

EDITORIAL

We are delighted to offer you the second issue of the journal *Annales Kinesiologiae*, to read and to critically review some very interesting considerations and research achievements. These are provoking a number of new questions and further research challenges as it is usual in an unstable and dynamic research area.

Since we wanted to study the problematic, areas and means of research in the kinesiometrics in its origin, a contribution from the very beginner and the founder of the American Association for Kinesiometrics, prof. Zhu, is more than an adequate introduction to the following issue of the journal. Views on the problems of measurement in kinesiology and researching of new theoretical and practical models of measurement are offered by the co-founder of European Forum for Kinesiometrics, prof. Franjo Prot. The article raises important questions whose answers are the foundation and starting point of the modern approach to the research work. It is followed by original scientific articles, which on the basis of offered examples and suggested solutions in the context of the fundamental problems of measurement and research, are discussing different areas and groups that kinesiology regularly researches.

As kinesiometrics presents a core of the kinesiology, where methods of measurement, mathematical modeling, applied stochastic approach and related statistical methods are essential for scientific progress, it seems to us that it is particularly important to discuss this area at the very starting point of the new scientific journal.

The use of appropriate formal models in the study of kinesiology problems has a significant impact on application and measurement of theoretical concepts, as are motoric abilities (speed, coordination, power, etc.) and motoric learning, etc. Quantitative methodology offers a number of general, on concepts based modeled approaches as well as several separated methods, suitable for solving such partial research problems. Their contribution in terms of quality diagnostics and measurement, particularly their reliability and validity is important for immediate use in practice.

The nature of scientific laws in kinesiology and the relation and connection between the phenomenon of human movement, undoubtedly require multidimensional treatment. And just kinesiometrics which is placed among interdisciplinary and integrative approaches in researching their own science, exceeds itself in the problem handling and through basic statistical applications follows the course of interdisciplinary parallel scientific branches, such as physiology, metabolism, biometrics, biomechanics, psychometrics, sociometrics, discoveries in the fields of elite sport and rehabilitation, evaluation of human health throughout life, technology development, etc.

Believing that the meaning of discussed areas and issues that scientific works offer are really a starting point for the kinesiology science, we leave them to your judgment. At the same time we open further argumentation with many unanswered questions.

Koper, 20th December 2010

Prof. dr. Rado Pišot
(Chief Editor)

UVODNIK

V veselje nam je, da vam lahko tudi ob izidu druge številke *Annales Kinesologiae* ponudimo v branje in kritično presojo nekaj izredno zanimivih razmišljanj in raziskovalnih ugotovitev. Ta, kot običajno v nestabilnem in dinamičnem raziskovalnem prostoru, provocirajo številna nova vprašanja in nadaljnje izzive raziskovanja.

Ker smo problematiko, področja in sredstva preučevanja Kineziometrije želeli preučiti v svojih izhodiščih nam prispevek samega začetnika in ustanovitelja ameriškega združenja za kineziometrijo, prof. Zhuja, pomeni več kot ustrezen uvod v naslednjo številko revije. Pogled, ki ga na probleme merjenja v kineziologiji ter raziskovanje novih teoretičnih in uporabnih modelov merjenja, v nadaljevanju ponuja soustanovitelj evropskega foruma za Kineziometrijo, prof. Franjo Prot pa odpira pomembna vprašanja, katerih odgovori so temelj in izhodišče sodobnega pristopa k raziskovalnem delu. Sledijo izvirni znanstveni prispevki, kateri na osnovi ponujenih primerov in predlaganih rešitev v okviru temeljnih problemov merjenja in raziskovanja obravnavajo različna področja in skupine, ki jih kineziologija redno preučuje.

Ker kineziometrija predstavlja jedro kineziologije, kjer so metode merjenja, matematičnega modeliranja, aplikativni stohastični pristop in sorodne statistične metode, nepogrešljive za znanstveni napredek se nam je zdelo še posebej pomembno obravnavati to področje v samih izhodiščih nove znanstvene revije.

Uporaba primernih formalnih modelov v preučevanju kinezioloških vprašanj in problemov ima izrazit vpliv na aplikacijo in merjenje teoretičnih konceptov kot motoričnih sposobnosti (hitrosti, koordinacije, moči, itd.), motoričnega učenja, itd. Kvantitativna metodologija ponuja več splošnih na konceptih temelječih, modeliranih pristopih kot tudi več ločenih metod primernih za reševanje tako parcialnih raziskovalnih problemov. Njihov doprinos z vidika kakovostne diagnostike in merjenja, posebno njihova zanesljivost in veljavnosti je pomembna za takojšno uporabo v praksi.

Narava znanstvenih zakonitosti v kineziologiji ter razmerja in povezave med fenomenom človekovega gibanja, nedvomno zahtevajo multidimenzionalno obravnavo. In ravno Kineziometrija, ki se umešča med interdisciplinarne in integrativne pristope v preučevanju lastne znanosti, v obravnavi problema presega sama sebe in preko osnovnih statističnih aplikacij sledi toku interdisciplinarnih vzporednih znanstvenih vej kot so fiziologija, metabolizem, biometrija, biomehanika, psihometrija, sociometrija, dognanja s področij elitnega športa in rehabilitacije, evalvacije človekovega zdravja skozi življenjsko dobo, razvoj tehnologije, itd.

V prepričanju, da je pomen obravnavanih področji in vprašanj, ki jih ponujajo znanstvena dela res izhodiščni za kineziološko znanost vam jih ponujamo v presojo. Hkrati pa s številnimi neodgovorjenimi vprašanji odpiramo nadaljnje argumentiranje.

Koper, 20. december 2010

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