



GEODETTIC PROFESSION

**Requirements, skills,
vision in the European context**



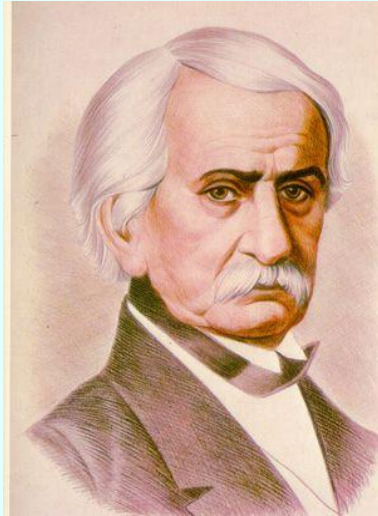
Romanian Geodetic Union

History :

- Oldest technical education in Romania is the **land surveying**;
- First colleges "hotărnicii" were established in the early nineteenth century by two outstanding Enlightenments , Gheorghe Asachi in Moldavia and Gheorghe Lazăr in Muntenia.
- From natural reasoning , that, you cannot educate and train professionals if not master very well yourself a profession , **Gheorghe Asachi and Gheorghe Lazăr** can be considered in this context the parents of geodetic engineering in Romania.
- Their creative period overlaps with the life of **Carl Friedrich Gauss** (1777-1855), who developed the reference work for Geodesy "*Theoria combinationis observationum erroribus minimis obnoxiae*" published in 1823.



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- begin studies in Lvov;
- 1804 - Vienna;
- 1808 - Rome;
- 1812 - returns in Iasi ;
- 1814 - establishes near "Academia Domneasca", a special class for "Inginerie si hotarnicie";
- 1818 - first promotion of "Ingineri hotarnici"



- Cluj;
- Vienna – studies Teology and Engineering School
- 1809 – topography works for the french army who had conquered Vienna;
- 1816 - Bucharest – "geometer"; the only Romanian who enjoyed this privilege;
- 1818 – Saint Sava monastery – The Engineering School ;



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ANUL I. IANUARIE-FEBRUARIE 1928 Nr 1

REVISTA CADASTRALĂ

ORGAN AL ASOCIAȚIUNEI GENERALE A TOPOMETRILOR
DIN ROMÂNIA

PROGRAMUL NOSTRU

Ing. D. I. Ciurileanu
Președintele Asociației Generale a
Topometrilor din România
Membru în Cons. Tehnic al Cadastrului

Dintre multiplele preocupări ce frământă cugetul bun al conducătorilor noștri de după război, și dintre problemele ce li se pun pentru o cât mai bună îndrumare a țării din punct de vedere economic, — răsare azi și se impune din ce în ce, prin importanța ei covârșitoare, *problema Cadastrului general*.

Această problemă, — pe care țările civilizate au rezolvat-o de peste un secol și pentru care intențiile bune ce au existat și la noi în trecut au cedat în fața unor continue amânări, — astăzi nu mai poate suferi nici o întârziere în rezolvarea ei.

- 1921 Polytechnic University of Bucharest;
- Distinct specialization - Cadastre;
- "Cadastral Engineer" diploma:

Ciurileanu:

The general Cadastre problem is solved with:

- ..entire armies of specialists prepared thru the agrarian reform in special schools based on Bacculaureate;
- ..surveying engineers trained in polytechnic schools, that have made Cadastral specialization.



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After 1990:

- Reestablishment of the **Faculty of Geodesy** at the Technical University of Civil Engineering Bucharest (***Specializations Geodesy and Cadastre***);
- Cadastre specializations at Iasi, Timisoara, Galati, Baia Mare, Oradea, Alba Iulia etc.

