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ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ
БЮДЖЕТНОЕ ОБРАЗОВАТЕЛЬНОЕ УЧРЕЖДЕНИЕ
ВЫСШЕГО ОБРАЗОВАНИЯ

«САНКТ-ПЕТЕРБУРГСКИЙ
ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ»
(СПбГУ)

Университетская наб., 7/9, Санкт-Петербург, 199034
тел./факс 328-97-88
http://www.spbu.ru
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А.Н. Ветрову

195248, г. Санкт-Петербург,
пр. Энергетиков, д. 36, кв. 82

e-mail: vetrovan@list.ru
vetrovan80@gmail.com

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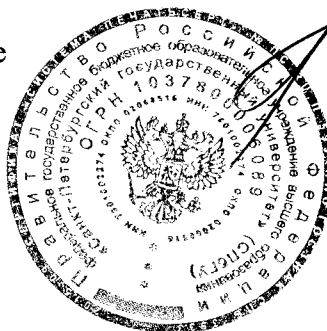
Уважаемый Анатолий Николаевич!

В ответ на Ваше обращение (вход. СПбГУ от 25.12.2018 № 01-20-В-4716) сообщаю, что представленное Вами на утверждение проректору по научной работе Заключение по диссертации, выполненной в СПбГУ, рассмотрено и согласовано директором Центра экспертиз СПбГУ В.А. Семеновым и утверждено и. о. проректора по научной работе С.В. Микушевым.

Приложение:

1. Заключение на диссертацию на русском языке на 30 л. в 3 экз.
2. Заключение на диссертацию на английском языке на 30 л. в 3 экз.

И. о. проректора по научной работе



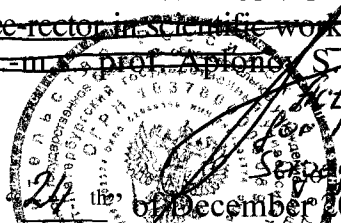
С.В. Микушев

Исп.: В.А. Семенов, т. (812) 327-46-15

APPROVE

~~Vice-rector in scientific work of "SPbSU",~~
~~d.g.m.y. prof. Aptone, S.V.~~
Acting Vice-rector
for Research
Sergey V. Mikushev

the 24 th of December 2018 y.



THE CONCLUSION
of "The Federal state budgetary educational establishment
of higher education (FSBEEHE)
"The Saint-Petersburg state university" ("SPbSU")"

The dissertation on the rights of manuscript "The environment of automated training with the properties of adaptation based on the cognitive models" on the competition of scientific degree of the candidate of technical sciences on the spec. 05.13.01 – "The system analysis, control and information processing" (the adaptive systems of automatic control with the determined entrance influences and the reference cognitive models of the subject of training and the means of training, the reconstructed models of the cognitive processes) is carried out by the applicant of scientific degree Vetrov Anatoly Nikolaevich (the citizen of RF, Saint-Petersburg city) at the chair "Information systems" ("IS") of the faculty "Applied mathematics – control processes" ("AM – CP") of "SPbSU"; the scientific supervisor – prof. of the chair "IS" of the faculty "AM – CP" of "SPbSU", the member of "The American mathematical society" ("AMS"), doctor of physical-mathematical sciences, professor Kvitko Alexander Nikolaevich.

On the 12th of May 1997 y. Vetrov A.N. has finished *with honors* "The training-industrial plant №1 of Krasnogvardeisky district of Saint-Petersburg city" and by the decision of attestation commission he was given the qualif. "Programmer-laboratory assistant" on the spec. 05.05.01 (01.01.09) – "Discrete mathematics and mathematical cybernetics" [the certificate (diploma) of RF – the average (secondary) professional education, phys.-math. sciences].

On the 11th of February 2003 y. Vetrov A.N. has graduated *with honors* from the chair "Automatics and control processes" ("ACP") of the faculty "Computer technologies and informatics" ("CTI") of "The Saint-Petersburg state electrotechnical university "LETI" named after V.I. Ulyanov (Lenin)" ("SPbSETU "LETI")" and by the decision of attestation commission he was given the qualification "Engineer" on the spec. 22.02.01 (05.13.01) – "Control and informatics in technical systems" [the diploma of RF – the series DVS №1230632, the higher professional education, technical sciences].

On the 11th of February 2003 y. Vetrov A.N. has graduated *with honors* from the chair "Submarines" of the faculty "Military training" ("MT") of "SPbSETU "LETI"" and by the decision of attestation commission he was given the qualification "Engineer" on the spec. 472500 – "Operation and repair of ship fighting information control systems" (the automated control systems of submarines) (lieutenant of "NAVY of RF", MU-3) [the diploma of RF – confidentially, the higher professional education, military sciences].

On the 24th of June 2004 y. Vetrov A.N. has graduated *with honors* from the chair "Banking" of the faculty "Professional retraining and improvement of professional skill" ("PR and IPS") of "The international banking institute" ("IBI") and by the decision of attestation commission he was given the qualification "Expert-economist" on the spec. 08.01.05 (08.00.10) – "Finance and credit" in the sphere "Banking" [the diploma of RF – the series PP №548008, the higher professional education, economic sciences].

