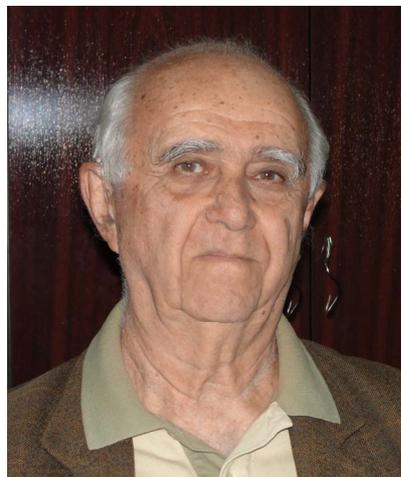


## Professor Grigore CIVIDJIAN at his 80<sup>th</sup> anniversary

Professor Grigore A. Cividjian was born in Chişinău (Republic of Moldova) on 12 January 1936. He followed the National College Carol I in Craiova between the years 1946 and 1953, when the name of this famous school was Popular College « Nicolae Bălcescu ». He graduated from the Craiova Institute of Electrical Machines and Apparatus in 1958 and sustained his graduated work in Polytechnic Institute of Bucharest in the summer of



1963, obtaining the engineer diploma in electrical machines and apparatus. In 1966 he began the doctoral study in theoretical electricity at Gh. Asachi Polytechnic Institute of Iassy with Professor dr. doc. ing. Gheorghe VASILIU, considered worthy successor of illustrious Dragomir Hurmuzescu and Ştefan Procopiu and also the mathematical study at University of Craiova. He sustained the thesis entitled “Contributions to the optimization of the parameters of shading coils from the electromagnets of control apparatus” and obtained his doctor (PhD) diploma in theoretical electricity in Polytechnic Institute of Iassy in 1970. In the next year he graduated from the University of Craiova with license in mathematics.

He began his activity as worker in local industry enterprise ILMET Craiova in 1958 in the metrological verification of high pressure mechanical installations, measuring instruments and electrical elevators and from May 1960 he is electrical installations designer in project institute DSAPC Craiova.

In September 1967 he was transferred as assistant in the new opened University of Craiova, in 1969 is promoted as lecturer and from 1977 he won a contest for associated professor of Electrical Apparatus.

In 1972 he made a 1 month formation stage in Bucharest Polytechnic Institute in *modeling the electric and magnetic fields* and in 1973 a 3 month formation stage in *switching arc phenomena* in the Sankt Petersburg Polytechnic institute.

In 1990 as result of contest he become university professor and PhD supervisor. In 1997 he is awarded with the title of professor emeritus of the Craiova University.

From 2006 he is consulting professor, associated to the Electrical Engineering faculty and director of the IEETE research center.

Prof. G. A. Cividjian was head of the department of Electrical Apparatus between 1990 and 2004 and along the years gave the following courses: Electrical apparatus (equipment), Statistical models and reliability (both in Romanian and French), Computer aided design of electrical apparatus, Special problems of electrical apparatus-switching in vacuum and SF<sub>6</sub>, Electro-physical devices (in Romanian and French). However his courses were at a high scientific level, sometimes difficult to understand, he was very appreciated by the students, being very close to them.

As invited professor he gave some lectures in the University of Perugia (Italy, 1999) and in Technical University of Sofia (Bulgaria, 2001). He participated with contributions at international doctoral schools as Budva (Serbia and Montenegro, 2004), Ohrid (Macedonia, 2005), Nis, CEMBEF (Serbia, 2009).

He made short documentation visits in several universities as Lancashire from Preston (GB), TEI Patras (GR), Bochum (D), University of Toulouse (F) by program Tempus, INSA Lyon (F) by program Erasmus, University of Sherbrooke, Ecole Polytechnique de Montréal, Ecole de Technologie Supérieure (Canada), University of Nis (YU), Technical University of Brno (CZ), University of Delft (NL).

