

MINISTERUL EDUCAȚIEI
UNIVERSITATEA POLITEHNICA TIMIȘOARA

TEZĂ DE ABILITARE

REZUMAT

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TIMIȘOARA
2021

HABILITATION THESIS

ABSTRACT

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.

The first part deals with issues related to topography and cadastre in a coherent and objective way through practical approaches supported in a comprehensive case study on the challenges and opportunities offered by the introduction of cadastre. The case study is structured on three main components, namely:

- The legal and technical effects of the application of property laws in Romania;
- Systematic cadastre - challenges regarding the implementation in rural communities;
- Standardization of cadastral numbering in international context.

The second part includes issues related to land use planning and sustainable development. In this context, the latest issues regarding the management of real estate are approached, simultaneously with the issues related to

the management of green spaces and the promotion of tourism. These elements are presented in case studies, namely:

- Management and conservation of national heritage - tourist and recreation areas;
- Sustainable urban development of mountain areas.

The third part focuses on issues related to the main beneficiary of these projects: the man. In this sequence, three current issues, regarding the social component of spatial planning, were addressed: the territorial expansion of localities, the social pension system and the health system seen in terms of pandemic monitoring.

All these case studies highlighted the implications of land measurements in land use planning and urban development both in the engineering and in the social side of the issue addressed.

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 over than 80 ISI Web of knowledge or international databases-indexed publications.

Regarding career evolution and development, it will further focus on:

- annual participation in national and international conferences;
- supporting specialized journals by activating as a member of editorial boards or scientific groups and publishing specialized articles;
- the development of research projects in order to access funds;
- the participation as a member of research teams of projects in the field but also of interdisciplinary projects;
- the involving students in research contracts and on attracting them to research;
- the managing the research activity in order to access the higher steps of university career;
- the publishing didactic materials for the coordinated disciplines;
- the 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 international 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.