piotr Strojek PL, s. 365-370
6. The condition monitoring of marine rotary machines
Piotr Bielawski, Tomasz Burnos PL, s. 355-364

12.00-14.00**Medical applications**

1. Segmentation of cytological images by combined Hough, evolutionary and watershed algorithms
Maciej Hrebień, Józef Korbicz ENG, s. 271-278
2. Application of data classifiers to breast cancer diagnosis
Maciej Kusy ENG, s. 279-286
3. Segmentation of color cytological images using type-2 fuzzy sets
Łukasz Dziekan, Andrzej Marciniak, Andrzej Obuchowicz ENG, s. 263-270
4. Image diagnosis support system
Arkadiusz Tomczyk, Dariusz Puchala, Kamil Stokfiszewski, Piotr S. Szczepaniak
PL, s.133-140
5. Distributed medical system supporting predictions of health parameters, BPD and ROP
Krzysztof Rączka, Paweł Stoch, Wiesław Wajs ENG, s. 287-294

12.00-14.00**Industrial applications V**

1. Computer model of 3D shunt reactor structure in optimisation strategy
Sławomir Wiak, Paweł Drzymala, Henryk Welfe ENG, s. 347-354
2. Pipeline geometry defects in high resolution pig's data
Józef Lubkiewicz, Paweł Raczyński, Krzysztof Warnke, Marcin Zych
ENG, s. 311-318
3. Hardware-based software protection systems
Ireneusz J. Józwiak, Krzysztof Marczak PL, s. 403-410
4. Testing and fault detection of virtual field controllers
Marek Kopeć, Izabela Skorupska PL, s. 433-440
5. The possibility of using stochastic modelling for assessment of safety instrumented systems
Kopka Ryszard PL, s. 61-68

14.00**Closing ceremony**