Training and professional organization:

- New curricula developed by five years of study ;
- Curricula content very close to those of Western European universities and that due to the doctoral scholarship programs such as "Humboldt", "DAAD", "ÖAAD" since the period 1970 - 1980 who have shown great benefit to education profile
- Reactivation of ***Romanian Geodetic Union*** and reappearance of ***Geodesy and Cartography Magazine***;



An important moment in professional life was:

Appearance of **Law 7/1996** and foundation of
**The National Offices for Cadastre, Geodesy and
Cartography - ONCGC**

A substantial contribution they have made during this period:

- Most representative civil institution IGFCOT;
- Military Topography Department DTM;
- Faculty of Geodesy;
- Romanian Geodetic Union etc.



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- Professional training of specialists of Geodesy and Cadastre in the first decade of XXI century is marked by the phenomenon BA / MA as a result of the Bologna Process !
- Bologna Process objectives are also known !
- FIG and CLGE had One of the first reactions to this process, witch have organized a seminar at Delft resulting the book "***Enhancing Professional Competence of Surveyors in Europe***" in 2000 published under the aegis of the FIG and CLGE.



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➤ **Personal Assessments :**

- Comparative study of curricula at most universities in Europe, which provides training in the field of Geodesy ;
- Defining competencies for a specialist in the field of land measurement ;
- Reduce the duration of studies for the first step to three years leads to sub qualification ;
- We recommend at least 4 years for this level etc.

➤ **Importance of professional organizations:**

As the Bologna process is known as a political action to create a unified European system of higher education by 2010 , the recommendations made by the FIG and CLGE in this book were very beneficial, because it led to the new curriculum which were developed from relevant competences;



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- In Romania the implementation of the system BA / MA began in 2005 thru the occurrence of the Law 288 / 2004 – regarding the organization of the university studies!



- Curricula were developed in four years and provides today in almost all university centers the following structure:
 - Fundamental training - 20 %
 - General engineering training - 23 %
 - General technical specialized training - 26 %
 - Specialized training - 24 %
 - Economical and legal training - 5 %
 - Complementary training - 2 %



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Outcome and effect on professional training:

- 14 University centers are offering curricula in the domain "***Geodetic Engineering***" - specialization "***Land Surveying and Cadastre***";
- A curricula exists at the Military Technical Academy ;
- A "***Mining Surveying***" curricula exists at Petrosani University;

In the **academic year 2009 - 2010** *were taken to competition in these university centers* (Study made by OGR – *vice president eng. Gh.Novac*):

At the specialization "***Land Survey and Cadastre***":

- 752 budgeted places + 1140 places with fee;

At the specialization "***Mining Surveying***":

- 53 budgeted places + 25 places with fee;

Total: 1970 places



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Master Studies

Were developed in 2009;

- Academic offer in Romania is provided by the Faculty of Geodesy of Bucharest – with 3 programs and Polytechnic University of Timisoara with – one program ;

Interests:

- Correlation studies curricula at the BA with the master license from the acquired skills;
- Collaboration with ARACIS (Romanian Agency for Quality Assurance in Higher Education);
- Collaboration with ACPART (National Agency for Qualifications in Higher Education and Partnership with Economic and Social Environment) especially in defining competencies for BA / MA ;



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- During this period the Romanian Union of Geodesy followed to achieve his main goals, which derives from that of the FIG, as well as a specific objective :
 - initiate the proposal and approval along with other professional associations a regulatory acts relating to organizing and exercise surveying activities ;

- Thus, after a remarkable mobilization was promoted to Law 16 / 2007 - Law on the organization and exercise the profession of surveyor in Romania;
- Promote legislation was a necessary action, taking account of the large number of "*specialists*" working in the field;
- In December 2008 Romania's Constitutional Court upheld the unconstitutionality raised by the Nation's Attorney about the organic nature of law, which was suspended;



Truth:

All theory is right, is almost necessarily fair. Not vice versa, that people had sinister practice in history.

