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THE FUNDAMENTAL DEVELOPMENTS BRANCH

“COGNITIVE MODELING IN THE PHYSIOLOGY,

FUNDAMENTAL MEDICINE AND PUBLIC HEALTH SERVICES” (“OFFM”) OF “THE SRI “SFA CMT” OF “THE RA(N)S” NAMED AFTER V.N. VENIAMINOV”

The developed “The fundamental developments branch “Cognitive modeling in the physiology, fundamental medicine and public health services”” (“OFFM”) treats to the fundamental developments divisions of “The scientific-research institute “System and financial analysis based on cognitive modeling technology” of “The RA(N)S” named after V.N. Veniaminov” (“The SRI “SFA CMT” of “The RA(N)S” named after V.N. Veniaminov” – The SRI) as the first SRI in structure of “The SIO “Academy of cognitive natural sciences”” (“The SIO “ACNS””), an additional component of science and education system of the modern country for creation, distribution and use of the main and derivative scientific results of the cognitive modeling technology (CMT) (www.vetrovan.(spb.)ru) [see the fundamental developments branches and departments of The SRI]:

- 1) it is executed by the principle of “administrative-economy submission”;
- 2) works in several main directions, which allow to provide development of the fundamental main and derivative scientific results (my second report on SRW from 2006-2008(9) y. was submitted to “The SPbSETU “LETI”” and The Government of The RF for the translation, carrying out of int. action and receiving of “The Nobel Prize”);
- 3) includes several various main divisions:
I. “The fundamental developments department “The theory of the physiology, bio-physiology and private physiology”” (“SF”) (*)
[the fundamental developments in area “Theoretical physiology” ()* – theory of general physiology, theory of methods and equipment of physiological researches, theory of physiology, theory of molecular physiology, theory of physiological cytology, theory of physiological embryology, theory of physiological genetics, theory of physiology of viruses, theory of micro-physiology, theory of physiology of organic individuals, theory of physiology of plants, theory of zoological physiology, theory of ecological physiology, theory of anthropology of physiology, theory of physiology of human and animals, theory of physiological immunology, theory of pharmacology and toxicology, theory of radiation physiology, theory of space physiology, theory of physiological cybernetics, theory of cognitive modeling technology in theoretical physiology;

the fundamental developments in area
“Theoretical bio-physiology and public health services” (*) –
theory of bio-medical-physiological disciplines,
theory of private physiology of analyzers and sensory systems,
theory of bio-physiological materials, means and products,
theory of bio-physiological technics, theory of clinical physiology,
theory of physiological bio-pharmacology and bio-epidemiology,
theory of other branches of bio-medicine and public health services,
theory of social physiology, theory of organization and management of public health services,
theory of modified model of reduced eye,
theory of modified model of reduced ear,
theory of software for automation of research tasks
of physiological, psychological and linguistical parameters
of parametrical cognitive models block in medicine,
theory of statistical substantiation of practical use of received results,
theory of physiological, psychological and linguistical factors influencing
to efficiency of functioning of information-educational environment
and increase of productivity of automated training system
with properties of adaptation based on cognitive models,
theory of organization and plan of carrying out of experiment,
theory of research of physiological, psychological and linguistical
parameters of cognitive models of subject of training and means of training,
theory of preliminary processing of a posteriori results of diagnostics,
theory of choice of statistical analysis methods of generated data sets,
theory of analysis of productivity dynamics of researches
in field of bio-physiology and public health services,
theory of dispersion, regression, discriminant, cluster analysis,
multidimensional scaling, factor analysis and bibliographical lists,
theory of the complex analysis of modified model of reduced eye
for research of visual acuity, field of vision, color perception and others parameters
in Descartes space of the 2 and 3 coordinates,
theory of the complex analysis of modified model of reduced ear
for research of absolute sensitivity and thresholds of sensitivity
in Descartes space of the 2 and 3 coordinates].

II. “The fundamental developments department
“The theory of the medicine, public health services, labor safety,
environment preservation and ecology of person”” (“SFM”) (*)
[the fundamental developments in area
“Theoretical medicine and public health services” –
 theory of medical-biological disciplines,
 theory of medical materials, means and products, theory of medical technics,
 theory of clinical medicine, theory of pharmacology, theory of hygiene and epidemiology,
 theories of other branches of medicine and public health services, theory of social hygiene,
 theory of organization and management of public health services,
 theory of cognitive modeling technology
 in theoretical medicine and public health services;
the fundamental developments in area
“Theoretical labor safety” (*) –
 theory of organization and management of labor safety,
 working conditions, industrial sphere and safety precaution,
 theory of professional illnesses and their preventive measures,
 theory of accidents on manufacture and their prevention,
 theory of work capacity and examination of work capacity,
 theory of labor safety on categories of workers,
 theory of work safety on manufactures of increased danger,
 theory of cognitive modeling technology
 in theoretical labor safety,
 theory of cognitive model of subject of training;
the fundamental developments in area
“Theoretical preservation of environment and ecology of person” –
 theory and methods of studying of preservation of environment and person,
 theory of ecological bases of use of natural resources,
 theory of international cooperation, theory of environmental contamination,
 theory of pollution, theory of pollution and protection of atmosphere,
 theory of pollution and protection of land waters, seas and oceans,
 theory of protection of soils, theory of protection of bowels,
 theory of ecological bases of ability to live of person,
 theory of influence of anthropogenous changes of environment
 on health and social-labor potential of person,
 on condition of natural ecosystems,
 populations and organisms of vegetative and generative (fauna) world,
 theory of protection vegetative and generative (fauna) world,
 theory of anthropogenous influence on landscape,
 theory of protection and optimization of landscape, theory of (nature) reserved affair,
 theory of protected natural territories and water areas,
 theory of acts of nature and accidents of anthropogenous origin,
 theory of ecological safety of person,
 theory of rational use and reproduction of natural resources by person,
 theory of preservation of environment and natural resources in separate regions and countries,
 theory of waste management, theory of small-waste and without waste technology,
 theory of protection of person from noise, vibration,
 electrical and magnetical fields and radiations,
 theory of cognitive modeling technology
 in theoretical preservation of environment and ecology of person].

The fundamental developments branches and departments of The SRI
 allow to develop the main and derivative scientific results of CMT.