On the 01st of May 2003 y. Vetrov A.N. has entered and on the 18th of May 2007 y. has graduated *with honors* from the full-time postgraduate study of "SPbSETU "LETI"" with presentation on the 07th of June 2005 y. the dissertation (the attestation work – in the form of scientific monography on the rights of manuscript – *the obligatory element by the candidate minimum in the full-time postgraduate study* on the spec. 05.13.01 at the chair "ACP" of the faculty "CTI" of "SPbSETU "LETI"" on the theme "The environment of automated training with the properties of adaptation based on the cognitive models" on the competition of scientific degree of the candidate of technical sciences on the spec. 05.13.01 – "The syst. analysis, control and inf. processing", 1 vol. without appendixes, 256 p. according to the *appr. his individual training plan of work of postgraduate student from the 01st of May 2003 y., the approved his individual plans of teacher for 2004-2005 ac. y. (it was executed without remarks), 2005-2006 ac. y. (it was executed without remarks), 2006-2007 ac. y. (it was executed the dep. in "The Russian author's society" ("RAS"), RF, Moscow city and publication in the network "Internet" due to means of Vetrov A.N.), the appr. primary protocol of meeting of examination commission from the 01st of November 2005 y. in fact of the planned reception of the candidate examination at Vetrov A.N. on the spec. 05.13.01 – "The system analysis, control and information processing", the appr. secondary protocol of meeting of examination commission №238 from the 05th of December 2006 y. in fact of the unplanned (the recovery of document) reception of the candidate examination at Vetrov A.N. on the spec. 05.13.01 – "The system analysis, control and information processing", the approved certificate about passing of the candidate examinations with honors by Vetrov A.N. on the spec. 05.13.01 №128 from the 06th of December 2006 y. [secondary (repeated or restored)] ("Philosophy": entrance – the protocol without № from the 14th of April 2003 y. and candidate – the protocol №85 from the 03rd of June 2004 y., "Foreign (English) language": at the same time entrance and candidate – the protocol №3 from the 04th of April 2003 y., "The spec. 05.13.01": entrance – the protocol without № from the 24th of March 2003 y. and candidate – the primary protocol from the 01st of November 2005 y. was lost in "The department of doctoral studies and postgraduate study" ("DDP") of "SPbSETU "LETI"" and the secondary protocol №238 from the 05th of December 2006 y. was restored in "DDP" "SPbSETU "LETI"", the first *appr. positive review* on the manuscript of scientific monography of Vetrov A.N. of the head of the chair "Systems and means of automation of control" ("S and MAC") of "The military-naval institute of radioelectronics named after A.S. Popov" ("MNIRE named after A.S. Popov"), d.t.s., associate prof., captain of the 1st rank Filippov P.V. from the 03rd of December 2007 y., the second *appr. positive review* of the manuscript of scientific monography of Vetrov A.N. of the senior assistant of the head of "The scientific-research and editorial department" ("SR and ED") of "MNIRE named after A.S. Popov", cts, associate prof, captain of the 2nd rank Kusov E.V. from the 03rd of December 2007 y., the *appr. copyright certificate of "RAS" (RF, Moscow city) about deposition and registration of the work – the object of intellectual property* on the manuscript of personal scientific monography of Vetrov A.N. on the theme "The environment of the automated training with properties of adaptation based on the cognitive models" №13117 from the 28th of December 2007 y.; the scientific supervisor – [the head of the chair "ACP" of the faculty "CTI" of "SPbSETU "LETI"" candidate of technical sciences, professor Kuzmin Nikolay Nikolaevich] (has died on the 08th of July 2016 y.).*

From the 01st of September 2003 y. to the 31st of August 2006 y. Vetrov A.N. worked at the chair "ACP" as the teacher of the discipline "Intellectual technologies and representation of knowledge": he gave the practical training in two groups of full-time department, and also he carried out the practical use of his scientific results of his dissertations.

From the 01st of September 2004 y. to the 31st of August 2010 y. Vetrov A.N. worked at the chair "ACP" as the teacher of the discipline "Informatics" (he has independently developed the methodical support): he gave the lectures in six groups of full-time department and two groups of evening department and he carried out the lab. pract. work in three groups of full-time department and two groups of evening department, and also he carried out the practical use of his scientific results of his dissertations.

On the 03rd of October 2006 y. (spec. 05.13.01) and on the 11th of December 2006 y. (spec. 05.13.01, 19.00.02 (19.00.03)) have taken place the predefences of the specified dissertation on the rights of manuscript of Vetrov A.N. at the chair "ACP" with the recommendations to defence on the main specialty 05.13.01.

Since the 12th of March 2003 y. Vetrov A.N. systematically represented his results of his dissertations at the various scientific conferences and seminars of the chair "ACP", "IHEAS" and "RAS" were held in "IBI", "SPbSETU "LETI"" and other organizations (not) residents.

On the 06th of December 2006 y. the certificate about passing of cand. examinations of "SPbSETU "LETI"" was issued.

On the 21st of August 2015 y. Vetrov A.N. has passed the unplanned (according to new req. of "HAC of RF") candidate examination on the discipline "History and philosophy of science" (the mark of "The state attestation commission" "excellent") according to the appr. protocol of meeting of examination commission from the 21st of August 2015 y. (according to the certificate about the period of training from the 20th of August 2015 y. to the 27th of August 2015 y. in fact of transfer as an extern for the intermediate attestation in "ANO HPE "IBI"").

From the 01st of September 2004 y. to the 31st of August 2010 y. Vetrov A.N. has prepared to successful defence 10 diploma-students at the chair "ACP" of the faculty "CTI" of "SPbSETU "LETI"" [physical-mathematical sciences, technical sciences and economic sciences] (diploma design has allowed to solve successfully the task of practical approbation of the main and derivative scientific results of his cognitive modeling technology):

