

IBWS 2011

- 7 On the Relation Between GRB Classes nad X-ray Flashes / **Z. Bagoly, P. Veres, I. Horváth, A. Mészáros, L. G. Balázs**
- 11 The Intriguing Nature of the Cataclysmic Variable SS Cygni / **F. Giovannelli, L. Sabau-Graziati**
- 18 Structural Variability of 3C 111 on Parsec Scales / **C. Grossberger, M. Kadler, J. Wilms, C. Müller, T. Beuchert, E. Ros, R. Ojha, M. Aller, H. Aller, E. Angelakis, L. Fuhrmann, I. Nestoras, R. Schmidt, J. A. Zensus, T. P. Krichbaum, H. Ungerechts, A. Sievers, D. Riquelme**
- 23 The Optical Transient Search in the Bamberg Southern Sky Survey: Preliminary Results / **R. Hudec, F. Kopel, P. Krapp, U. Heber, W. Cayé**
- 27 Ultra Low Dispersion Spectroscopy with Gaia and Astronomical Slitless Surveys / **R. Hudec, L. Hudec, M. Klíma**
- 34 BOOTES Observation of GRB 080603B / **M. Jelíek, J. Gorosabel, A. J. Castro-Tirado, A. de Ugarte Postigo, S. Guziy, R. Cunniffe, P. Kubánek, M. Prouza, S. Vitek, R. Hudec, V. Reglero, L. Sabau-Graziati**
- 39 S5 1803+78 Revisited / **R. Nesci, A. Maselli, F. Montagni, S. Sclavi**
- 43 GRB Duration Distribution Considering the Position of the Fermi / **D. Szécsi, Z. Bagoly, L. Horváth, L. G. Balázs, P. Veres, A. Mészáros**
- 46 Production of Biodiesel from Vegetable Oil Using Microwave Irradiation / **N. Kapilan**
- 51 Prediction of Lower Extremity Movement by Cyclograms / **P. Kutilek, S. Viteckova**
- 61 Plasma Flow and Temperature in a Gliding Reactor with Different Electrode Configurations / **J. Sláma**
- 65 Czech Technical University Events

- 7 Optimization of Fuzzy Logic Controller for Supervisory Power System Stabilizers / **Y. A. Al-Turki, A.-F. Attia, H. F. Soliman**
- 17 Angular Distribution of GRBs / **L. G. Balázs, A. Mészáros, I. Horváth, Z. Bagoly, P. Veres, G. Tusnády**
- 26 Teaching Management at Technical Universities, Business Reality in the Academic Environment / **V. Baroch, B. Duchoň, V. Faifrová, Z. Říha**
- 31 An Optimal Procedure for Determining the Height Parameters of Fracture Surfaces / **T. Ficker**
- 34 Modeling of Concrete Creep Based on Microprestress-solidification Theory / **P. Havlásek, M. Jirásek**
- 43 Influence of the Surface Layer when the CMT Process Is Used for Welding Steel Sheets Treated by Nitrooxidation / **I. Michalec, M. Marônek**
- 48 FMEA and FTA Analyses of the Adhesive Joining Process using Electrically Conductive Adhesives / **E. Povolotskaya, P. Mach**
- 56 Utilization of Image Intensifiers in Astronomy / **S. Vitek, K. Fliegel, P. Páta, P. Koten**

