

## **ATEE'04 PROCEEDINGS**

### **Secțiunea Electrotehnică Teoretică (Electric Circuits and Electromagnetic Field & CAD in Electrical Engineering Thematic Section Sessions)**

#### **Oral Session I , 25<sup>th</sup> Nov., 15:00-17:00, room EB 206**

**CHAIRMANS:** *Prof.dr.ing. Florea Hăniță*  
*Prof.dr.ing. Florin Constantinescu*

1. [\*\*THEOREMS ABOUT THE MINIMUM OF THE POWER FUNCTIONAL IN LINEAR AND RESISTIVE ELECTRIC CIRCUITS, Horia ANDREI, „Valahia” University of Targoviste, Fanica SPINEI, Costin CEPISCA, „Politehnica” University of Bucharest\*\*](#) (pp. 1-6)
2. [\*\*PARALLEL MODELING OF MAGNETIC MATERIALS WITH HYSTERESIS, Valentin IONITA and Radu PIETRARU, „Politehnica” University of Bucharest\*\*](#) (pp. 7-10)
3. [\*\*REDUCED-ORDER MODELLING TECHNIQUES BASED ON STATE VARIABLE SPACE AND THEIR USE IN CIRCUIT DIAKOPTIC ANALYSIS, Mihai Iordache, Lucia Dumitriu, “Politehnica” University of Bucharest\*\*](#) (pp. 11-25)
4. [\*\*UNITĂȚI DE MĂSURĂ NOI ÎN INFORMATICĂ, Mihai Vasiliu, “Politehnica” University of Bucharest\*\*](#) (pp. 25-26)

#### **Oral Session II , 25<sup>th</sup> Nov., 17:00-18:30, room EB 206**

**CHAIRMANS:** *Prof.dr.ing. Florea Hăniță*  
*Prof.dr.ing. Florin Constantinescu*

1. [\*\*CONSIDERAȚII PRIVIND STUDIUL REGIMULUI DEFORMANT, Cătălin VOINA, Simona MORARU, Andreea COSAC, Universitatea Politehnica București\*\*](#) (pp. 27-32)
2. [\*\*A NUMERICAL MODEL OF INTERNAL ELECTRICAL STIMULATION OF THE HEART, Oana Mihaela DROSU, “Politehnica” University of Bucharest\*\*](#) (pp. 33-36)
3. [\*\*A NUMERICAL MODEL OF EXTERNAL ELECTRICAL STIMULATION, Oana Mihaela DROSU, “Politehnica” University of Bucharest\*\*](#) (pp. 37-40)
4. [\*\*CALCULUL RĂSPUNSULUI PERIODIC AL CIRCUITELOR NELINIARE DE RF CU METODA URMĂRII INFASURĂTOAREI IMPLEMENTATA IN SPECTRE RF, Alexandru Gheorgh, “Politehnica” University of Bucharest\*\*](#) (pp. 41-46)
5. [\*\*MIXED NOISE REDUCTION, Marilena Stanculescu, Emil Cazacu, “Politehnica” University of Bucharest\*\*](#) (pp. 47-52)
6. [\*\*DENOISING TECHNIQUES ASPECTS, Marilena Stanculescu, Emil Cazacu, “Politehnica” University of Bucharest\*\*](#) (pp. 53-56)
7. [\*\*ESTIMATION OF DIMENSIONS OF MAGNETIC INDUCTIVE DISPLACEMENT RACK TRANSDUCER, A. Stănciulescu, I. Nemoianu, O. Drosu, Anișoara Anghel\*\*](#) (pp. 57-60)
8. [\*\*INDUCTANCE COMPUTATION USING SCALAR BEM, M.Maricaru, Politehnica University of Bucharest, Romania\*\*](#) (pp. 61-66)
9. [\*\*REACTANȚĂ CAPACITIVĂ COMANDATĂ ELECTRIC, Radu G., Leonte P., Furnica E., Ilas I., Corduneanu P., Univ.Tehnică “Gh. Asachi”Iasi, Facultatea de Electrotehnică\*\*](#) (pp. 67-70)