1. Zinovyeva Natalya Nikolaevna, the citizen of RF, Baikonur city, group 8832 (2004 y.), the mark of "The state attestation commission" "excellent", the theme of diploma project "The development of the program toolkit of qualification estimation of the professional participants of the securities market" (spec. 05.13.01, 08.00.10).
2. Blinkov Roman Yuryevich, the citizen of RF, Saint-Petersburg city, group 9832 (2005 y.), the mark of "The state attestation commission" "excellent", the theme of diploma project "The development of the diagnostic module of the open educational portal for the tasks of the information environment of the automated remote training" (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)).
3. Tasoyeva Elena Borisovna, the citizen of RF, Leningrad area, Sosnovy bor town, group 9832 (2005 y.), the mark of "The state attestation commission" "excellent", the theme of diploma project "The development of the program toolkit of diagnostics of the level of convergent intellectual abilities of the cognitive model of the examinee for the tasks of the information environment of the adaptive training" (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)).
4. Fedoseyeva Natalya Aleksandrovna, the citizen of RF, Saint-Petersburg city, group 9832 (2005 y.), the mark of "The state attestation commission" "good", the theme of diploma project "The development of the program toolkit of diagnostics of the level of divergent intellectual abilities of the cognitive model of the examinee for the tasks of the information environment of the adaptive training" (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)).
5. Prikhodko Dmitry Yuryevich, the citizen of RF, Saint-Petersburg city, group 2321 (2008 y.), the mark of "The state attestation commission" "good", the theme of diploma project "The program realization of the procedure of diagnostics of the achromatic and chromatic field of vision of the cognitive model of the subject of training for the analysis of the automated educational environment" (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)).
6. Shaposhnikov Alexey Vladimirovich, the citizen of RF, Saint-Petersburg city, group 3321 (2009 y.), the mark of "The state attestation commission" "excellent", the theme of diploma project "The program realization of the procedure of diagnostics of the parameters of color perception of the cognitive model of the trainee for the analysis of the information environment of automated training" (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)).
7. Anufriyeva Olga Konstantinovna, the citizen of RF, Saint-Petersburg city, group 3831 (2009 y.), the mark of "The state attestation commission" "good", the theme of diploma project "The program realization of the procedure of diagnostics of the cognitive styles of the cognitive model of the trainee for the analysis of the information environment of automated training" (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)).
8. Karyukhina Anna Petrovna, the citizen of RF, Saint-Petersburg city, group 3831 (2009 y.), the mark of "The state attestation commission" "good", the theme of diploma project "The program realization of the procedure of diagnostics of the acuity of vision of the cognitive model of the trainee for the analysis of the information environment of automated training" (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)).
9. Andreyeva Katerina Aleksandrovna, the citizen of RF, Saint-Petersburg city, group 4832 (2010 y.), the mark of "The state attestation commission" "good", the theme of diploma project "The program realization of the procedure of the electronic dean's office for the support of the system analysis of the information-educational environment based on the cognitive modeling technology" (spec. 05.13.01, 19.00.02 (19.00.03)).
10. Bocharova Lyubov Nikolaevna, the citizen of RF, Saint-Petersburg city, group 4832 (2010 y.), the mark of "The state attestation commission" "excellent", the theme of diploma project "The program realization of the procedure of the electronic laboratory practical work of the automated training system with the properties of adaptation based on the parametrical cognitive models block" (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)).

As the results of discussion of the dissertation on the rights of manuscript on the theme “The environment of automated training with the properties of adaptation based on the cognitive models” on the competition of scientific degree of the candidate of technical sciences on the spec. 05.13.01 – “The system analysis, control and information processing” of the applicant Vetrov A.N. the following conclusion of “FSBEEHE "SPbSU"” was accepted:

1. The assessment of the dissertation work carried out by the applicant

The author of the specified dissertation gives the generalized assessment of condition of the problem of creation of the modern adaptive intellectual environments of training (at distance) [chapter 1]: the relevance, the existing contradiction, the degree of readiness of the problem, the purpose, the tasks and the stages of research, and also the list of the scientific results received by him.

By the author of the specified dissertation was carried out the analysis of the new information technologies and the theoretical bases of creation of the modern information-educational environments and the automated means of training (at distance) of a new generation [chapter 2]: the different standards in the field of quality of the information-educational environment, the priority aspects and the directions of informatization of educational establishments, the basic theoretical principles of the automated (remote) training, the stages of development of the innovative automated means and environments of training, the features of organization of the (adaptive) information-educational environment of the automated training system (at distance) of the educational establishment, the characteristic of technical capabilities of the automated training systems, the main parameters of assessment of the modern means of training and the development of their functional capabilities at present historical stage of evolution, the features of information exchange of the subjects and means of training, and also the factors influencing in the efficiency of the formation of knowledge of trainees in the automated educational environment of the educational or scientific establishment and the influence of components of the automated training system at the health of consumers.

By the author of the specified dissertation was developed the innovative environment of automated training with the properties of adaptation based on the parametrical cognitive models [chapter 3]: the essence of approach to the complex solution of problem and the statement of research tasks, the modifications in the organization of the (classical) information-educational environment for the realization of accounting of the individual features of the contingent of trainees [the items 1, 2, 3, 4, 7, 8, 11 of “The passport of the specialty 05.13.01”], the modifications in the technology of the (traditional) automated training for the realization of the contour of adaptation based on the cognitive models block [the items 1, 2, 3, 4, 7, 8, 11 of “The passport of the specialty 05.13.01”], the structure of the (modern) environment of automated training (at distance) with the properties of adaptation based on the parametrical cognitive models (the appointment and functional capabilities of the adaptive means of training, the main and applied diagnostic modules as software, and also the appointment and structure of the parametrical cognitive models block) [the items 1, 2, 3, 4, 6, 7, 8, 9, 10, 12, 13 of “The passport of the specialty 05.13.01”], the processing and extraction of information, the structuring of data and the representation of knowledge for the filling of content of the electronic textbook as the adaptive means of training [the items 1, 2, 3, 4, 6, 7, 8, 10, 12, 13 of “The passport of the specialty 05.13.01”], the formal description of the innovative adaptive information-educational environment on the basis of the classical and modern theory of automatic control [the items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 of “The passport of the specialty 05.13.01”].

