

REVUE ROUMAINE  
DES  
SCIENCES TECHNIQUES  
SÉRIE  
**ÉLECTROTECHNIQUE**  
**ET**  
**ÉNERGÉTIQUE**

Tome 68, 2023, N° 1, Janvier–Mars

Paraît quatre fois par an

Revue incluse dans

“Clarivate Analytics Science Citation Index Expanded (also known as SciSearch\*) and Journal Citation Reports/Science Edition”

**S o m m a i r e**

<i>In memoriam</i> Professor Alexandru Fransua .....	3
<i>In memoriam</i> Professor Ioan Cricic.....	5

**Électrotechnique et électroénergétique | Electrical engineering and electrical power engineering**

KHALIL BENMOUIZA, Nonlinear clustered adaptive-network-based fuzzy inference system model for hourly solar irradiation estimation.....	7
WASSILA ISSAADI, SALIM ISSAADI, Influence of the sampling frequency on various maximum power point tracking commands.....	12
ALI CHEBABHI, AL-DWA ALA ADDIN MOHAMMED HUSIN, SAID BARKAT, MOHAMMED KARIM FELLAH, Proportional integral quasi-resonant controller for zero-sequence circulating Current and ripple suppression in parallel three-phase rectifiers .....	18
BOUROUNECH CHARAF, LEHOUCHE HOCINE, MENDIL BOUBEKEUR, A novel approach for controlling with a matrix converter .....	24
JASMINE GNANA MALAR, VENKATRAMAN THIYAGARAJAN, NATARAJAN BALASUBRAMANIAN MUTHU SELVAN, MANI DEVESH RAJ, Electric vehicle onboard charging via Harris hawks optimization-based fractional-order sliding mode controller .....	30
DRAGOŞ-ŞTEFAN NICOLESCU, PETRU ROŞCA, ALEXANDRU RADULIAN, CRISTIAN PREDOI, ALEXANDRU MUNTEANU, Main electrical components of an assault rifle with adaptive mechanism .....	36
MOHAMED NADJIB BENALLAL, ALI MAHIEDDINE, CHERIFA KARA MOSTAPHA KHELIL, AMEL MAZOUZ, Use of the <i>B-H</i> curves approximation for the calculation of magnetic circuits in electrical machines .....	42
IBRAHIM YAICHI, ABDELHAFID SEMMAH, PATRICE WIRA, Control of doubly-fed induction generator using artificial neural network controller .....	46
MAMA CHOUITEK, ABDELLAH CHAOUCH, BENAISSE BEKKOUCHE, Comparison of the various controls of the switched reluctance motor 12/8 .....	52
FAYSSAL AMRANE, AZEDDINE CHAIBA, BRUNO FRANCOIS, Improved adaptive nonlinear control for variable speed wind-turbine fed by direct matrix converter .....	58
TOUFIK ROUBACHE, SOUAD CHAOUCH, Nonlinear fault tolerant control of dual three-phase induction machines based electric vehicles .....	65
TIBERIU TUDORACHE, ANDREI MARINESCU, ADRIAN VINTILA, Inductive coupler for battery charging system of heavy electric vehicles .....	71
MIHAIȚĂ-ALEXANDRU ILIE, DAN FLORICĂU, Grid-connected photovoltaic systems with multilevel converters – modeling and analysis.....	77

**Électronique et transmission de l'information | Electronics and transmission of information**

ASHWINI KUMAR VARMA, AJEET KUMAR VISHWAKARMA, ANOOP KUMAR TIWARI, DEBJANI MITRA, Discriminating statistical feature for wideband spectrum sensing .....	84
---------------------------------------------------------------------------------------------------------------------------------------------------------	----

**Automatique et ordinateurs | Automatics and computers**

CRISTIAN-GEORGE DRAGOMIRESCU, RADU-MIRCEA CIUCEANU, MARIA-IULIANA DASCALU, IOSIF-VASILE NEMOIANU, Theory of catastrophes regarding the operation of a dc	
----------------------------------------------------------------------------------------------------------------------------------------------------------	--

electric motor with series excitation.....	90
YOUSSEF OUBBATI, BRAHIM KHALIL OUBBATI, ABDELHAMID RABHI, SALEM ARIF, Experimental analysis of hybrid energy storage system based on nonlinear control strategy.....	96

### **Thermotechnique et thermoénergétique | Thermal engineering and thermal energy**

DJAMILA TALAH, HAMID BENTARZI, GIOVANNI MANGOLA, Modeling and simulation of an operating gas turbine using Modelica language .....	102
MANSOUR ZEGRAR, M'HAMED HOUARI ZERHOUNI, FATIMA ZOHRA ZERHOUNI, Réalisation pratique d'un système de purification d'eau utilisant la source solaire photovoltaïque avec suivi du point de puissance maximale.....	108

### **Génie biomédical | Biomedical engineering**

AYSHWARYA LAKSHMI S., A disease prediction model using spotted hyena search optimization and bidirectional long short-term memory .....	113
--------------------------------------------------------------------------------------------------------------------------------------------	-----