The research was and is his permanent activity, materialized in large part with solutions for practical problems occurring in industry or research institutions. From 2001 prof. G. A. Cividjian is the director of the Research Center for Electrical Energy Engineering and Ecological Technology (IEETE) of University of Craiova. His research activity can be summarized as follows:

146 published research papers in national and international revues as “Rev. Roum. Sci. Tech. Electrotechnique et Energetique », « Electrotehnica, » « Studii si cercetari ale Academiei – Fizica si Stiinte Tehnice, » and « Archiv für elektrotechnik », « Elektrotehnika », « Izv. VUZ - Elektromehanika », « Elektrichestvo », “IEEE Transactions on Magnetics”, “Compel”, “Serbian Journal of Electrical Engineering”, “Electrical Engineering (PI)”, or in proceedings of international conferences as “Modelling, Simulation & Control, A, AMSE Press”, “Accelerators'92, Seventh Conference on Applied Accelerators, St. Petersburg, 16-18 June, 1992, “Seventh Int. Conf. on Switching Arc Phenomena, SAP' 93”, “The 5-th International Conference on Electrical Fuses and their Applications, ICEFA'95, 25th - 27th Sept., 1995, VDE Verlag, Technical University Ilmenau, Germany”, “7-th

International IGTE Symposium on Numerical Field Calculation in Electrical Engineering, Proceedings, p. 1, Graz, Austria, Sept. 23-25, 1996”, “Numelec' 97, Seconde Conférence Européenne sur les Méthodes Numériques en Electromagnétisme, 19-21 mars, 1997, Ecole Centrale de Lyon, France”, “International Symposium on Short-circuit currents in Power systems, Brussels (Belgium), 8-10 October, 1998”, *Symposium on Physics of Switching Arc*, TU Brno (Czech Rep.), 1994 – 2005.  
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Prof. G. A. Cividjian is the author of the textbooks “Aparate electrice, Reprografia Universitatii din Craiova, 1970, 1972”, «Aparate electrice – Izolatie si arc, 1996” and the first author of the textbook , “Modèles statistiques et fiabilité, Université de Craiova, 2003”. He contributed as coauthor at two monographs on electrical technologies (coordinated by F. T. Tanasescu e. a.) published in Romanian Editura Academiei (2002) si Editura AGIR (2011) with the chapters on Magnetic separation (I. Bahrin, G. Cividjian), pp. 346-392 and respectively Acoustic emission (N. Cividjian, G. Cividjian) pp. 549-598 and also at the proceeding of selected papers edited by S. Wiak and E. Napieralska-Juszk: Computer field models of electromagnetic devices, IOS press, Amsterdam, Berlin, Oxford, Tokyo, Washington DC, 2010, 935 p.:with Exact expression of corner reluctances in a magnetic circuit of rectangular section, (E. Matagne, G. A. Cividjian and Virginie Kluyskens), pp.134-142;

- He coordinated also 37 scientific research projects and is co-author of 3 invention brevets.

The main research directions of his activity are the modeling of electric and physical phenomena and processes, the optimization of electrical equipment and statistical models in engineering. Between his original contributions can be cited:

1. Optimization of the parameters of electromagnet shading coils with and without consideration of leakage flux;
2. Internal and external inductance of the coils with rectangular cross-section and application to the electromagnet design.
3. Contribution to the theory development of fragmented core transformers and of high voltage direct current cascade generators for industrial and medical accelerators.
4. Modeling the potential 2D strong no uniform fields: formulas for “corner permeance (capacitance)”, ‘corner force”, “constriction permeance”, “distorted constriction resistance” etc.
5. Modeling the physical processes in electrical apparatus and equipment; black-box arc model, lightning surges in transformers, thermal field diffusion in cylindrical items.

The research activity of prof. Cividjian is largely recognized in the world. He is member of several professional and scientific organizations as Romanian Electrical Committee CER (CT8), ASER (electrostatics), ACER (electrical compatibility), Fuse Club, member of IBC Advisory Council. He is also member of several scientific committees of international conferences as ICATE, SIELA, PES, SAP and member of editorial board of revues as Serbian Journal of Electrical Engineering and Annals of the University of Craiova – Electrical engineering. He was or is expert evaluator for INTAS, GACR (Czech Scientific Foundation), GNSF (Georgian National Science Foundation), FP-7 and voluntary reviewer for prestigious revues as IEEE Transaction on Magnetics (SUA) and COMPEL - The international journal for computation and mathematics in electrical and electronic engineering.

This is a short review of an activity dedicated to the professional formation of 49 generations of engineers and of an distinguished scientific research activity of the professor Grigore A. Cividjian.

Prof. dr. ing. Ioan C. POPA