By the author of the specified dissertation was developed the cognitive modeling technology for the carrying out of the system analysis of the information-educational environment [chapter 4]: its iterative cycle [the items 1, 2, 3, 4, 6, 7, 8, 10, 11, 12, 13 of “The passport of the specialty 05.13.01”], the technique of its use [the items 1, 2, 3, 4, 6, 7, 8, 10, 11, 12, 13 of “The passport of the specialty 05.13.01”], the traditional and new ways of representation of the structure of the cognitive model [the items 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13 of “The passport of the specialty 05.13.01”], the algorithm of formation of the structure of the parametrical cognitive model [the items 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13 of “The passport of the specialty 05.13.01”], the techniques of research of the parameters of the cognitive models of the subject and means of training [the items 1, 2, 3, 4, 6, 7, 8, 10, 11, 12, 13 of “The passport of the specialty 05.13.01”] and the algorithm of the analysis of a posteriori results of testing of the contingent of trainees [the items 1, 2, 3, 4, 5, 8, 10, 11, 12, 13 of “The passport of the specialty 05.13.01”].

By the author of the specified dissertation was developed the param. cognitive models block [chapter 5] for the system analysis and the increase in the efficiency of functioning of the (traditional) automated educational environment (at distance): the structures of the cognitive models of the subject of training and the means of training [the items 1, 2, 3, 5, 6, 7, 8, 10, 11, 12, 13 of “The passport of the specialty 05.13.01”].

By the author of the specified dissertation was developed the complex of software for the automation of the tasks of research of the information-educational environment [chapter 6]: the adaptive electronic textbook [the items 1, 2, 3, 4, 5, 8, 10, 12, 13 of “The passport of the specialty 05.13.01”], the main [the items 1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 13 of “The passport of the specialty 05.13.01”] and applied [the items 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13 of “The passport of the spec. 05.13.01”] diagnostic modules.

By the author of the specified dissertation has conducted independently the statistical justification of practical use (application) of the scientific results received by him [chapter 7]: there was defined the factors influencing in the efficiency of the formation of knowledge of the trainee in the (traditional) automated educational environment (at distance) [the items 1, 2, 3, 8 of “The passport of the specialty 05.13.01”], the features of organization and the plan of carrying out of the innovative experiment [the items 1, 2, 3, 4, 6, 7, 8, 11, 13 of “The passport of the specialty 05.13.01”], the features (of the automation) of research of the parameters of the physiological, psychological and linguistic portraits of the cognitive models of the subject and means of training [the items 1, 2, 3, 4, 6, 7, 8, 11, 13 of “The passport of the specialty 05.13.01”], the specifics of preliminary processing of a posteriori results of diagnostics [the items 1, 2, 3, 4, 5, 8, 11, 13 of “The passport of the specialty 05.13.01”], the features of choice of the methods of the statistical analysis of the formed selections [the items 1, 2, 3, 4, 8, 10, 11, 13 of “The passport of the specialty 05.13.01”], the analysis of dynamics of the resultativity (efficiency) of training for several years [the items 1, 2, 3, 4, 8, 11, 13 of “The passport of the specialty 05.13.01”] and the results of the regression and discriminant analysis of a posteriori data [the items 1, 2, 3, 4, 8, 11, 13 of “The passport of the specialty 05.13.01”].

The purpose of researches of the author is the increase in the efficiency of functioning of the information-educational environment of the automated (remote) training due to the realization of the individually-oriented formation of knowledge of the trainee with the use of the adaptive generation of the various educational influences on the basis of the innovative parametrical cognitive models block and the complex of software for the automation of the tasks of research.

2. The personal participation of the applicant in obtaining of the results, stated in the dissertation

The content of the specified dissertation and the basic scientific provisions, submitted for defence, reflect the personal contribution of the author (Vetrov A.N.) in the published his scientific works.

The preparation to the publication of the received results was conducted independently by the author (coauthors are formal), therefore the contribution of the applicant Vetrov A.N. was considerable.

The scientific results, presented to defence, are received personally by the applicant Vetrov A.N.

3. The degree of reliability of the scientific results of the conducted researches

The reliability is confirmed by the analysis of researches and developments in subject area, the positive results of practical use of the scientific results of the dissertation, and also the approbation of the basic scientific provisions in the printing works and at the conferences.

The validity and reliability of the received scientific results of Vetrov A.N. is provided by the compliance of the used methods to the subject areas of solvable tasks, the adequacy of the developed cognitive models to the objective tasks of research and the correctness of program realization of the means of automation, confirmed by the following:

- the coincidence of the scientific results of modeling and the solution of test tasks with the scientific results, given in the various scientific sources and received by the other methods and means of the system analysis at the solution of the considered class of tasks in practice (in the subject area);
- the solution of control (test) tasks of the automatic modeling on the control points, in which the scientific results are known in advance;
- the consistency of the scientific results of modeling and the calculations to the physical sense of the properties of the researched objects, processes and phenomena.

