



CONTENTS - SADRŽAJ

P	INVITED PAPERS RADOVI PO POZIVU
J. Miller V. Ostović V. Stefanović J. Kelly	AN INTEGRATED AUTOMOTIVE STARTER-GENERATOR WITH POLE-PHASE MODULATION
B. Jeftenić	Višemotorni regulisani pogoni CONTROLLED MULTI-MOTOR DRIVES
R. Zehringer P. Jörg M. Suter N. Celanovic	POWER ELECTRONICS SOLUTIONS FOR DISTRIBUTED POWER GENERATION
G. Arsov	POWER SEMICONDUCTOR DEVICE MODELING FOR SPICE SIMULATION: PART I – BASIC CONCEPTS
G. Arsov	POWER SEMICONDUCTOR DEVICES MODELING FOR SPICE SIMULATION – PART II: BEHAVIORAL DEVICE MODELS
P. Miljanić	Predlog izmene definicija efektivne i srednje vrednosti naizmeničnih veličina PROPOSAL FOR NEW DEFINITIONS OF RMS AND AVERAGE VALUES
D. Schreiber	STATE OF THE ART OF VARIABLE SPEED WIND TURBINES
E. Levi I. Zulkifilie	FUZZY LOGIC OR PI SPEED CONTROL IN HIGH PERFORMANCE AC DRIVES: WHICH IS PREFERABLE?
S. Mircevski	HOW TO SOLVE THE CRISIS IN ELECTRIC POWER ENGINEERING STUDIES?
S. Vukosavić Lj. Perić	Mogućnost za uštede električne energije povećanjem efikasnosti elektromotornih pogona ELECTRIC ENERGY SAVING POSSIBILITIES BY INCREASING OF ELECTRIC DRIVES EFFICIENCY
J. Varga S. Pletl	Simulacija rada asimetričnih jednofaznih kondenzatorskih motora u sklopu tiristorske regulacije SIMULATION OF A THYRISTOR-REGULATED ASYMMETRICAL SINGLE-PHASE CAPACITOR MOTOR
T1	POWER CONVERTERS ENERGETSKI PRETVARAČI
J. Shikoski V. Katić U. Rechkoska	IMPORTANT ASPECTS OF POWER QUALITY IN A DEREGULATED POWER SYSTEM
Lj. Nikoloski	POWER QUALITY IN STEEL ROLLING MILL, A CASE STUDY
J. Schlabbach	COUNTERMEASURES AGAINST RESONANCES IN A 6-kV-SYSTEM
D. Graovac V. Katić A. Rufer J. Knežević	UNIFIED POWER QUALITY CONDITIONER BASED ON CURRENT SOURCE CONVERTER TOPOLOGY