Technique:

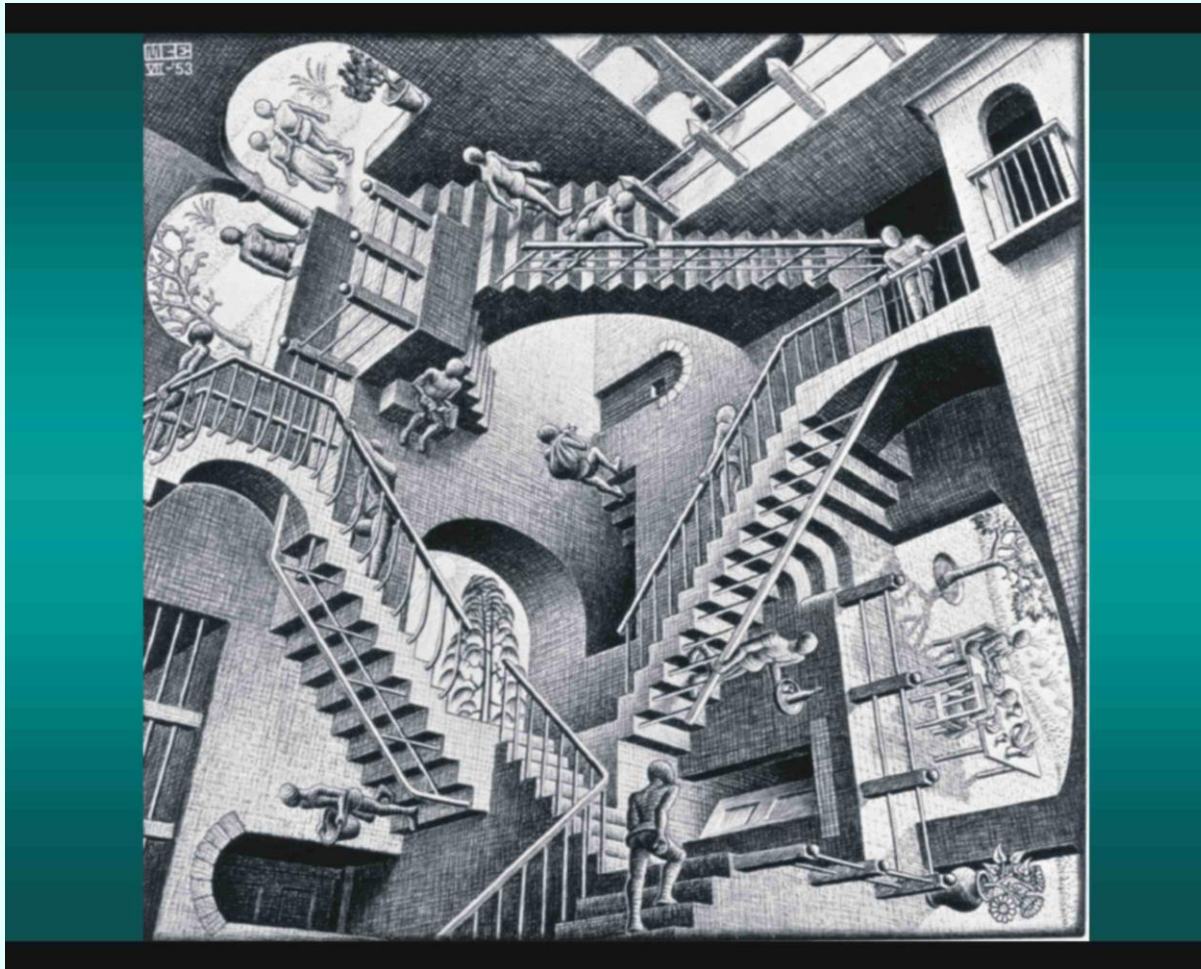
It is incorrect to have contempt for the technical. I am not a technocrat, but I recognize that the battle for the technical adjustment is universally useful. But that does not mean that the technique bears in her infinite dimension!