4. The scientific novelty of the scientific results received by the applicant

- the structure of the information-educational environment and the principles (algorithms) of functioning of the components of the automated (remote) training system with the properties of adaptation based on the parametrical cognitive models block – differ in the possibility of realization of the additional contour of adaptation on the basis of the individual features of personality of the subjects of training, allowing to increase the efficiency in functioning of the information-educational environment of the automated (remote) training system;
- the cognitive modeling technology, including the technique of its use, the algorithm of formation of the structure of the parametrical cognitive model, the technique of research of the parameters of the cognitive models of the subject and means of training, the algorithm of processing of a posteriori results of testing of the trainees – allows respectively to formalize the sequence of use of the technology, to form the structure of the cognitive model, to provide the statement of the experiment and the diagnostics of the parameters of the cognitive models of the subject and means of training, to form the function of estimation and to calculate the indicators of quality of the test on the basis of the received results of testing of the contingent of trainees and in general to carry out the complex system analysis of the efficiency (resultativity) of functioning of the (adaptive) information-educational environment of the automated (remote) training system in the context of series of the chosen various scientific aspects of research;
- the structures of the cognitive models of the subject of training and the means of training – accumulate respectively the parameters of the subject and means of training, characterizing the individual features of personality of the subjects of training and the potential technical capabilities of the (adaptive) means of training, providing the adaptive generation of the sequence of educational influences;
- the complex of software, including the adaptive means of training (the electronic textbook), the main and applied diagnostic modules – provide the potential opportunity respectively of the automated individual-oriented generation of information fragments, the estimation of the level of residual knowledge of the diverse contingent of trainees and the diagnostics of the various parameters of the cognitive model of the subject of training.

5. The practical importance (and the use) of the scientific results received by the applicant

- there were offered the bases of reorganization of the information-educational environment taking into account the realization of the possibility of adaptation to the individual features (parameters) of the diverse subjects of training: the structure of the automated (remote) training system with the properties of adaptation based on the parametrical cognitive models; the specifics of training as the operated technological process; the features of the structure of the various innovative components of the automated (remote) training system; the bases of the extraction of knowledge in the subjects of studying for the purposes of construction of the theoretical-reference (help) modules of the electronic textbooks and the parameters of their estimation; the specifics of use of the means of multimedia in the information-educational environment of the automated (remote) training;
- there were allocated the different organizational and technological modifications of the traditional (automated) information-educational environment, and also the principles (algorithms) of functioning of the various components of the automated (remote) training system at the realization of the contour of adaptation on the basis of the parametrical cognitive models block;
- there were considered the channels of information exchange of the subjects and means of training in the developed automated (remote) training system with the properties of adaptation based on the parametrical cognitive models block, there were allocated the key parameters (factors), influencing in the efficiency of the formation of knowledge of the trainee in the information-educational environment;
- the developed cognitive modeling technology provides the realization of the system analysis of the information-educational environment;
- the received structures of the cognitive models of the subject and means of training by means of the algorithm of formation of the structure of the cognitive model allow to provide the adaptive generation of information fragments adequately to the individual features of personality of the subjects of training and the potential technical capabilities of the adaptive means of training;
- the developed techniques of research of the parameters of the cognitive models and the algorithm of processing of a posteriori data of testing of the trainees directly formalize respectively the sequences (stages) of statement of the experiment and the processing of a posteriori data of testing;
- the complex of programs provides the automation of the adaptive generation of diverse information fragments on the discipline on the basis of the previously diagnosed parameters of the cognitive models, the subsequent estimation of the level of residual knowledge of each trainee and the diagnostics of the individual features of personality of each examinee.

The main scientific results of the specified dissertation of Vetrov A.N. have been practically used (introduced) at the implementation by Vetrov A.N. the individual initiative scientific-research work in the training process, that is confirmed with the relevant acts about practical use (introduction):

- at the chair "ACP" of the faculty "CTI" of "SPbSETU "LETI"" – on the disciplines "Intellectual technologies and representation of knowledge" (practical classes) and "Informatics" ("Computer science") (lectures and laboratory practical work) on the specialties "Control and informatics in technical systems" and "Information systems in technics and technologies";
- at the faculty "PR and IPS" of "IBI" (RF, Saint-Petersburg city) – on the disciplines "Financial management", "Managerial accounting", "Banking", "Insurance business", "Taxes and taxation" and "Audit of bank activity" on the specialties "Finance and credit" and "Anti-crisis management".

The specified dissertation of Vetrov A.N. is characterized by the logicity of construction, the argumentativeness of the basic scientific provisions (and conclusions) and the clearness of statement.

6. The scientific specialty, to which corresponds the dissertation of the applicant

The specified dissertation of Vetrov A.N. conforms to the various requirements, imposed to the dissertations on the competition of scientific degree of the candidate and doctor of sciences on the specialty 05.13.01 – “The system analysis, control and information processing”.

On the subject, the methods of research, the offered new scientific provisions and the content the specified dissertation of the applicant Vetrov A.N. corresponds to the content of “The passport of the specialty of scientific workers (scientists) 05.13.01 – “The system analysis, control and information processing””, in particular:

- to the item 1 – the theoretical bases and methods of the system analysis, optimization, control, making of decisions and information processing;
- to the item 2 – the formalization and statement of tasks of the system analysis, optimization, control, making of decisions and information processing;
- to the item 3 – the development of the criteria and models of the description and the estimation of efficiency of the solution of tasks of the system analysis, optimization, control, making of decisions and information processing;
- to the item 4 – the development of the methods and algorithms of the solution of tasks of the system analysis, optimization, control, making of decisions and information processing;
- to the item 5 – the development of the special mathematical and algorithmic support of the system analysis, optimization, control, making of decisions and information processing;
- to the item 6 – the methods of identification of the control systems on the basis of retrospective, current and expert information;
- to the item 7 – the methods and algorithms of the structural-parametrical synthesis and identification of difficult systems;
- to the item 8 – the theoretical-multiple and theoretical-information analysis of the difficult systems;
- to the item 9 – the development of the problem-oriented control systems, making of decisions and the optimization of technical objects;
- to the item 10 – the methods and algorithms of intellectual support at the making of administrative decisions in the technical systems;
- to the item 11 – the methods and algorithms of forecasting and the estimation of efficiency, quality and reliability of the difficult systems;
- to the item 12 – the visualization, transformation and the analysis of information on the basis of the computer methods of information processing;
- to the item 13 – the methods of receiving, the analysis and processing of expert information.

