

MINISTRY OF NATIONAL EDUCATION AND SCIENTIFIC RESEARCH
PETROLEUM-GAS UNIVERSITY OF PLOIEȘTI

HABILITATION THESIS

ABSTRACT

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IMPLICATIONS OF TOPOGRAPHY AND CADASTRE ON SPATIAL PLANNING AND SUSTAINABLE DEVELOPMENT

The „academic” is a complex and dynamic concept that involves scientific competence on the one hand, materialized through studies and recognized by professional prestige. On the other hand, teaching is a calling and the two components are inseparable.

This Habilitation Thesis highlights in a coherent manner the research achievements and prospects of the author after the public defense of the doctoral thesis entitled „Optimizing the Legal Cadastral Registration of Land Books and Creating the Specific Database” under the coordination of Professor PhD. Eng. Nicolae Dima. The defense was held on the premises of the University of Petroșani, on 22.05.2009 and the PhD. title was confirmed by Order of the Minister of Education, Research and Innovation no. 6026 dated 27.11.2009.

The scientific and professional achievements and career development plans presented in this habilitation thesis are structured into four sections, namely:

1. The motivational framework of the habilitation thesis;
2. Implications of Topography and Cadastre on Spatial Planning and Sustainable Development;
3. Plans for career development;
4. Bibliography.

The second section is the largest, as it presents the most important achievements of the author, closely related to the current context of development of the area in which the topic of the present Habilitation Thesis finds its applicability.

The topic presented „ Implications of Topography and Cadastre on Spatial Planning and Sustainable Development” is actually a continuation through diversification of the topic addressed in the doctoral thesis.

The activity carried out within this context is reflected by the results of scientific research, in the form of papers and scientific articles or textbooks or specialized books, as the case.

The academic teaching and research tendency during the latest years has been to publish articles, and therefore, the author's activity has followed this line of publishing scientific articles in journals indexed in databases approved by the competent Ministry. Currently, the author's work focuses on interdisciplinary directions, based on collaborations with research teams in various fields of activity, which has had a major impact on the author's training as a researcher and a teacher alike.

The topic addressed „ Implications of Topography and Cadastre on Spatial Planning and Sustainable Development” is found at the borderline of two areas of activity, namely land measurements and cadastre (1) and spatial planning (2). The borderline between these two areas cannot be drawn clearly and unequivocally, as both fields interfere with each other.

Thus, the author properly identified and discussed the aspects leading to interference between the two areas. The first part dealt briefly with the premises of creating valuable experts through university studies and curricula based on a modern education system, compatible at a European level.

The second part dealt in a consistent and objective manner with the aspects of surveying and cadastre through theoretical approaches on:

- Introducing general cadastre into an administrative territory;
- Land surveying within the built-up areas;
- IT System named "eTerra"
- Land Registry in light of the new Civil Code.

This part ends with the presentation of case studies suggestive of the issues covered.

The third part covers theoretical and practical aspects of sustainable development and spatial planning:

- Vicinities in spatial planning projects;
- Using topographical techniques and technologies for spatial planning projects;
- Expansion of urban areas;
- Establishing tourist resorts;

- Sustainable development and tourism.

The case studies presented in this section successfully crown the interdisciplinary approaches this habilitation thesis.

All activities that have been carried out after the doctorate have taken place within research groups, whose members are also the co-authors of the articles published. Also, these collectives of authors include people both from the field of land measurements and surveying but also from other fields, all involved in providing interdisciplinary articles with a varied topic, whose value has been recognized by being cited in 62 ISI Web of knowledge or international databases-indexed publications and 11 patents indexed to Google Scholar.

Regarding career evolution and development, it will further focus on annual participation in national and international conferences and on publishing articles, on the development of research projects in order to access funds, on participation as a member of research teams of projects in the field but also of interdisciplinary projects, on involving students in research contracts and on attracting them to research, on managing the research activity in order to access the higher steps of university career, on publishing didactic materials for the subjects coordinated by the author and similar activities designed to lead to quality teaching and research activities.

In conclusion, the topic addressed during this Habilitation Thesis leads to the idea that the implications of land measurements for sustainable land development are closely related to the European sustainable development policies and they are a delicate stage in the completion of large spatial planning projects. These reasons fully justify the topic of the present Habilitation Thesis as well as the finality of this endeavour.