

**2019 International Aegean
Conference on Electrical Machines
and Power Electronics
(ACEMP 2019) & 2019 International
Conference on Optimization of
Electrical and Electronic Equipment
(OPTIM 2019)**

**Istanbul, Turkey
27 – 29 August 2019**



**IEEE Catalog Number: CFP1922D-POD
ISBN: 978-1-5386-7688-2**

**Copyright © 2019 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP1922D-POD
ISBN (Print-On-Demand):	978-1-5386-7688-2
ISBN (Online):	978-1-5386-7687-5
ISSN:	1842-0133

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

PLENARY SESSIONS

ACEMP-OPTIM 2019 OPENING SPEECH	5
<i>H. Bülent Ertan</i>	
FUTURE OF EV CHARGING	8
<i>Pavol Bauer</i>	
IN MEMORIAM - PROFESSOR ROBERT D. LORENZ	10
<i>Tom Jahns</i>	
ELECTRIFIED AVIATION: ARE MOTOR DRIVES READY TO SPREAD THEIR WINGS AND FLY?	16
<i>Thomas M. Jahns</i>	
REVIEW OF ELECTRIC VEHICLE POWERTRAIN TECHNOLOGIES WITH OEM PERSPECTIVE	18
<i>Mustafa Karamuk</i>	
LARGE VARIABLE SPEED GENERATORS DESIGN AND THEIR CONTROL: A REVISIT IN 2019	29
<i>Ion Boldea ; Lucian Tutelea ; Ana Popa</i>	
REQUIRED TECHNOLOGY FOR UPGRADING EFFICIENCY OF HIGH-SPEED MOTOR WITH HIGH POWER DENSITY	41
<i>Masato Enokizono</i>	
DEVELOPMENTS AND TRENDS IN THE ADJUSTABLE SPEED DRIVES INDUSTRY	51
<i>Norbert Hanigovszki</i>	
SYNCHRONOUS RELUCTANCE MOTOR DRIVES: STILL A NICHE TECHNOLOGY?	57
<i>Gianmario Pellegrino</i>	
DESIGN OF ELECTRICAL HIGH SPEED DRIVES FOR VEHICLE DRIVETRAINS	58
<i>Markus Henke</i>	
AUTOMOTIVE POWER ELECTRONICS: CURRENT STATUS AND FUTURE TRENDS	60
<i>Bülent Sarlioglu</i>	

TECHNICAL TRACK ON ELECTRICAL MACHINES, INDUSTRIAL DRIVES AND CONTROL

10MW, 10RPM, 10HZ DIRECTLY-DRIVEN CAGE ROTOR INDUCTION GENERATOR (CRIG): PRELIMINARY DESIGN WITH KEY FEM VALIDATIONS	65
<i>I. Boldea ; L. N. Tutelea ; I. Torac ; F. Marignetti</i>	
A DIRECT-DRIVE, LINEAR ACTUATOR OF A HYBRID STRUCTURE	71
<i>Ning Zhang ; Michael Collins ; Michael Rae ; Howard Locatt</i>	
A NOVEL APPROACH TO PLCS BASED SYSTEMS UTILIZED IN ELECTRIC DRIVES	77
<i>Adrian Daniel Martin ; Lucian Tutelea ; Radu Babau ; Ion Boldea</i>	
A NOVEL KURTOGRAM-BASED HEALTH INDEX FOR INDUCTION MOTOR FAULT DIAGNOSIS	85
<i>Azadeh Gholaminejad ; Farzaneh Sabbaghian Bidgoli ; Javad Poshtan ; Majid Poshtan</i>	
A NOVEL SURFACE IMPEDANCE BASED CLAMPING PLATE LOSS MODEL FOR LARGE SYNCHRONOUS GENERATORS	93
<i>Torben Fricke ; Babette Schwarz ; Bernd Ponick</i>	
ADAPTIVE ALGORITHM TO REDUCE ACOUSTIC NOISE AND TORQUE RIPPLE IN LOW-COST PM MOTORS	100
<i>Martin Sumega ; Simon Zossak ; Patrik Varecha ; Pavol Rafajdus ; Marek Stulrajter</i>	
ANALYSIS OF THE THERMAL INFLUENCE ON THE VIBRATIONAL BEHAVIOR OF THE STATOR END-WINDING REGION	108
<i>Sebastian Lange ; Martin Pfost</i>	
ASSESSMENT OF 5 KW INDUCTION MOTOR FINITE ELEMENT COMPUTATIONS WITH A COMMERCIAL AND AN OPEN-SOURCE SOFTWARE	114
<i>M. Zaheer ; P. Lindh ; L. Aarniovuori ; J. Pyrhönen</i>	