The specified dissertation of Vetrov A.N. completely corresponds to the criteria of “The provision about the order of award of scientific degrees”, shown to the dissertations on the competition of scientific degree of the candidate and doctor of technical sciences.

7. The value of the scientific works of the applicant

- Vetrov A.N. is “the author of the unique technology” of cognitive modeling” for the system analysis of the information-educational environments, the financial analysis of the highly-integrated (credit) organizations and the complex analysis of the difficult objects, processes and phenomena (nuclear polymers) at the micro-level (“AUT CMT SFA”) (according to the items 1542, 1543, 1544, 1545, 1546, 1547 and 1551 of “Civil codex of RF”);
- the scientific results of Vetrov A.N. reflect the inter-disciplinary approach in science, therefore the short information about him is added to the encyclopedia “Famous scientists” of “The Russian academy of natural science” (“RANS”) [according to the decision “The Presidium of “RANS””];
- the scientific works of Vetrov A.N. allowed to prove the genesis (emergence and development), to allocate the author's new academic scientific direction “Cognitive informatics (computer science), cognitive modelling technology for the system and financial analysis” and directly to add it to “The register of the new scientific directions” of “RANS” [according to the decision “The Presidium of “RANS””, protocol №699 from the 08th of June 2018 y.].

8. The completeness of statement of materials of the dissertation in the works, published by the applicant

The scientific provisions, conclusions and recommendations, formulated by the author, are theoretically proved, practically checked and do not raise the doubts.

The basic scientific provisions and results of the specified dissertation have received the reflection in 43 on 2007 y. (80 on 2012 y.) different scientific works of various kind and appointment: 01 textbook and 03 methodical instructions to the lab. works on the discipline “Informatics”; 02 separate sections in 01 collective scientific monography of “The international Higher education academy of sciences” (“IHEAS”) (with formal coauthors-teachers); 08 (16) learning manuals and scientific monographies (without coauthors); 01 (02) report(s) on the individual initiative SRW (for 2003-2005 y. and 2006-2008 y.); 05 (12) scientific articles in the scientific journals, recommended by “HAC of RF”, from them 00 (05) scientific articles are deposited in “VINITI” of “RAS”; 22 (43) scientific reports in the materials of 11 (24) international scientific conferences, and also there were received 04 copyright certificates about deposition and registration of the works – the objects of intellectual property in “RAS” (RF, Moscow city) [in 2005-2007 y. (2012 y.) there was executed the norm for the candidate (doctor) of technical sciences (it was required 02 (10) scientific articles in scientific journals from the list of “HAC of RF”)].

The main content and the scientific results of the specified dissertation are defined by the personal contribution of the applicant and are reflected in the following works in the necessary completeness:

8.1. The textbooks.

8.1.1. Vetrov A.N. Informatics (computer science): the textbook for students and pupils (technical, natural, humanitarian, social and medical sciences) / A.N. Vetrov; “SPbSETU “LETI””. – SPb.: “SPbSETU “LETI””, 2005, M.: “VINITI” of “RAS””, 2008, M.: “The Russian author’s society” (“RAS”), 2008. – 331 p.: pic. – Bibliogr. 26 nom. – Rus. – Dep. in “VINITI” of “RAS””, 2008, “RAS”, 2008.

The contribution of the applicant consists in the independent development of methodical support for the purpose of holding of the lecture classes on the discipline “Informatics” for the students of the first-year of “SPbSETU “LETI”” (and a wide range of readers).

8.2. The learning manuals and the scientific monographies (with coauthors).

8.2.1. Vetrov A.N. The factors of success in the educational activity of modern HEI: The tendencies of development of the information environment of remote education: t h e c o l l e c t i v e s c i e n t i f i c m o n o g r a p h y (natural, technical, humanitarian, social and medical sciences) / A.N. Vetrov, N.A. Vetrov; edited by the memb.-corr. of “IHEAS” I.N. Zakharov. – SPb.: The publishing house of “IBI”, 2004. – P.54-65 (13 p. from 148 p.).

The contribution of the applicant consists in the independent research of the tendencies of development of the information environment of remote education.

8.2.2. Vetrov A.N. The factors of success in the educational activity of modern HEI: The cognitive model for the adaptive systems of remote training: t h e c o l l e c t i v e s c i e n t i f i c m o n o g r a p h y (natural, technical, humanitarian, social and medical sciences) / A.N. Vetrov, E.E. Kotova; edited by the memb.-corr. of “IHEAS” I.N. Zakharov. – SPb.: The publishing house of “IBI”, 2004. – P.65-78 (14 p. from 148 p.).

The contribution of the applicant consists in the independent development of the structure of the cognitive model for the adaptive systems of remote training.

8.2.3. Vetrov A.N., Zinovyeva N.N. The program toolkit of qualification estimation of the professional participants of the securities market: the scientific monography (technical and economic sciences) (spec. 05.13.01, 08.00.10) / A.N. Vetrov, N.N. Zinovyeva; "SPbSETU "LETI"". – SPb.: "SPbSETU "LETI"", 2004. – 160 p.

The first diploma-student Zinovyeva Natalya Nikolaevna, RF, Baikonur city – the theme of diploma project "The development of the program toolkit of qualification estimation of the professional participants of the securities market", the mark of "The state attestation commission" "excellent" ("SPbSETU "LETI"", 2004 y., gr. 8832, the scientific supervisor, "AUT CMT SFA" Vetrov A.N.).

8.2.4. Vetrov A.N., Blinkov R.Y. The diagnostic module of the open educational portal for the tasks of the information environment of the automated remote training: the scientific monography (technical and physical-mathematical sciences) (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)) / A.N. Vetrov, R.Y. Blinkov; "SPbSETU "LETI"". – SPb.: "SPbSETU "LETI"", 2005. – 160 p.