**Poster Session, 25<sup>th</sup> Nov., 17:00-18:30, EA Hall**

**CHAIRMAN:** *Prof.dr.ing. Mihai Iordache*  
*Prof.dr.ing. Augustin Moraru*

1. **ANALIZA COMPARATIVA A COMPORTARII CUPLAJELOR COAXIALE SI FRONTALE – CU MAGNETI PERMANENTI – IN MEDII CU TEMPERATURA RIDICATA**, Ion Voncila, Cristian Munteanu, Razvan Buhosu, Universitatea « Dunarea de Jos » din Galati (pp. 71-76)
2. **POSSIBILITĂȚI DE MENTINERE A NIVELULUI DE TENSIUNE CU DISPOZITIVE ELECTROMAGNETICE COMANDATE ORTOGONAL**, \*Petru CORDUNEANU, \*Petru LEONTE, \*\*Minel LICĂU, \*Gabriel RADU, \*Universitatea Tehnică "Gh. Asachi" Iași, \*\*S.C. Translectrica S.A. Sucursala Iași (pp. 77-80)
3. **NONLINEAR AND TIME-VARIANT ANALOG CIRCUIT ANALYSIS IN THE TIME DOMAIN**, Lucian Mandache, University of Craiova, Lucia Dumitriu, Mihai Iordache, "Politehnica" University of Bucharest (pp. 81-85)
4. **THERMAL FIELD ANALYSIS FROM THE TURBO-GENERATOR ROTOR WITH DIRECT COOLING**, Nicolae Voicu, Mihai Iordache, "Politehnica" University of Bucharest (pp. 86-98)
5. **COMPUTER AIDED GENERATION OF DC AND AC CIRCUIT TESTS**, Paul Cristea, "Politehnica" University of Bucharest (pp. 99-111)
6. **REGIMURILE DE FUNCTIONARE ALE CIRCUITELOR AUTONOME SI NEAUTONOME**, Florin Constantinescu, Miruna Nitescu, "Politehnica" University of Bucharest (pp. 112-119)
7. **ISOLATION TRANSFORMER SOLUTIONS TO ELECTROMAGNETIC COMPATIBILITY PROBLEM**, Doina Marin, Vasile Trusca, B. Nisipeanu, Constantin Viorel Marin (pp. 120-125)
8. **OVER THE MORTAR FINITE ELEMENT METHOD IN LINEAR ELECTROSTATICS**, Răzvan Răducanu, Al. I. Cuza University, Iasi, Romania (pp. 126-134)
9. **ENERGY EXCHANGE FIELD-CIRCUITS**, Mihai Vasiliu, Florea Hăntîlă, "Politehnica" University of Bucharest
10. **ENERGY DISTORTION COEFFICIENTS OF COAXIAL CABLES UNDER PERIODIC NON-SINUSIODAL CONDITIONS**, Sorin I. Antoniu, "Politehnica" University of Bucharest (pp. 135-140)
11. **ENERGY DISTORTION COEFFICIENTS OF BIMETALLIC CONDUCTORS UNDER PERIODIC NON-SINUSIODAL CONDITIONS**, Sorin I. Antoniu, "Politehnica" University of Bucharest (pp. 141-146)
12. **RADIAL-GAP ELECTROSTATIC WOBBLE MOTOR**, Anca TOMESCU, Sorin ANTONIU, Mihaela GHITIU, F.M.G. TOMESCU, "Politehnica" University of Bucharest (pp. 147-152)
13. **SIMULATION OF WAVE PROPAGATION ON ELECTRIC LINES**, Anca TOMESCU, Sorin ANTONIU, F.M.G. TOMESCU, "Politehnica" University of Bucharest, Mircea CATRINOIU, CN INVEST – Cernavodă (pp. 153-156)
14. **INTEGRATED CAPACITIVE MICROPHONE**, Anca TOMESCU, Sorin ANTONIU, F.M.G. TOMESCU, "Politehnica" University of Bucharest, George Cătălin CAZANGIU (pp. 157-162)
15. **INTEGRATED MAGNETICALLY ACTUATED MICRORELAY**, Anca TOMESCU, Sorin ANTONIU, Gabriela CIUPRINA, "Politehnica" University of Bucharest, Stefan COLLER, S.C. COL-AIR S.R.L. Bucharest (pp.163-167)
16. **AXIAL-GAP ELECTROSTATIC WOBBLE MICROMOTOR**, Anca TOMESCU, Sorin ANTONIU, F.M.G. TOMESCU, "Politehnica" University of Bucharest, Răzvan MACOVEI, ING – ROMANIA, Bucharest (pp. 168-172)
17. **SALIENT-POLE ELECTROSTATIC MICROMOTOR**, Anca TOMESCU, Mihaela GHITIU, Sorin ANTONIU, "Politehnica" University of Bucharest, Daniel MARTA (pp. 173-177)

