

**CENTRUL DE INGINERIA ILUMINATULUI – UTC-N
LIGHTING ENGINEERING CENTER – LEC**

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Lighting Engineering Center - LEC – was created following the Tempus-Phare programme CME-03551-97 [15 December 1998 – 14 March 2000] – see the web site <http://bavaria.utcluj.ro/~lec>.

The LEC activity was presented in the previous issues of the journal (1 – 12), beginning with **25 April 2000** when its establishment was approved by the University Senate Council until **March 2004**, the printing date of the issue no. 12 (Winter) 2003

Dr. **Florin POP** and Dr. **Dorin BEU** contributed to the International Symposium on Lighting–Quality Solutions for an Efficient Lighting, Bucharest, September 2004, the XII National Conference on Lighting **Light '2004** 15–17 June 2004, Varna, and the IEECB '04 Conference, Frankfurt am Main, 21–22 April 2004.

INGINERIA ILUMINATULUI – Lighting Engineering journal, with a half-yearly appearance, is edited by the consortium of the Technical University, ELECTRICA Local Distribution Branch – Transilvania Nord, and MEDIAMIRA Printing House. Its scientific presentation and content is targeted to the continuing education in the lighting field, without any insertion of the commercial advertisings inside of its pages.

LEC members are involved in working-out of different **lighting systems optimization studies** and **lighting design projects** for local owners. An interesting study was initiated by the City Council in May 2004 for **the rehabilitation of pedestrian lighting in residential areas of Cluj-Napoca city** and conducted by the Lighting Engineering Center of the Technical University of Cluj-Napoca in two areas. The aims of this study are: a) to survey the existing situation; b) to present the new European and national regulations concerning this matter; c) to propose a modern energy efficient system, and d) to generate specific GIS maps of the whole lighting

system and electric network. The public lighting for pedestrian alleyways or for mixed traffic pedestrians/ vehicles between blocks of flats was made in the same time with the urban structure. For this reason the lighting system was designed and installed between 1960-1990. The existing system presents many deficiencies and cases of destruction determined by vandalisms, physical and technical use, inadequate protection, and low quality of lighting equipment. Proposals for a modern lighting system are targeted to obtain a high quality photometric environment and energy efficiency. The design is based on the quality requirements stipulated on the Romanian norms NP 062-02 and SR EN 60598 and European or CIE guidance. The presumed costs for the rehabilitation of pedestrian lighting in two residential districts of Cluj-Napoca – Grigorescu and Gheorghieni - are at about € 146,000, with respect to the rehabilitation of old or broken down equipment (electric cables and boxes, columns, lamps, luminaires and accessories) and to the extension of the lighting systems/network. The proposed systems will use an installed power $P_{inst. rehabilitated} = 75.492$ kW for 613 rehabilitated points and 319 new ones with HSE (Sodium) 70 W lamps instead of the used power $P_{real} = 126.828$ kW of old lamps.

On the university cooperation field, there is continuity under the frame of the UE institutional university programmes SOCRATES – ERASMUS with the Helsinki University of Technology (Professor Liisa HALONEN, Lighting Laboratory), Universitat Politecnica de Catalunya (Professor Ramon SAN MARTIN, Estudios Luminotecnicos), and University of Liverpool (Dr. David CARTER, Reader, Lighting Research Unit).

Professor dr. Jeong Tai KIM, director of the LAEL, Kyung Hee University, Seoul, Korea initiated the development of a university cooperation under the frame of The Memorandum of Understanding

Information

between Light & Architectural Environment Laboratory, Kyung Hee University and Lighting Engineering Center, Universitatea Tehnică din Cluj-Napoca.

The Lighting Engineering Center LEC is developing its activity on the Lighting and Electrical Installations Laboratory of the Building Services Department of the Technical University of Cluj-Napoca. The rehabilitation and technical modernization of its space was partially financed by the Tempus-Phare programme, the university

resources, the funds received on the research grants, and postgraduate courses and sponsorships of lighting/electric installations companies and former students:

PHILIPS Romania/FLASH Transilvania
OSRAM Romania
TOTAL Quality/ACI Constructions and Installations
LEGRAND Romania/Electro Daniella
PRAGMATIC Comprest
ABB Romania
ELBA



In connection with a prospective collaboration in research and development, the following Memorandum of Understanding has been concluded between

Lighting Engineering Center
Technical University of Cluj-Napoca
Hereafter designated as "LEC-TUCN"
Address: #15, C. Daicoviciu St., RO-400020 Cluj-Napoca, Romania
Represented by: Professor Florin POP, Director of Center

And

Light & Architectural Environment Laboratory
Kyung Hee University
Hereafter designated as "LAEL-KHU"
Address: #1, Socheon-ri, Kiheung-eup, Youngin-shi, Kyunggi-do, 449-701
Represented by: Professor Jeong Tai KIM, Director of Laboratory

1. LEC-TUCN and LAEL-KHU, enter into this memorandum of understanding to promote and extend the exchange of technical, scientific, and professional knowledge in the areas of mutual interest between the two institutions.

2. The purpose of this memorandum of understanding is to advance
- 1) Collaborative development of academic projects in the areas of mutual interest
 - 2) Dissemination of discoveries and findings arising from collaborative work
 - 3) Exchange of research staff
3. This memorandum of understanding shall become a valid agreement after it has been approved and signed by the Director of both institutions. The initial agreement is concluded for a period of two years from the date the latest amendment. The agreement may be terminated at any time prior to the expiry date by giving six months written notice by either party. Amendments to the agreement may be made any time, but should be mutually confirmed in writing by both institutions.

Date of Initial Memorandum of Understanding: 15th October, 2003

Signatures

	
Professor Jeong Tai KIM Director of Laboratory	Professor Florin POP Director of Center