D.Graovac V.Katić A.Rufer J.Knežević	DSP BASED CONTROL OF UNIVERSAL POWER QUALITY CONDITIONING SYSTEM
G. Pavkov	Metod proračuna gubitaka snage usled viših harmonika CALCULATION METHOD OF POWER LOSSES IN NETWORK DUE TO HIGHER HARMONICS
M. Milićević V. Milićević	Prilog analitičkom izračunavanju parametara punomostnog pretvarača snage sa doziranjem energije A CONTRIBUTION TO ANALITICAL PARAMETER CALCULATION OF FULL-BRIDGE POWER CONVERTER WITH ENERGY DOSING
V. Radišić V. Katić	Analiza dualnosti naponskog i strujnog ispravljača sa diodnim mostom THE ANALYSIS OF DIODE VOLTAGE AND CURRENT RECTIFIER DUALITY
V. Jevremović V. Katić	Proračun parametara naponskog aktivnog ispravljača CALCULATION OF ACTIVE VOLTAGE RECTIFIER PARAMETERS
B. Ivanović Z. Stojiljković	Nedisipativna snaber kola za dc - dc pretvarač podizač napona NONDISSIPATIVE SNABER CIRCUITS FOR DC/DC BOOST CONVERTER
J. Miniböck J. Kolar	A NOVEL 10KW 2-U THREE-PHASE UNITY POWER FACTOR RECTIFIER MODULE
Z. Sütő I. Nagy	NONLINEAR PHENOMENA IN THREE-PHASE HYSTERESIS CONTROLLED CONVERTERS
J. Junak B. Grzesik	CLASS E INVERTER WITH MATCHING CIRCUIT FOR HF INDUCTION HEATING
J. Kosev G. Arsov	MULTISTEP INDUCTORLESS DC-DC TRANSFORMER WITH HIGH VOLTAGE RATIO
V. Proca F. Velea G. Patrascu E. Calugaru	DC-DC POWER CONVERTER FOR UNCONVENTIONAL SUPPLY VOLTAGES
M. Makraduli	STEADY STATE AND TRANSIENT LOADING OF DRIVE UNIT IN THREE PHASE INVERTERS
N. Bogoevici D. Irimia I. Tatai	PRINTED ELECTRIC FIELD IN CONDUCTORS AND SEMICONDUCTORS WITH PHYSICAL AND CHEMICAL NONHOMOGENEITIES
V. Desnica Lj. Živanov O. Aleksić	THICK FILM EMI/EMC FILTERS
A. Sijerković Z. Kuzmanović A. Kačavenda	Jedan način organizacije i izvođenja laboratorijskih vežbi iz električnih mašina ONE POSSIBILITY OF ORGANIZATION AND DOING LABORATORY EXERCISES WITHIN THE SUBJECT OF ELECTRICAL MACHINES
V. Jevremović S.Vukosavić	PRACTICAL ASPECTS OF TEACHING DSP IN LABORATORY
J. Šafranj M. Katić	SOME ASPECTS OF TECHNICAL STATEMENTS IN POWER ENGINEERING O tehnikama prevođenja nekih engleskih termina energetske elektronike ABOUT TRANSLATION TECHNIQUES OF SOME POWER ELECTRONICS TERMS

T2

ELECTRICAL DRIVES ELEKTROMOTORNI POGONI

M. Bebić B. Jeftenić M. Belinčević	Elektromotorni pogoni papir mašina ELECTRIC DRIVES IN PAPER MACHINES
M. Živić R. Jevremović	Primena vektorski regulisanog asinhronog pogona za pozicioniranje ose na CNC mašini I deo APPLICATION OF VECTOR CONTROLLED AC DRIVE FOR AXIS POSITIONING AT CNC MACHINE – PART 1
M. Živić R. Jevremović	Primena vektorski regulisanog asinhronog pogona za pozicioniranje ose na CNC mašini II deo APPLICATION OF VECTOR CONTROLLED AC DRIVE FOR AXIS POSITIONING AT CNC MACHINE – PART 2

S. Vukosavić J. Radaković P. Kiril L. Peter	Regulacija brzine trofaznog asinhronog motora za pogon pumpe REGULATION POWER DRIVE SYSTEM FOR A CIRCULATING PUMP
Ž. Despotović M. Jovanović Z. Stoiljković	Mikroprocesorski kontrolisan pretvarač za pogon elektromagnetnih vibratora MICROPROCESSOR CONTROLLED CONVERTER FOR ELECTROMAGNETIC VIBRATOR DRIVE
M. Milićević V. Milićević	Optimizacija energetske parametara i kvaliteta VF induktivnog zavarivanja čeličnih šavnih cevi OPTIMIZATION OF ENERGY PARAMETERS AND QUALITY OF HF INDUCTION WELDING OF STEEL SEAM TUBES
Z. Marković	Elektromotorni pogon tangentsnog premotača ELECTRIC DRIVE OF TANGENT REWINDER
B. Jeftenić M. Bebić D. Jevtić	Raspodela opterećenja kod pogona u mehaničkoj sprezi LOAD DISTRIBUTION FOR MECHANICALLY COUPLED DRIVES
M. Živanov Lj. Živanov	STATE OF TECHNOLOGY OF POWER SOURCES FOR AUTOMOTIVE ELECTRIC VEHICLES
D. Raca R. Jevremović	Pregled i izbor savremenih vučnih pogona za EV OVERVIEW OF MODERN TRACTION DRIVES FOR EVS AND ITS SELECTION
V. Radulescu I. Strainescu L. Moroianu E. Tudor S. Gheorghe M. Tanase	ELECTRICAL DRIVE EQUIPMENT WITH IGBT CHOPPER FOR TROLLEY BUS
G. Fekete	A NEW ENERGY BASED CURRENT CONTROLLED CSI-FED INDUCTION MOTOR DRIVE
V. Radulescu I. Strainescu V. Serbu L. Moroianu F. Huzlau F. Bozas A. Cojocar E. Tudor S. Gheorghe D. Vizireanu C. Goia	STATIC SOURCES FOR RAILWAY PASSENGER WAGGONS
D. Marčetić S. Vukosavić	Model vektorski upravljano pogona za male signale SMALL SIGNAL MODEL OF VECTOR CONTROLLED DRIVES
B. Blanuša S. Vukosavić	Algoritam za minimizaciju snage gubitaka vektorski regulisanog asinhronog pogona zasnovan na primjeni fazi logike ALGORITHM FOR MINIMISATION POWER LOSSES IN VECTOR CONTROLLED INDUCTION MACHINE DRIVE

