SUMMARY OF THE HABILITATION THESIS

Entitled ***"Psychomotor and Functional Mechanisms of Human Performance in Motor Activities,"*** this habilitation thesis represents a personal and original approach to a specific area within the extremely broad field of research in Sport Science and Physical Education. It presents the development of my academic, professional, and scientific career, the principal contributions I have made since obtaining my doctoral degree, as well as the future directions of academic, scientific, and professional development that I intend to pursue.

The thesis follows the standard three-part structure (*Scientific, Professional and Academic Achievements*; *Plan for the Evolution and Development of the Academic, Scientific and Professional Career*; and *References*), with each section presenting specific information.

In *Chapter I* of Section I, I outline the evolution and development of my professional, academic, and scientific career, a trajectory closely connected to the academic environment of the "Vasile Alecsandri" University of Bacău, Faculty of Movement, Sports and Health Sciences. This chapter provides details regarding the successive stages of my professional career, from adjunct teaching staff member and university instructor to Associate Professor with a PhD. These details encompass my teaching activities within various study programmes, my continuing professional development and managerial responsibilities, the preparation of teaching materials, the supervision of final-year dissertations and theses, my involvement in student activities and the organization of university sports competitions, as well as my participation in various academic committees and institutional representative bodies.

Since obtaining my doctoral degree, my scientific activity has been characterized by the publication of 14 textbooks and specialized books, more than 140 scientific articles (87 in journals indexed in the Web of Science database), participation in over 30 national and international conferences held in Romania and abroad, and involvement, either as project director or team member, in 12 research and development projects.

Chapter II, entitled *Research Directions*, presents the research interests that I have developed over time within the field of Sport Science and Physical Education. These interests are organized into three main research directions, each synthesizing a selection of studies from the more than 140 publications produced since the completion of my doctoral studies, as follows:

- the first research direction, dedicated to postural control and neuromuscular adaptations associated with motor and functional performance in different population categories, provides a concise synthesis of ten scientific articles. These studies address various aspects of performance manifestation in different categories of individuals, including preschool children, primary school-aged children, pubertal children, adolescents, persons with disabilities, and women at different ages;
- the second research direction, focused on training methodologies and sports performance optimization, highlights original findings presented in nine scientific articles and one specialized book. It summarizes the importance of various factors involved in enhancing athletic performance, emphasizing the effects of modern training and assessment methods and tools, including post-activation performance enhancement (PAPE), post-activation potentiation (PAP), electromyography, myotonometry, and related approaches;
- the third research direction, oriented toward the psychological, motivational, and technological determinants of human performance in sport from an interdisciplinary perspective, synthesizes key ideas drawn from ten scientific articles and one specialized book. This research direction underscores the importance of interdisciplinary approaches, drawing on emerging areas within Sport Science and Physical Education, such as psychology, nutrition, rehabilitation, physiology, and public health, in the optimization of human performance. It also highlights the growing role of new technologies in enhancing both athletic performance and broader human functioning.

The results of these research activities have been disseminated through scientific publications (articles indexed in Web of Science and other international databases), participation in scientific conferences, as well as the organization of workshops, scientific sessions, and international conferences, all aimed at advancing knowledge within the field.

Chapter III, entitled *Professional and Scientific Recognition*, highlights the activities that have contributed to the development of my professional and scientific visibility and expertise. These activities include my participation in academic and administrative committees, my involvement in the evaluation of both research and teaching activities, my contribution to the scientific committees of journals and conferences, professional collaborations and participation in specialized professional structures, as well as my work as a reviewer for scientific articles published in journals indexed in the Web of Science and other international databases, particularly within the field of Sport Science and Physical Education.

Section II, which presents the *Plan for the Evolution and Development of the Academic, Scientific and Professional Career*, provides a concise overview of the future professional and scientific directions that I intend to pursue. These are focused on acquiring new competencies and continuously improving my teaching and professional activities, while also expanding research collaborations and participation in new research projects. All of these objectives are aligned both with the strategic priorities of the institution in which I carry out my activity and with emerging trends in the academic environment.

Section III is dedicated, in accordance with the methodological requirements, to the presentation of the bibliographic references used to provide the theoretical foundation and scientific basis for the concepts addressed throughout this habilitation thesis.