AUTOMATIC SUPERIMPOSED DROOP FREQUENCY CONTROL SCHEME FOR DC MICROGRIDS	120
<i>Mohammad Jafari Matehkolaei ; Hossein Mokhtari ; Majid Poshtan</i>	
BEHAVIOR OF A FIVE-PHASE PENTACLE CONNECTED IM OPERATED UNDER ONE-PHASE FAULT	126
<i>Pavel Zaskalicky</i>	
CALCULATING FREQUENCY RESPONSES OF SYNCHRONOUS MACHINES USING MIMO TRANSFER FUNCTIONS	132
<i>Matthias Kalla ; Olga Korolova ; Alexander Neufeld ; Lutz Hofmann ; Bernd Ponick</i>	
COMPARISON OF PI AND FOPI BASED VOLTAGE AND CURRENT CONTROLLED DC MOTOR DRIVE SYSTEM.....	139
<i>Hafiz M. Usman ; Abdel Gafoor Haddad ; Habibur Rehman ; Shayok Mukhopadhyay</i>	
COMPARISON OF TIME-DOMAIN AND TIME-SCALE DATA IN BEARING FAULT DETECTION	143
<i>I. Halil Ozcan ; Levent Eren ; Turker Ince ; Bulent Bilir ; Murat Askar</i>	
COMPARISON OF TWO-LEVEL AND THREE-LEVEL NPC INVERTER TOPOLOGIES FOR A PMSM DRIVE FOR ELECTRIC VEHICLE APPLICATIONS	147
<i>Alican Madan ; Emine Bostanci</i>	
CURRENT DATA FUSION THROUGH KALMAN FILTERING FOR FAULT DETECTION AND SENSOR VALIDATION OF AN ELECTRIC MOTOR	155
<i>Sadra Mousavi ; Duygu Bayram ; Serhat Seker</i>	
CURRENT HARMONIC SUPPRESSION FOR PERMANENT MAGNET SYNCHRONOUS MOTORS	161
<i>Ngoc-Tu Trinh ; Fabien Vidal-Naquet</i>	
CUTTING TECHNOLOGIES INFLUENCE ON MAGNETIC PROPERTIES OF ELECTRICAL STEELS USED IN HIGH-EFFICIENCY MOTORS MANUFACTURING	166
<i>Gheorghe Paltanea ; Veronica Manescu Paltanea ; Elena Helerea ; Iosif-Vasile Nemoianu ; Marius Daniel Calin</i>	
DESIGN OF CONICAL ROTOR FLUX-SWITCHING PERMANENT MAGNET MACHINE WITH IMPROVED FLUX-WEAKENING CAPABILITY FOR TRACTION APPLICATIONS	172
<i>Hao Ding ; Mingda Liu ; Bulent Sarlioglu</i>	
DEVELOPMENT OF HIGH EFFICIENCY AND HIGH-SPEED MOTOR WITH HIGH POWER DENSITY	178
<i>Masato Enokizono ; Naoya Soda ; Daisuke Wakabayashi ; Shohei Ueno ; Yuji Tsuchida</i>	
DIAGNOSIS OF DIFFERENT ECCENTRICITY FAULTS IN INDUCTION MOTORS BASED ON ELECTRICAL AND MAGNETIC SIGNATURES AND UNBALANCED MAGNETIC PULL.....	186
<i>T. A. Sarikaya ; A. Polat ; L. T. Ergene</i>	
DIRECT RADIAL AND CIRCUMFERENTIAL ANALYTICAL AIR-GAP FIELD CALCULATION FOR ELECTRICAL MACHINES.....	191
<i>Jan Andresen ; Bernd Ponick ; Axel Mertens</i>	
EARLY DETECTION OF TURN-TO-TURN FAULTS IN POWER TRANSFORMER WINDING: AN EXPERIMENTAL STUDY.....	199
<i>Arash Moradzadeh ; Kazem Pourhossein</i>	
ECCENTRICITY FAULT DIAGNOSIS IN PMSM USING MOTOR CURRENT SIGNATURE ANALYSIS	205
<i>Zakaria Gherabi ; Noureddine Benouzza ; Djilali Toumi ; Azeddine Bendiabdellah</i>	
HIGHLY EFFICIENT MULTI-JUNCTION SOLAR CELLS PERFORMANCE IMPROVEMENT FOR AC INDUCTION MOTOR CONTROL USING THE DSPIC30F MICROCONTROLLER.....	211
<i>Abdelkader Hadj Dida ; Mohamed Bourahla ; H. Bülent Ertan</i>	
IMPROVED DIAGNOSIS OF INDUCTION MOTOR'S ROTOR FAULTS USING THE PAPOULIS WINDOW	216
<i>Mohamed Boudiaf Koura ; Ahmed Hamida Boudinar ; Ameer Fethi Aimer</i>	
MODEL PREDICTIVE CURRENT AND CAPACITOR VOLTAGE CONTROL OF POST-FAULT THREE-LEVEL NPC INVERTER-FED SYNCHRONOUS RELUCTANCE MOTOR DRIVES.....	221
<i>Yong-Chao Liu ; Salah Laghrouche ; Abdoul N'Diaye ; Maurizio Cirrincione</i>	
MODELING AND DIAGNOSIS OF STATOR WINDING FAULTS IN PMSM USING MOTOR CURRENT SIGNATURE ANALYSIS	227
<i>Zakaria Gherabi ; Djilali Toumi ; Noureddine Benouzza ; Noureddine Henini</i>	
MOTOR EFFICIENCY DETERMINATION OF SYNRM AND MEASUREMENT UNCERTAINTY	233
<i>Youn-Hwan Kim ; Hee-Deuk Jun ; Jae-Won Moon ; Rae-Eun Kim ; Se-Hyun Rhyu ; Sang-Young Jung</i>	
NUMBER OF TURNS INFLUENCE ON THE PARAMETERS OF HIGH SPEED SWITCHED RELUCTANCE MOTOR	240
<i>S. Kocan ; P. Rafajdus ; P. Makys ; R. Bastovansky</i>	