- 9 Use of Grasses and Mixtures of Grasses for Energy Purposes / **David Andert, Jan Frydrych, Ilona Gerndtová**
- 13 Idealized Compression Ratio for a Screw Briquetting Press / **Peter Biath, Juraj Ondruška**
- 17 A Neural Network Model for Predicting NO_x at the Mělník 1 Coal-powder Power Plant / **Ivo Bukovský, Michal Kolovratník**
- 23 Effect of Gas Mixture Composition on the Parameters of an Internal Combustion Engine / **Andrej Chríbik, Marián Poloni. Ján Lach**
- 28 Production of Biocellulosic Ethanol from Wheat Straw / **Ismail, W. Ali, Braim, R. Rasul, Ketuly, K. Aziz, Awang Bujag, D. Siti Shamsiah, Arifin, Zainudin**
- 35 Measurement of O₂ in the Combustion Chamber of Apulverized Coal Boiler / **Břetislav Janeba, Michal Kolovratník, Ondřej Bartoš**
- 39 A Thermogravimetric Study of the Behaviour of Biomass Blends During Combustion / **Ivo Jiříček, Pavla Rudasová, Tereza Žemlová**
- 43 Resistance Spot Welding of dissimilar Steels / **Ladislav Kolařík, Miroslav Sahul, Marie Kolaříková, Martin Sahul, Milan Turňa, Michal Felix**
- 48 Heat Exchangers for Condensation and Evaporation Applications Operating in a Low Pressure Atmosphere / **Petr Kracík, Jiří Pospíšil, Ladislav Šnajdárek**
- 54 Lab-scale Technology for Biogas Production from Lignocellulose Wastes / **Lukáš Krátký, Tomáš Jirout, Jiří Nalezenc**
- 60 Change of Pressing Chamber Conicalness at Briquetting Process in Briquetting Machine Pressing Chamber / **Peter Križan, Miloš Matúš, Jaan Kers, Djordje Vukelić**
- 66 Biomass Gasification — Primary Methods for Eliminating Tar / **Martin Lisý, Marek Baláš, Jiří Moskalík, Otakar Štelcl**
- 71 Modularity of Pressing Tools for Screw Press Producing Solid Biofuels / **Miloš Matúš, Peter Križan**
- 77 Energy Recovery from Contaminated Biomass / **Jiří Moskalík, Jan Škvařil, Otakar Štelcl, Marek Baláš, Martin Lisý**
- 83 Plasma Surface Treatment of Powder Materials — Process and Application / **Monika Pavlatová, Marta Horáková, Jan Hladík, Petr Špatenka**
- 89 Optimal Combustion Conditions for a Small-scale Biomass Boiler / **Viktor Plaček, Cyril Oswald, Jan Hrdlička**
- 93 Research and development of CO₂ Capture and Storage Technologies in Fossil Fuel Power Plants / **Lukáš Pilař, Jan Hrdlička**
- 97 Experimental Investigation of Radial Gas Dispersion Coefficients in a Fluidized Bed / **Jiří Štefanica, Jan Hrdlička**
- 101 Explosion Cladding of Lead on Steel / **Milan Tuňa, Jozef Ondruška, Zuzana Turňová**

- 7 The Effect of Temperature on the Gasification Process / **Marek Baláš, Martin Lisý, Ota Štelcl**
- 12 Contributions to the Study of Dynamic Absorbers, a Case Study / **Monica Bălcău, Angela Pleșa, Dan Opruța**
- 16 A Flexible Adjustment and Control System for Hydraulic Machines / **Daniel Banyai, Lucian Marcu**
- 21 A Way to Use Waste Heat to Generate Thermoelectric Power / **Marian Brázdil, Jiří Pospíšil**
- 26 Strontium As a Structure Modifier for Non-binary Al-Si Alloy / **Barbora Bryksí Stunová**
- 33 Replacing Natural Gas by Biogas — Determining the Bacterial Contamination of Biogas by PCR / **Jiřina Čermáková, Jakub Mrázek, Kateřina Fliegerová, Daniel Tenkrát**
- 39 Energy Accumulation by Hydrogen Technologies / **Jiřina Čermáková, Aleš Doucek, Lukáš Polák**
- 44 Application of Induction Heating for Brazing Parts of Solar Collectors / **Kristína Demianová, Milan Ožvold, Milan Turňa**
- 49 A Pulverized Coal-Fired Boiler Optimized for Oxyfuel Combustion Technology / **Tomáš Dlouhý, Tomáš Dupal, Jan Dlouhý**
- 57 Determination of Uncertainties for Correlated Input Quantities by the Monte Carlo Method / **Marcel Goliaš, Rudolf Palenčár**
- 62 Laser Cutting of Materials of Various Thicknesses / **Martin Grepl, Marek Pagáč, Jana Petrů**
- 68 Checking the Geometric Accuracy of a Machine Tool for Selected Geometric Parameters / **Adam Janásek, Robert Čep, Josef Brychta**
- 74 Lifetime Assessment of a Steam Pipeline / **Jiří Janovec, Daniela Poláchová, Michal Junek**
- 80 New Abrasive Materials and Their Influence on the Surface Quality of Bearing Steel After Grinding / **Ondrej Jusko**
- 83 Advanced Functions of a Modern Power Source for GMAW Welding of Steel / **Ladislav Kolařík, Marie Kolaříková, Karel Kovanda, Marek Pantůček, Petr Vondrouš**
- 89 Metallurgical Joining of Magnesium Alloys by the FSW Process / **Tomáš Kupec, Ivana Hlavačová, Milan Turňa**
- 93 Influence of Various Process Parameters on the Density of Sintered Aluminium Alloys / **Mateusz Laska, Jan Kazior**
- 96 Fundamental Research on Hydraulic Systems Driven by Alternating Flow / **Ioan-Lucian Marcu, Daniel- Vasile Banyai**
- 100 Holding Pressure and Its Influence on Quality in PIM Technology / **Pavel Petera**
- 103 Concepts of Emission Reduction in Fluidized Bed Combustion of Biomass / **Amon Purgar, Franz Winter**
- 108 Influence of the Amount of Master Alloy on the Properties of Austenitic Stainless Steel AISI 316L Powder Sintered in Hydrogen / **Mateusz Skaloń, Jan Kazior**
- 113 Creating a Multi-axis Machining Postprocessor / **Petr Vavruška**
- 118 The Simulation of the Influence of Water Remnants on a Hot Rolled Plate after Cooling / **Radek Zahradník**

