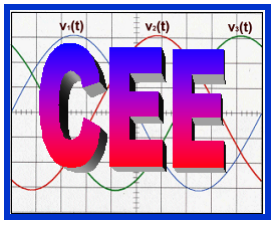
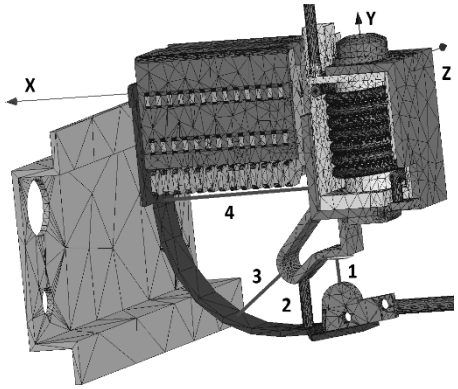
POWER QUALITY AND ENERGY EFFICIENCY

Contact details

Name	**Power Quality and Energy Efficiency**
Acronym	**CEE**
Logo	
Site	http://cee.ubm.ro/CEE
Address	62/A Dr. V. Babes Str., 430083, Baia Mare, Romania
Faculty Department	**Faculty of Engineering** **Electrical, Electronic and Computer Engineering Department**
Telephone	+40 362 401265
Fax	+40 262 276 153
Director	Assist. Prof. Dr. Eng. Liviu Neamt
e-mail	liviu_neamt@cunbm.utcluj.ro



Areas of expertise

Modern computer aided design, analysis and optimization of electrical equipments, based on Finite Element Method.
Energy efficiency through power circulation improvement, enhanced technologies and renewable energies integration;
Monitoring, analysis and improvement of power quality;
Measurement, testing and diagnosis in electrical installations.

Team

Assist. Prof. Dr. Eng. Liviu Neamt, Assist. Prof. Dr. Eng. Olivian Chiver, Assoc. Prof. Dr. Eng. Mircea Horgos, Prof. Dr. Eng. Liviu Emil Petrean:

Representative projects

“Electromagnetic field simulation of capacitive touch sensors”. Electrolux, 2015;
“High Voltage switching equipment”, Electrosistem, 2015;
“Investigation of the circumstances and causes of the LV electrical equipment failure due to HV commutation at CEFD Solaris 56 MWp Ciuperceni”, Bester Generacion, 2015;
“Consulting services and earthing system testing on overhead power line 400 KV Gădălin – Cluj Est”, Emsens, 2014;
“**Technical analysis of the power quality at UAC Dumbrăvița**”, 2014.

Significant results

The most representative publications of the past 5 years:

1. Neamt L, Neamt Alina, Chiver O, Horgos M, A flexible design method for double-shell magnetostatic shields, Journal of Electrical and Electronics Engineering, volume 4 - nr. 1, pp. 135-138, 2011.
2. Neamt L, Horgos M, Chiver O, Erdei Z, Estimation of power cables magnetic fields in mine tunnels, Journal of Sustainable Energy, pp. 20-25, volume II - nr. 4, 2011.
3. Chiver O, Neamt L, Horgos M, Finite elements analysis of a shell-type transformer, Journal of Electrical and Electronics Engineering, vol4/nr.2, pp. 98-101, 2011.
4. Chiver O, Neamt L, Horgos M, Oniga S and Buchman A, The study of transient regimes for a shell-type transformer, Carpathian Journal of Electronic and Computer Engineering, vol.4/nr.4, pp. 156-159, 2011.
5. Pop D. D, Tîrnovan R, Neamt L, Vaida T, Optimal design of a cylindrical magnetic shield against electromagnetic interferences, Acta Electrotehnica, Special issue: "Selected papers from the 4th international conferences on modern power systems, MPS 2011, pp. 362-365, Cluj Napoca, 2011.
6. Neamt L, Coman Mirela, *Corrected simple solar irradiance model for mono-si photovoltaic potential estimation*, Carpathian Journal of Electronic and Computer Engineering, volume 4 - nr. 1, pp. 89-92, 2011.