The second diploma-student Blinkov Roman Yuryevich, RF, Saint-Petersburg city – the theme of diploma project "The development of the diagnostic module of the open educational portal for the tasks of the information environment of the automated remote training", the mark of "The state attestation commission" "excellent" ("SPbSETU "LETI"", 2005 y., gr. 9832, the scientific supervisor, "AUT CMT SFA" Vetrov A.N.).

8.2.5. Vetrov A.N., Tasoyeva E.B. The program toolkit of diagnostics of the level of convergent intellectual abilities of the cognitive model of the examinee for the tasks of the information environment of the adaptive training: the scientific monography (technical and physical-mathematical sciences) (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)) / A.N. Vetrov, E.B. Tasoyeva; "SPbSETU "LETI"". – SPb.: "SPbSETU "LETI"", 2005. – 160 p.

The third diploma-student Tasoyeva Elena Borisovna, RF, Leningrad area, Sosnovy bor town – the theme of diploma project "The development of the program toolkit of diagnostics of the level of convergent intellectual abilities of the cognitive model of the examinee for the tasks of the information environment of the adaptive training", the mark of "The state attestation commission" "excellent" ("SPbSETU "LETI"", 2005 y., gr. 9832, the scientific supervisor, "AUT CMT SFA" Vetrov A.N.).

8.2.6. Vetrov A.N., Fedoseyeva N.A. The program toolkit of diagnostics of the level of divergent intellectual abilities of the cognitive model of the examinee for the tasks of the information environment of the adaptive training: the scientific monography (technical and physical-mathematical sciences) (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)) / A.N. Vetrov, N.A. Fedoseyeva; "SPbSETU "LETI"". – SPb.: "SPbSETU "LETI"", 2005. – 160 p.

The fourth diploma-student Fedoseyeva Natalya Aleksandrovna, RF, Saint-Petersburg city – the theme of diploma project "The development of the program toolkit of diagnostics of the level of divergent intellectual abilities of the cognitive model of the examinee for the tasks of the information environment of the adaptive training", the mark of "The state attestation commission" "good" ("SPbSETU "LETI"", 2005 y., gr. 9832, the scientific supervisor, "AUT CMT SFA" Vetrov A.N.).

8.2.7. Vetrov A.N. The operating system “MS Windows 98/Me/2000”: the methodical instructions to the laboratory works (technical, natural, humanitarian, social and medical sciences) / O.Y. Belash, A.N. Vetrov, E.E. Kotova; edited by the prof. N.N. Kuzmin. – SPb.: The publishing house of “SPbSETU “LETI””, 2005. – 72 p.

The contribution of the applicant consists in the independent development of methodical support with the purpose of carrying out the laboratory practical work on the discipline “Informatics” for the students of the first-year of “SPbSETU “LETI”” (and a wide range of readers).

8.2.8. Vetrov A.N. The package of applied programs “MS Office 97/2000”: the textual editor “Word”: the methodical instructions to the laboratory works (technical, natural, humanitarian, social and medical sciences) / O.Y. Belash, A.N. Vetrov, E.E. Kotova; edited by the prof. N.N. Kuzmin. – SPb.: The publishing house of “SPbSETU “LETI””, 2005. – 64 p.

The contribution of the applicant consists in the independent development of methodical support with the purpose of carrying out the laboratory practical work on the discipline “Informatics” for the students of the first-year of “SPbSETU “LETI”” (and a wide range of readers).

8.2.9. Vetrov A.N. The package of applied programs “MS Office 97/2000”: the system of spreadsheets “Excel”: the methodical instructions to the laboratory works (technical, natural, humanitarian, social and medical sciences) / O.Y. Belash, A.N. Vetrov, E.E. Kotova; edited by the prof. N.N. Kuzmin. – SPb.: The publishing house of “SPbSETU “LETI””, 2005. – 76 p.

The contribution of the applicant consists in the independent development of methodical support with the purpose of carrying out the laboratory practical work on the discipline “Informatics” for the students of the first-year of “SPbSETU “LETI”” (and a wide range of readers).

8.2.10. Vetrov A.N., Prikhodko D.Y. The program realization of the procedure of diagnostics of the achromatic and chromatic field of vision of the cognitive model of the subject of training for the analysis of the automated educational environment: the scientific monography (technical and physical-mathematical sciences) (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)) / A.N. Vetrov, D.Y. Prikhodko; “SPbSETU “LETI””. – SPb.: “SPbSETU “LETI””, 2008. – 160 p.

The fifth diploma-student Prikhodko Dmitry Yuryevich, RF, Saint-Petersburg city – the theme of diploma project “The program realization of the procedure of diagnostics of the achromatic and chromatic field of vision of the cognitive model of the subject of training for the analysis of the automated educational environment”, the mark of “The state attestation commission” “good” (“SPbSETU “LETI””, 2008 y., gr. 2321, the scientific supervisor, “AUT CMT SFA” Vetrov A.N.).

8.2.11. Vetrov A.N., Shaposhnikov A.V. The program realization of the procedure of diagnostics of the parameters of color perception of the cognitive model of the trainee for the analysis of the information environment of automated training: the scientific monography (technical and physical-mathematical sciences) (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)) / A.N. Vetrov, A.V. Shaposhnikov; “SPbSETU “LETI””. – SPb.: “SPbSETU “LETI””, 2009. – 160 p.

The sixth diploma-student Shaposhnikov Alexey Vladimirovich, RF, Saint-Petersburg city – the theme of diploma project “The program realization of the procedure of diagnostics of the parameters of color perception of the cognitive model of the trainee for the analysis of the information environment of automated training”, the mark of “The state attestation commission” “excellent” (“SPbSETU “LETI””, 2009 y., gr. 3321, the scientific supervisor, “AUT CMT SFA” Vetrov A.N.).