- 121 An Application of the Individual Channel Analysis and Design Approach to Control of a Two-input Two-output Coupled-tanks System / **David J. Murray-Smith**

- 7 Foreword: Selected Papers Presented at POSTER 2012, the 16th
8 International Scientific Student Conference on Electrical Engineering
Simulation of a Matrix Converter Fed Drive With Sliding Mode Control /
Jan Bauer
- 17 Femoral Test Bed for Impedance Controlled Surgical Instrumentation /
**Christian Brendle, Annegret Niesche, Alexander Korff, Klaus
Radermacher, Steffen Leonhardt**
- 22 Comparison of Power Quality Controllers / **Petr Černek, Michal Brejcha,
Jan Hájek, Jan Pígl**
- 26 Energy Estimation of Distributed Phase-shift Beamforming / **Viktor Černý**
37 Hygiene 3, a Forgotten Project for Electrolytic Water Treatment / **Kryštof
Drnek**
- 42 Model of Customer Buying Behavior in the CZ Mobile Telecommunication
Market / **Ondrej Grünwald**
- 51 A Task-driven Grammar Refactoring Algorithm / **Ivan Halupka, Ján
Kollár, Emília Pietriková**
- 58 Diamond Films For Implantable Electrodes / **Petra Henychová, Klára
Hřimanová, Martin Vraný**
- 62 ESSO — Electrification of the Central Labe Districts between 1916 and
1950 / **Jan Holovský**
- 70 Overhead Line Mechanics Taking the Influence of Wind into Account /
Miroslav Müller
- 76 Gated Graphene Electrical Transport Characterization / **Josef Náhlík,
Michal Janoušek, Zbyněk Šobán**
- 80 Accelerometer-assisted PPG Measurement During Physical Exercise Using
the LAVIMO Sensor System / **Susana Aguiar Santos, Boudewijn
Venema, Steffen Leonhardt**
- 86 Control Algorithms for Large-scale Single-axis Photovoltaic Trackers /
Dorian Schneider
- 93 Integration of Autonomous UAVs into Multi-agent Simulation / **Martin
Selecký, Tomáš Meiser**
- 100 A Study of the Properties of Electrical Insulation Oils and of the
Components of Natural Oils / **Milan Spohner**
- 106 A Study of Parameters Setting of the STADZT / **Václav Turoň**
112 A Network Simulation Tool for Task Scheduling / **Ondřej Votava**
- 120 Evaluation of Bioelectrical Impedance Spectroscopy for the Assessment of
Extracellular Body Water / **Sören Weyer, Lisa Röthlingshöfer, Marian
Walter, Steffen Leonhardt**
- 125 Flexible Multi-electrode Array for Medical Applications / **Nadine Winkin,
Wilfried Mokwa**
- 130 The Electrification of Tramways in Ostrava in 1900-1901 / **Michaela
Závodná**
- 133 Design Process of Energy Effective Shredding Machines for Biomass
Treatment / **Juraj Beniak, Juraj Ondruška, Viliam Čačko**
- 138 Development of an Ultralight with a Ducted Fan / **Jiří Brabec, Martin
Helmich**
- 144 Research Trends for PID Controllers / **Antonio Visioli**