T3

ELECTRICAL MACHINES ELEKTRIČNE MAŠINE

Z. Andonov	OVERVIEW OF INDUCTION MOTOR PARAMETER IDENTIFICATION TECHNIQUES
V. Horga I. Graur M. Răţoi	INDIRECT PARAMETER ESTIMATION OF INDUCTION MOTOR BASED ON TIME DOMAIN ANALYSIS
T. Ganciu V. Horga I. Graur	DIRECT PARAMETER ESTIMATION OF INDUCTION MOTOR BASED ON CONTINUOUS TIME MODEL
F. Toth T. Adam	COMPARISON OF DIFFERENT TYPE OF LINEAR INDUCTION MACHINES USING FINITE-ELEMENT ANALYSIS

C. Filote A. Graur A. Potorac	THE CALCULUS OF THE INVERSE GENERALISED INDUCTANCE MATRIX USING PARK TRANSFORMATION
C. Pal S. Dumbrava	OSCILLATION DAMPING METHOD BASED ON A BANG-BANG TYPE COMMAND USED FOR STEPPER MOTORS
A. Simion I. Vartolomei L. Livadaru S. Calugareanu	ON THE CAD OF THE THREE-PHASE RELUCTANCE MOTOR
B. Grzesik M. Stepień	HF TRANSFORMER OF VERY HIGH EFFICIENCY
D. Petrović Z. Lazarević N. Laketić	Merenje dinamičkog elektromagnetskog momenta pri zaletanju visokonaponskog asinhronog motora MEASUREMENT OF DINAMIC ELECTROMAGNETIC TORQUE DURING START-UP OF HV INDUCTION MOTOR
V. Trifa A. Graur O. Rabulea	LABVIEW VIRTUAL INSTRUMENTATION FOR A SWITCHED RELUCTANCE MOTOR
D. Lucache A. Simion S. Calugareanu I. Vartolomei	THE CALIBRATION OF A DC-MACHINE FOR A LOW-POWER TEST-BENCH
V. Guzun I. Guzun	DATA ACQUISITION SYSTEM FOR STUDYING ASYNCHRONOUS AC MACHINES
D. Vidanovski S. Mircevski Z. Andonov	INDUCTION MOTORS THERMAL MONITORING WITH COMBINED METHOD
G. Jovović	Ekperimentalna provera performansi GVMI EXPERIMENTAL TESTING OF PERFORMANCES GVMI
K. Stockman F. D'hulster K. Verhaege J. Desmet R. Belmans	VOLTAGE DIP IMMUNITY TEST SET-UP FOR INDUCTION MOTOR DRIVES
I. Sekula J. Varga J. Radaković	Određivanje temperature zagrevanja velikih asinhronih motora primenom metode dvofrekventnog napajanja LARGE INDUCTION MOTORS HEAT TEMPERATURE DETERMINATION USING TWO FREQUENCIES SOURCES SUPPLY
J. Varga I. Sekula J. Radaković	Indirektna metoda za određivanje karakteristike opterećenja velikih asinhronih motora INDIRECT LOAD CHARACTERISTICS DETERMINATION METHOD FOR LARGE ASYNCHRONOUS MOTORS
S. Gajin	Dijagnostika stanja glava namotaja statora generatora DIAGNOSTICS OF WINDING HEAD OF GENERATOR STATOR
S. Gušavac Lj. Gerić	Analiza parametara pouzdanosti rada elektromotora Beočinske fabrike cementa THE ANALYSIS OF PARAMETERS OF ELECTRIC DRIVE REALIBILITY IN BFC
S. Gušavac	Planiranje potreba za rezervnim motorima na bazi parametara pouzdanosti i šteta usled njihovog otkaza PLANNING THE NEED FOR RESERVE MOTORS ON BASIS OF REALIBILITY AND LOSS DUE TO THEIR FAILURE
M. Kostić	Metode za procenu opterećenja i stepena iskorišćenja asinhronih motora u radu EVALUATION METHODS FOR LOAD AND EFFICIENCY OF INDUCTION MOTOR IN THE EXPLOITATION.
I. Sabata M. Greconici A. Sabata	FORCE THAT ACTS ON A ROTOR WITH ALTERNATING POLES
Z. Kocić J. Stojanović M. Antić	Uređaj za zaštitu trofaznih motora A DEVICE FOR THREE PHASE MOTOR PROTECTION
V. Todosijević	Dinamičke pojave kod asinhronih generatora sa samopobuđivanjem DINAMIC EFFECTS AT INDUCTION SELF-EXITED GENERATORS