NVH-SIMULATION OF SALIENT-POLE SYNCHRONOUS MACHINES FOR TRACTION APPLICATIONS	246
<i>Stephan-Akash Vip ; Jan Hollmann ; Bernd Ponick</i>	
OUTER RACE FAULT DIAGNOSIS BY COMPARISON BETWEEN THE POWER SPECTRAL DENSITY AND THE KURTOGRAM.....	254
<i>Mohammed-El-Amine Khodja ; Ahmed Hamida Boudinar ; Ameer Fethi Aimer ; Azeddine Bendiabdellah</i>	
SENSORLESS SYNCHRONOUS RELUCTANCE GENERATOR CONTROL BASED ON Q AXIS ESTIMATED CURRENT	260
<i>Liviu-Danut Vitan ; Lucian Tutelea ; Nicolae Muntean ; Ion Boldea</i>	
SHORT CIRCUIT LOCATION IN TRANSFORMER WINDING USING DEEP LEARNING OF ITS FREQUENCY RESPONSES.....	268
<i>Arash Moradzadeh ; Kazem Pourhossein</i>	
TEMPORAL ENVELOPE ESTIMATION OF STATOR CURRENT BY PEAKS DETECTION FOR IM FAULT DIAGNOSIS	274
<i>Hamid Khelfi ; Samir Hamdani ; Youcef Chibani</i>	
TORQUE ERROR REDUCTION OF INTERIOR PERMANENT MAGNET SYNCHRONOUS MOTOR DRIVES USING A STATOR FLUX LINKAGE OBSERVER	280
<i>Sungmin Choi ; Seung-Hwan Lee ; Jae Suk Lee</i>	

