

# **ADVANCES IN ORTHOTIDAL POTAMOMOLOGY**

habilitation thesis

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*ABSTRACT (IN ENGLISH)*

This work represents the habilitation thesis of the author in the domain of Geography. It offers a documented view of the evolution of orthotidal potamology whilst depicting the substantial contributions of the author to this new scientific domain. Also, it includes novel research results obtained by continuing the work of other authors in this domain.

The habilitation thesis has 8 chapters plus an addendum regarding the author's skills for habilitation. The chapters offer useful information about orthotidal potamology as follows: definition of the most used terms, details about preliminary studies, in-depth analysis of the first studies, enumeration and description of the intermediate studies, detailed description of the applied studies.

The first 6 chapters of this thesis describe how the orthotidal potamology has switched from a pure theoretical consequence of the existence of groundwater tides (consequence predicted by a few authors) to a scientific domain with its own methods and where funds were already granted for a specific research project.

This part of the thesis highlights the analyses undertaken by the author for finding the orthotidal rivers in United States of America, Australia, Canada and Romania. The useful analysis methods of each study in orthotidal potamology are described in the corresponding chapter.

The flow of ideas has its climax in chapter 7. In this chapter with novel research, original examples of the orthotides discussed in the previous chapters are given. The chosen study area is in Australia. The analyses are based entirely on open access data so that other authors may be able to reproduce/verify/improve the results of this study anytime.

Final words in this thesis are grouped in an addendum where the author shows his scientific proficiency in some research domains and his role and didactic activities as part of the academic staff.