T4**CONTROL AND MEASUREMENT
UPRAVLJANJE I MERENJE U ENERGETICI**

M. Stojić M. Matijević	STRUCTURAL DESIGN OF DIGITAL CONTROL SYSTEM WITH IMMEASURABLE ARBITRARY DISTURBANCES
I. Celanovic N. Celanovic D. Boroyevich	A NEW DISTRIBUTED CONTROL ARCHITECTURE FOR FUTURE POWER ELECTRONICS SYSTEMS
N. Celanovic I. Celanovic D. Boroyevich	THE FEEDFORWARD METHOD OF CONTROLLING THREE-LEVEL DIODE CLAMPED CONVERTERS WITH SMALL DC-LINK CAPACITORS
Z. Kaczmarczyk B. Grzesik	OPTIMUM CONTROL OF CLASS E INVERTER WITH VARIABLE LOAD
T. Petrović A. Rakić	MODELING AND ROBUST CONTROLLERS FOR DETERMINISTIC SWITCHING DC/DC CONVERTERS
A. Nikolić	Savremena rešenja za analizu upravljanja motornim pogonima MODERN SOLUTIONS FOR ANALYSIS OF MOTOR DRIVE CONTROL
A. Nikolić B. Jeftenić	DTC metoda kod asinhronog pogona sa strujnim invertorom DTC METHOD FOR AC DRIVES WITH CURRENT INVERTER
D. Mitić B. Veselić	CHATTERING FREE SUB-OPTIMAL DISCONTINUOUS MINIMUM VARIANCE CONTROL OF DC MOTOR SPEED
R. Giuclea L. Kreindler A. Sarca L. Antognini	DSP CONTROL OF SYNCHRONOUS MACHINE WITHOUT POSITION AND SPEED SENSORS
M. Cernat V. Comnac F. Moldoveanu	SENSORLESS DIRECT TORQUE CONTROL OF PERMANENT MAGNET SYNCHRONOUS MACHINES BASED ON EXTENDED KALMAN FILTER
V. Vasić S. Vukosavić	Greška u struji statora kao izvor za procenu brzine am STATOR CURRENT ERROR AS SOURCE OF IM ROTOR SPEED ESTIMATION
B. Stojić P. Pejović	Analiza kompenzovanog strujnog senzora koji radi na principu hallovog efekta THE ANALYSIS OF COMPENSATED CURRENT SENSOR ON HALL EFFECT PRINCIPLE
A. Nikolić B. Jeftenić	Estimacija fluksa asinhronog motora merenjem u dc kolu ESTIMATION OF INDUCTION MOTOR FLUX BY MEASUREMENT IN DC LINK
M. Damjanović L. Nad Lj. Živanov	Induktivni senzor pomeraja u ravni sa korekcijom odstupanja DISPLACEMENT INDUCTIVE SENSOR IN THE PLANE WITH CORRECTION OF DISAGREEMENT
Z. Nikolin S. Vukosavić	Detekcija ugaone brzine i pozicije osovine primenom elektromagnetnog rezolvera i fpga logičkog kola visokog stepena integracije ANGULAR SPEED AND POSITION DETECTION BY ELECTROMAGNETIC RESOLVER AND FPGA LSI LOGIC CIRCUIT APPLICATION
S. Travica M. Srećković M. Živanov	Napajanje senzora optičkim putem OPTICALLY POWERED SENSORS
G. Andreescu A. Popa	OBSERVERS FOR MOTION CONTROL OF SERVO-DRIVES – COMPARATIVE STUDY
D. Mančić M. Radmanović	Projektovanje pretvarača pomoću “prividne elastičnosti” DESIGN OF TRANSDUCERS BY MEANS OF THE “APPARENT ELASTICITY” METHOD
R. Pentiu S. Pentiu A. Graur L. Cantemir C. Popa D. Danubianu	CONTROL SYSTEM FOR MECHANIC BAND CONVEYORS BASED ON PATTERN RECOGNITION TECHNIQUES
G. Livinț D. Lucache	THE CONTROL OF THE MAGNETIC SUSPENSION IN A FLYWHEEL SYSTEM