TECHNICAL TRACK ON POWER ELECTRONICS AND POWER CONVERSION

A BIDIRECTIONAL HYBRID SWITCHED-CAPACITOR DC-DC CONVERTER WITH A HIGH VOLTAGE GAIN	289
<i>Dan Hulea ; Nicolae Muntean ; Mihaita Gireada ; Octavian Cornea</i>	
A COMPARATIVE STUDY OF CAPACITIVE AND INDUCTIVE PULSED POWER SUPPLY TOPOLOGIES FOR ELECTROMAGNETIC LAUNCHER APPLICATIONS.....	297
<i>Doga Ceylan ; Siamak Pourkeivannour ; Ozan Keysan</i>	
A FAMILY OF QUADRATIC DC/DC CONVERTERS WITH ONE LOW-SIDE SWITCH AND A TAPPED INDUCTOR AT THE OUTPUT SIDE	304
<i>Felix A. Himmelstoss ; Helmut L. Votzi</i>	
A FRAMEWORK FOR FAST SIMULATION OF POWER ELECTRONIC CIRCUITS	310
<i>Hadhiq Khan ; Mohammad Abid Bazaz ; Shahkar Ahmad Nahvi</i>	
A FULL SOFT SWITCHED BRIDGELESS POWER FACTOR CORRECTED AC-DC CONVERTER.....	315
<i>Sevilay Cetin ; Veli Yenil</i>	
A METHOD FOR ACCELERATING FPGA BASED DIGITAL CONTROL OF SWITCHED MODE POWER SUPPLIES	322
<i>Tudor Gherman ; Dorin Petreus ; Remus Teodorescu</i>	
A REAL TIME SIMULATOR OF A PEV'S ON BOARD BATTERY CHARGER	329
<i>Tudor Gherman ; Dorin Petreus ; Remus Teodorescu</i>	
A SINGLE-SWITCH ZCS BOOST CONVERTER WITH LOW CONDUCTED EMI	336
<i>Mohammad Rouhollah Yazdani ; Mohammad Pahalvandust</i>	
A TLBO ALGORITHM FOR DESIGN OPTIMIZATION OF DVRS IN AN INTERLINE DVR (IDVR)	341
<i>Mahdi Jabbari ; Majid Moradlou ; Mehdi Bigdeli</i>	
AN APPROACH FOR SPACE VECTOR PWM TO REDUCE HARMONICS IN LOW SWITCHING FREQUENCY APPLICATIONS	347
<i>Ali Bakbak ; Erkan Mese</i>	
ANALYSIS OF CURRENT-FEEDBACK PWM PROCEDURES BASED ON HYSTERESIS AND CURRENT-CARRIER-WAVE CONTROL FOR VSI-FED INDUCTION MOTOR DRIVE	351
<i>Csaba Szabo ; Eniko Szoke ; Norbert Szekely ; Vlad Zacharias ; Maria Imecs</i>	
CAPACITOR VOLTAGE BALANCE ON NPC MULTILEVEL CONVERTER	359
<i>Juan Diego Nieto Cardona ; Fabio Gómez-Estern Aguilar ; Francisco Gordillo</i>	
CASCADED FUZZY CONTROLLER FOR ELECTRIC VEHICLE TRACTION SYSTEM BATTERY ENERGY MANAGEMENT	366
<i>Ahmed Sayed Abdelaal Abdelaziz ; Habib-Ur Rehman ; Shayok Mukhopadhyay</i>	
CONTROL STRATEGY FOR FLYWHEEL ENERGY STORAGE SYSTEMS ON A THREE-LEVEL THREE-PHASE BACK-TO-BACK CONVERTER.....	372
<i>M. Di Benedetto ; A. Lidozzi ; D. M. Kumar ; H. K. Mudaliar ; M. Cirrincione</i>	