18. **DELAY AND INTERFERENCE IN INTERCONNECTS**, Anca TOMESCU, Sorin ANTONIU, F.M.G. TOMESCU, "Politehnica" University of Bucharest, Roxana Violeta MEGELEA (pp. 178-183)
19. **PERMANENT-MAGNET ANGULAR MICROACTUATOR**, Anca TOMESCU, Sorin ANTONIU, F.M.G. TOMESCU, "Politehnica" University of Bucharest, Gabriela PETROSEL-CIUGULEA (pp. 184-189)
20. **ELECTROSTATIC LEVITATION IN COMB MICROACTUATORS**, Anca TOMESCU, Mihaela GHITIU, Sorin ANTONIU, "Politehnica" University of Bucharest, Răzvan Nicolae POPA, G&B-CONSULT, Bucharest (pp. 190-195)
21. **PERMANENT-MAGNET SPIRAL-COIL ANGULAR MICROACTUATOR**, Anca TOMESCU, Sorin ANTONIU, F.M.G. TOMESCU, "Politehnica" University of Bucharest, Cătălina Gabriela POPESCU (pp. 196-200)
22. **ELECTROSTATIC ANGULAR MICROACTUATOR**, Anca TOMESCU, Sorin ANTONIU, Gabriela CIUPRINA, "Politehnica" University of Bucharest, Petru Gabriel TAFLAN, ROMAVIA – Bucharest (pp. 201-206)
23. **ELECTROHYDRODYNAMIC POLARISATION MICROPUMP**, Anca TOMESCU, Sorin ANTONIU, F.M.G. TOMESCU, "Politehnica" University of Bucharest, Alexandru TEODORU, NOVISANA – Bucharest (pp. 207-212)
24. **AXIAL-GAP ELECTROSTATIC MICROMOTOR**, Anca TOMESCU, Sorin ANTONIU, F.M.G. TOMESCU, "Politehnica" University of Bucharest, Ramona Marilena TOADER, ICPE COENERG – Bucharest (pp. 213-218)
25. **RECONSTRUCT OF THE AGED REGIONS IN THE FERROMAGNETIC BODIES**, F. Hantila\*, C.Mihai\*, and T.Leuca\*\*, \*)Politehnica University of Bucharest, Romania, \*\*)University of Oradea, Romania (pp. 219-228)
26. **ERRORS IN NUMERICAL SOLVING OF NONLINEAR MAGNETIC FIELD PROBLEMS**, F.Hantila\*, M.Vasiliu\*, M.Maricaru\*, and C.Ifrim\*\*, \*)Politehnica University of Bucharest, Romania,\*\*)Ecoair Corp., USA (pp. 229-232)