M. Belinčević M. Bebić B. Jeftenić	Upravljački algoritam za sinhronizaciju rada pogona letećih makaza CONTROL ALGORITHM FOR SYNCHRONIZATION OF THE FLYING SHEAR DRIVE
I. Sekula L. Ratman-Babić L. Peter	Industrijska mašina za pranje veša INDUSTRY WASHING MACHINE
L. Ratman-Babić L. Bolesni T. Beneš	Sistem za nadzor rada kotla za produkciju vrelе vode HOT WATER BOILER (HEATING REACTOR) SUPERVISOR SYSTEM
G. Bojković M. Nimrihter V. Bajović	Merno-akvizicioni sistemi i upravljanje MEASUREMENT-ACQUISITION SYSTEMS AND CONTROL
D. Pejić V. Vujičić	MEASUREMENT OF PWM SIGNALS USING UNIFORM RANDOM DITHERED TWO-BIT AD CONVERTERS
K. Nađ V. Vujičić	APPLICATION OF STOCHASTIC ADDING CONVERSION AND FUZZY LOGIC IN MEASUREMENT AND CONTROL
Dž. Tosunbegović V. Vujičić	Granice tačnosti stohastičkog DFT procesora ERROR LIMITS OF STOCHASTIC DFT PROCESSOR
P. Petrović S. Marjanović	Realizacija novog digitalnog mernog sistema REALIZATION OF NEW DIGITAL MEASUREMENT SYSTEM
P. Petrović	Digitalna obrada sporopromenljivih ac signala DIGITAL TREATMENT OF SLOW VARIABLE AC SIGNALS
V. Pjevalica V. Vujičić	MEASUREMENT OF NONSINUSOIDAL ELECTRICAL POWER AND ENERGY
Z. Ristanović V. Vujičić	FAST DETECTION OF FAULT WITH ARC
M. Nimrihter R. Ćirić G. Bojković Z. Radojević	REAL AND PSEUDO-MEASUREMENTS IN DISTRIBUTION NETWORKS
M. Kostić	MEASURING OF ADDITIONAL NO-LOAD LOSSES IN INDUCTION MOTORS AND PROOF OF PROPOSITION $P_{ado} \sim I_0^2$

T5

POWER ELECTRONICS IN TELECOMMUNICATIONS ENERGETSKA ELEKTRONIKA U TELEKOMUNIKACIJAMA

R. Kosanović J. Varga J. Almaši	Elektroagregat za punjenje akumulatora sa integrisanim sinhronim bezkontaktnim generatorom ELECTRO-GENERATOR FOR ACCUMULATOR CHARGING USING INTEGRATED CONTACTLESS GENERATOR
V. Marić	LIVE INSERTION IN SHELF-BASED EQUIPMENT SYSTEMS