DIGITAL HYBRID CURRENT MODE CONTROL WITH ASYMMETRIC SLOPE COMPENSATION FOR THREE-LEVEL FLYING CAPACITOR BUCK CONVERTER	377
<i>Abdulkerim Ugur ; Murat Yilmaz</i>	
DUAL-MODE OPERATION OF 3-LEVEL 4-LEG AT-NPC INVERTER FOR MICROGRIDS	383
<i>Emre Avcı ; Mehmet Ucar</i>	
IMPROVING THE MODULAR LAYER METHOD TO REPRESENT THE CAPACITIVE EFFECTS OF OVERLAPPING LAYERS IN PLANAR TRANSFORMERS	389
<i>Ismail Onur Loraz ; M. Timur Aydemir</i>	
INVESTIGATION OF THE EFFECTS OF SWITCHING TECHNIQUE ON THE PERFORMANCE OF FOUR SWITCH BUCK-BOOST BIDIRECTIONAL DC/DC CONVERTERS	395
<i>Ibrahim Koçak ; Hulusi Bülent Ertan</i>	
LIFETIME ESTIMATION AND RELIABILITY OF PV INVERTER WITH MULTI-TIMESCALE THERMAL STRESS ANALYSIS	402
<i>Sara Bouguerra ; Kamel Agroui ; Oussama Gassab ; Ariya Sangwongwanich ; Frede Blaabjerg</i>	
MULTILOOP PR+P CONTROLLER OF INTEGRATED BESS-DVR FOR POWER QUALITY IMPROVEMENT	409
<i>Abdul Muiz Sufianto ; Jaeho Choi ; Nanang Hariyanto ; Arwindra Rizqiawan</i>	
OPTIMAL LOW-PASS BUTTERWORTH FILTER DESIGN BY AN ENHANCED ACO ALGORITHM	417
<i>Bachir Benhala</i>	
OPTIMIZATION OF EFFICIENCY AND HARMONICS FOR GBIT FLASH MEMORY BASED PWM INVERTERS	423
<i>Dorin O. Neacsu</i>	
POWER LOSS ANALYSIS IN MODULAR MULTILEVEL CONVERTERS	431
<i>Ahmed Eshwiage ; Suleiman M. Sharkh ; Sara Bouguerra</i>	
THREE-PHASE MODIFIED Z-SOURCE THREE-LEVEL T-TYPE INVERTERS WITH CONTINUOUS SOURCE CURRENT	439
<i>Anh-Vu Ho ; Anh-Tuan Huynh ; Tae-Won Chun</i>	

**TECHNICAL TRACK ON RENEWABLE ELECTRIC ENERGY CONVERSION,
PROCESSING AND STORAGE**

A SUPERIMPOSED FREQUENCY METHOD WITH AN ADAPTIVE DROOP CHARACTERISTIC FOR DC MICROGRIDS	447
<i>Mohammad Jafari Matehkolaei ; Hossein Mokhtari</i>	
ANALYSIS OF MMC HVDC SYSTEM USING SYMMETRIC COORDINATE METHOD	453
<i>Chan-Ki Kim ; Soo-Yeon Sim ; Sang-Min Kim ; Kyeon Hur</i>	
CONTROL OF MULTI-SOURCES ENERGY PV/FUEL CELL AND BATTERY BASED MULTI- LEVEL INVERTER FOR AC LOAD	459
<i>Mostefa Koulali ; Bachir Boumediene ; Karim Negadi ; Siamak Pourkeivannour ; Mohamed Mankour ; Attalah Smaili</i>	
CONTROL STRATEGY FOR OPTIMIZING ENERGY MANAGEMENT IN MICROGRID SYSTEM USING ADAPTIVE CONTROL	466
<i>R Dimas Dityagraha ; Jaeho Choi ; Nanang Hariyanto</i>	
HYBRID STORAGE SYSTEM ASSOCIATED WITH A GRID-CONNECTED WIND GENERATOR	473
<i>Karima Boulaam ; Akkila Boukhelifa</i>	
IDENTIFYING INTERNAL DEFECTS OF PHOTOVOLTAIC PANELS USING SWEEP FREQUENCY RESPONSE ANALYSIS	481
<i>Kazem Pourhossein ; Meysam Asadi</i>	
INTEGRATION OF OFFSHORE WIND FARM PLANTS TO THE POWER GRID USING AN HVDC LINE TRANSMISSION	486
<i>Abderrahmane Berkani ; Siamak Pourkeivannour ; Karim Negadi ; Bachir Boumediene ; Tayeb Allaoui ; H. Bülent Ertan</i>	
MATLAB/SIMULINK MODEL FOR HVDC FAULT CALCULATIONS	493
<i>Ahmad Mustapha Usman ; Mahir Kutay ; Tuncay Ercan</i>	
MODEL COMPARISON AND PARAMETER ESTIMATION OF POLYMER EXCHANGE MEMBRANE (PEM) FUEL CELL BASED ON NONLINEAR LEAST SQUARES METHOD	500
<i>Krishnil R Ram ; Karteek Naidu ; Ravinesh Kumar ; Maurizio Cirrincione ; Ali Mohammadi</i>	
MODELING AND ANALYSIS OF A RENEWABLE-ENERGY-POWERED GREENHOUSE	506
<i>Yerbol Akhmetov ; Mehdi Bagheri ; G. B. Gharehpetian</i>	