7. Neamt L, Pop D, Chiver O, Barz C., *Numerical Simulation of the Interactions between Low Voltage Network, Miniature Circuit Breaker and Mounting Technique*, 19th International Conference on the Computation of Electromagnetic Fields, Compumag 2013, Budapest, pc3-23, 2013.
8. Pop D, Neamt L, Tîrnovan R, Sabou D., *3D Finite Element Analysis of a Miniature Circuit Breaker*, The 8th International Symposium on Advanced Topics In Electrical Engineering, Bucharest, 2013, pp. 1-6, 2013.
9. Chiver O, Neamt L., Horgos M., Barz C, *Study of salient poles synchronous generator by finite elements analysis*, 12th International Conference on Environment and Electrical Engineering, EEEIC 2013, pp. 450-454, 2013.
10. Chiver O, Neamt L., Pop D., Barz C., *Torque-Slip Characteristic of Squirrel Cage Induction Motor by New FEA Technique*, 19th International Conference on the Computation of Electromagnetic Fields, Compumag 2013, Budapest, pc6-11, 2013.
11. Pop D., Neamt L, Tirnovan A, Sabou D. , *Analysis of an Electrical Arc in a Low Voltage Miniature Circuit Breaker*, Acta Electrotehnica, Vol 54, nr. 5, pp 378-381, 2013.
12. Neamt, L., Chiver, O., *A simple method for photovoltaic energy estimation*, in 12th International Conference on Environment and Electrical Engineering, EEEIC, pp. 513-516, 2013,
13. Neamt, L., Chiver, O., Barz, C., Costea, C., Erdei, Z., *Considerations about power system grounding for different soil structure*, Proceedings of the 2014 International Conference and Exposition on Electrical and Power Engineering, pp. 1034-1038, 2014,
14. Chiver, O., Neamt, L., Barz, C., Costea, C., *Frequency domain numerical analysis of rotor cage induction motor*, Proceedings of the 2014 International Conference and Exposition on Electrical and Power Engineering, pp. 327-331, 2014,
15. Barz C, Oprea C, Chiver, O, Erdei Z, Neamt L, Pop Vadean Alina, *The Advantages of Numerical Analysis for Claw Pole Alternator*, Proceedings of the 2014 International Conference and Exposition on Electrical and Power Engineering, pp. 353-356, 2014,
16. Neamt, Liviu; Matei, Oliviu; Chiver, Olivian, *Optimised Methodology for Stepper Motor Simulation*, IEEE 15th International Conference on Environment and Electrical Engineering Rome, pp: 1078-1082, 2015,
17. Neamt Liviu; Chiver Olivian; Bartis Madalin, *Capacitive Touch Sensors Sensibility For Different Ground Hatch And Shield Electrode Structures*, The 9th International Symposium on Advanced Topics in Electrical Engineering, Bucharest, pp. 123-127, 2015,
18. Chiver, Olivian; Neamt, Liviu; Matei, Oliviu, *Comparative study on sudden short-circuit currents of a synchronous generator*, IEEE 15th International Conference on Environment and Electrical Engineering Rome, pp: 1688-1693, 2015,
19. Horgos Mircea; Neamt Liviu; Erdei Zoltan; Chiver Olivian; Barz Cristian; Zetea Ovidiu, *Determination Of System For Wireless Power Transfer*, The 9th International Symposium on Advanced Topics in Electrical Engineering, Bucharest, pp. 223-227, 2015..

Research, development and design of the 2+3 m^3 gully emptier control and automation, S.C. ADISS SRL;

The offer addressed to the economic environment

Research & development	Electrical equipments analysis and optimization, based on Finite Element Method; Energy efficiency and better power quality trough power circulation improvement, based on computer assisted simulation; Development of enhanced technologies in energy conversion; Development of new testing and diagnosis methods in electrical installations. Achievement of a software routine for simulating-validation of the electrical equipments and installations design results: high current and voltage, control systems; Optimization of electrical equipments and installations performances based on client specification; Development of a software platform structured on a data base with energy efficiency actions, usable on-line by consumers.
Consulting	Audit, energy efficiency and power quality; Renewable sources potential estimation for feasibility studies; Renewable energy conversion systems integration; Complicated measurements in electrical installations, data processing and results interpreting.
Training	Romanian Energy Regulatory Authority certified courses for electricians,; project supervising, experts, Romanian Energy Regulatory Authority certified courses for: energy auditors and managers; Measurement, testing and diagnosis in electrical installations using modern equipment and techniques; Renewable energies integration. Energy efficiency and power quality at consumers.