Petre Tutea



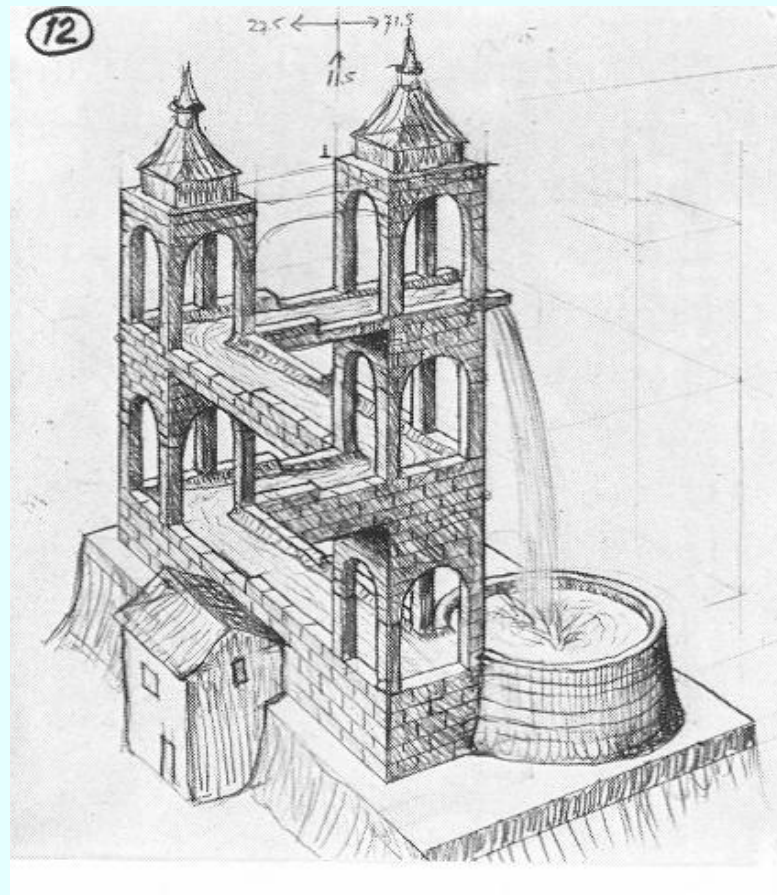
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Current status:



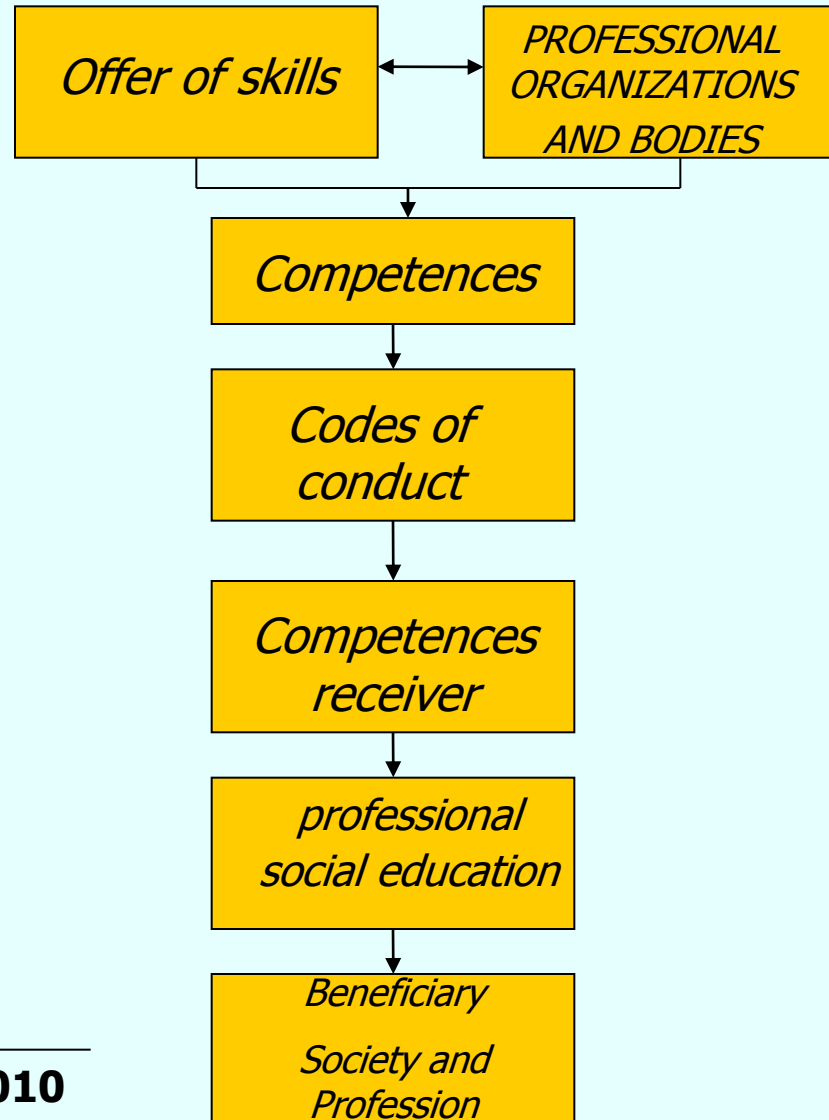
Bucharest – 07 May 2010

Discussions





WHY NOT TO THROW AWAY THE GUNS AND GIVE UP?



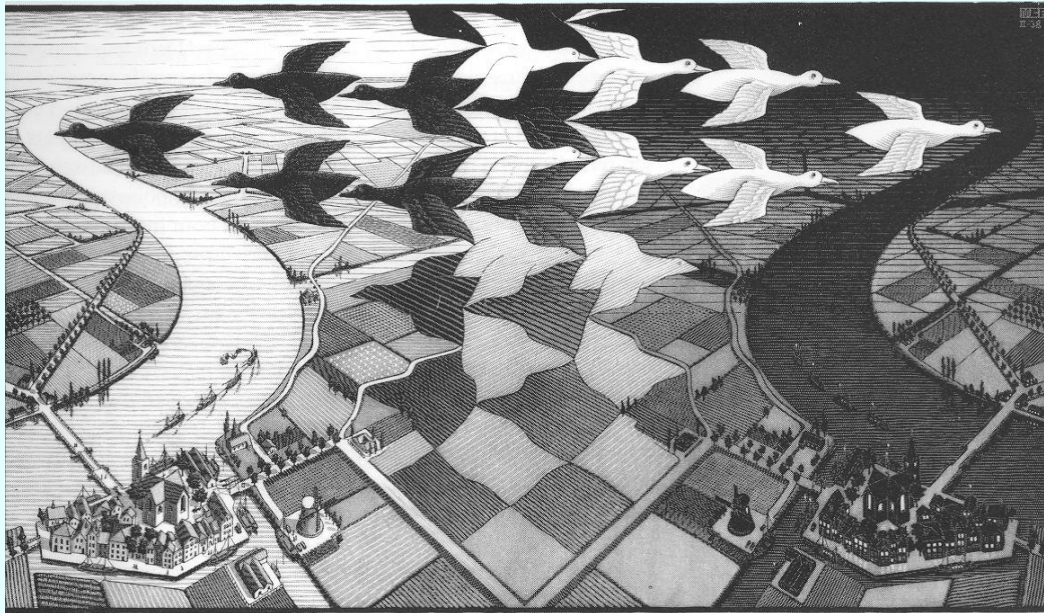


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I would like to conclude with some optimistic thoughts:

That individual personality is endowed with the capacity to give.
The hero is a person because he no longer belongs to himself.

Petre Tutea



**It is important to choose the right
path and right direction!**



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**Even in this apparent chaos
there are laws that govern!!**



Surely there is an order and balance !



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Thank you
for your attention!