MODELING AND SITING OF WIND FARMS USING SUPPORT VECTOR REGRESSION (SVR)	511
<i>Meysam Asadi ; Kazem Pourhossein</i>	
MPPT BASED ADAPTIVE CONTROL ALGORITHM FOR SMALL SCALE WIND ENERGY CONVERSION SYSTEMS WITH PMSG	517
<i>M. C. Akkaya ; A. Polat ; L. T. Ergene</i>	

TECHNICAL TRACK ON MECHATRONICS, INDUSTRIAL AUTOMATION AND CONTROL

A NOVEL DEVELOPMENT OF ACOUSTIC SLAM	525
<i>Joseph O'Reilly ; Silvia Cirstea ; Marcian Cirstea ; Jin Zhang</i>	
ALTERNATIVE APPROXIMATION METHOD FOR TIME DELAYS IN AN IMC SCHEME	532
<i>Cristina I. Muresan ; Isabela R. Birs ; Cosmin Darab ; Ovidiu Prodan ; Robin De Keyser</i>	
DESIGN OF PROGRAMMABLE, HIGH-FIDELITY HAPTIC PADDLE	540
<i>Seyit Yigit Sizlayan ; Mustafa Mert Ankarali</i>	
MICROCONTROLLER-BASED MOTION CONTROL FOR DC MOTOR DRIVEN ROBOT LINK	547
<i>Mustafa M. Mustafa ; Ibrahim Hamarash</i>	
PATIENT-SPECIFIC IMAGINARY MOTOR MOVEMENT CLASSIFICATION OF EEG SIGNALS AND CONTROL OF ROBOTIC ARM	553
<i>Özer Can Devecioglu ; Burak Yaman ; Özle Mesekoparan ; Can Çakir ; Türker Ince</i>	
SOUTH AFRICAN POWER DISTRIBUTION NETWORK LOAD FORECASTING USING HYBRID AI TECHNIQUES: ANFIS AND OP-ELM	557
<i>Sibonelo Motepe ; Ali N. Hasan ; Bhekisipho Twala ; Riaan Stopforth ; Nancy Alajarmeh</i>	
SUPERCAPACITOR PARAMETER IDENTIFICATION USING GREY WOLF OPTIMIZATION AND ITS COMPARISON TO CONVENTIONAL TRUST REGION REFLECTION OPTIMIZATION	563
<i>Ravneel Prasad ; Utkal Mehta ; Kajal Kothari ; Maurizio Cirrincione ; Ali Mohammadi</i>	
TUNING PID CONTROLLER USING HYBRID GENETIC ALGORITHM PARTICLE SWARM OPTIMIZATION METHOD FOR AVR SYSTEM	570
<i>Faouzi Aboura</i>	
USING DEEP LEARNING TECHNIQUES FOR SOUTH AFRICAN POWER DISTRIBUTION NETWORKS LOAD FORECASTING	575
<i>Sibonelo Motepe ; Ali N. Hasan ; Bhekisipho Twala ; Riaan Stopforth</i>	

AUTOMOTIVE POWER CONVERSION – MOTORS, POWER ELECTRONICS, BATTERIES, AND CHARGERS

DESIGN OF A CONTROLLER FOR TORSIONAL VIBRATIONS OF AN ELECTRIC VEHICLE POWERTRAIN	583
<i>Mustafa Karamuk ; Salih Baris Ozturk</i>	
DEVELOPMENT OF FUZZY LOGIC BASED ENERGY MANAGEMENT CONTROL ALGORITHM FOR A PLUG-IN HEV WITH FIXED ROUTED	590
<i>Hazal Sölek ; Kenan Müderrisoglu ; Cem Armutlu ; Murat Yilmaz</i>	
ELECTRIC MULTIPURPOSE VEHICLE POWER TAKE-OFF: OVERVIEW, LOAD CYCLES AND ACTUATION VIA SYNCHRONOUS RELUCTANCE MACHINE	596
<i>Branko Ban ; Stjepan Stipetic</i>	
STATE-OF-CHARGE ESTIMATION OF LI-ION BATTERY CELL USING SUPPORT VECTOR REGRESSION AND GRADIENT BOOSTING TECHNIQUES	604
<i>Eymen Ipek ; M. Kerem Eren ; Murat Yilmaz</i>	
TRACKING CONTROLLER DESIGN OF A RF MATCHING BOX WITH PLASMA LOAD VARYING	610
<i>Yen-Fang Li ; Ming-Heng Hsieh ; Ren-Stian Liou</i>	
Author Index	