8.2.12. Vetrov A.N., Anufriyeva O.K. The program realization of the procedure of diagnostics of the cognitive styles of the cognitive model of the trainee for the analysis of the information environment of automated training: the scientific monography (technical and physical-mathematical sciences) (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)) / A.N. Vetrov, O.K. Anufriyeva; "SPbSETU "LETI"". – SPb.: "SPbSETU "LETI"", 2009. – 160 p.

The seventh diploma-student Anufriyeva Olga Konstantinovna, RF, Saint-Petersburg city – the theme of diploma project "The program realization of the procedure of diagnostics of the cognitive styles of the cognitive model of the trainee for the analysis of the information environment of automated training", the mark of "The state attestation commission" "good" ("SPbSETU "LETI"", 2009 y., gr. 3831, the scientific supervisor, "AUT CMT SFA" Vetrov A.N.).

8.2.13. Vetrov A.N., Karyukhina A.P. The program realization of the procedure of diagnostics of the acuity of vision of the cognitive model of the trainee for the analysis of the information environment of automated training: the scientific monography (technical and physical-mathematical sciences) (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)) / A.N. Vetrov, A.P. Karyukhina; "SPbSETU "LETI"". – SPb.: "SPbSETU "LETI"", 2009. – 160 p.

The eighth diploma-student Karyukhina Anna Petrovna, RF, Saint-Petersburg city – the theme of diploma project "The program realization of the procedure of diagnostics of the acuity of vision of the cognitive model of the trainee for the analysis of the information environment of automated training", the mark of "The state attestation commission" "good" ("SPbSETU "LETI"", 2009 y., gr. 3831, the scientific supervisor, "AUT CMT SFA" Vetrov A.N.).

8.2.14. Vetrov A.N., Andreyeva K.A. The program realization of the procedure of the electronic dean's office for the support of the system analysis of the information-educational environment based on the cognitive modeling technology: the scientific monography (technical and physical-mathematical sciences) (spec. 05.13.01, 19.00.02 (19.00.03)) / A.N. Vetrov, K.A. Andreyeva; "SPbSETU "LETI"". – SPb.: "SPbSETU "LETI"", 2010. – 160 p.

The ninth diploma-student Andreyeva Katerina Aleksandrovna, RF, Saint-Petersburg city – the theme of diploma project "The program realization of the procedure of the electronic dean's office for the support of the system analysis of the information-educational environment based on the cognitive modeling technology", the mark of "The state attestation commission" "good" ("SPbSETU "LETI"", 2010 y., gr. 4832, the scientific supervisor, "AUT CMT SFA" Vetrov A.N.).

8.2.15. Vetrov A.N., Bocharova L.N. The program realization of the procedure of the electronic laboratory practical work of the automated training system with the properties of adaptation based on the parametrical cognitive models block: the scientific monography (technical and physical-mathematical sciences) (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)) / A.N. Vetrov, L.N. Bocharova; "SPbSETU "LETI"". – SPb.: "SPbSETU "LETI"", 2010. – 160 p.

The tenth diploma-student Bocharova Lyubov Nikolaevna, RF, Saint-Petersburg city – the theme of diploma project "The program realization of the procedure of the electronic laboratory practical work of the automated training system with the properties of adaptation based on the parametrical cognitive models block", the mark of "The state attestation commission" "excellent" ("SPbSETU "LETI"", 2010 y., gr. 4832, the scientific supervisor, "AUT CMT SFA" Vetrov A.N.).

8.3. The learning manuals and the scientific monographies (without coauthors).

8.3.1. Vetrov A.N. The control system of eight-position step-by-step electric drive: the attestation work in the form of scientific monography on the rights of manuscript (technical and physical-mathematical sciences – “Elements and devices of automatic systems”) (spec. 01.02.01, 05.13.01) / A.N. Vetrov; “SPbSETU “LETI””. – SPb.: “SPbSETU “LETI””, 2002. – 160 p.

The contribution of the applicant consists in the independent development of structure and content of the obligatory attestation work in the form of scientific monography on the rights of manuscript and the simultaneous passing of the planned obligatory examination on the discipline “Elements and devices of automatic systems” (the mark “excellent”) according to the appendix to the diploma about the higher educ. the series DVS №1230632 from the 11th of February 2003 y.

8.3.2. Vetrov A.N. The working demonstrational prototype of the expert system of training: the attestation work in the form of scientific monography on the rights of manuscript (technical and physical-mathematical sciences – “Cognitive computer science”) (spec. 05.13.01, 01.01.09) / A.N. Vetrov; “SPbSETU “LETI””. – SPb.: “SPbSETU “LETI””, 2003. – 160 p.

The contribution of the applicant consists in the independent development of structure and content of the obligatory attestation work in the form of scientific monography on the rights manuscript and the simultaneous defence of the planned diploma project “The development of the working demonstrational prototype of the expert system of training” (the mark of “The state attestation commission” “excellent”) according to the appendix to the diploma about the higher educ. the series DVS №1230632 from the 11th of February 2003 y.

8.3.3. Vetrov A.N. The carbon life in the postindustrial society and the cognitive modeling technology: the attestation work in the form of scientific monography on the rights of manuscript (humanitarian sciences – “Foreign (English) language”) (spec 10.02.04, 10.02.19, 10.02.20, 10.02.21, 10.02.22) / A.N. Vetrov; “SPbSETU “LETI””. – SPb.: “SPbSETU “LETI””, 2003. – 64 p.

The contribution of the applicant consists in the independent development of structure and content of the obligatory attestation work in the form of scientific monography on the rights of manuscript and the simultaneous passing of the planned entrance and candidate examination on the discipline “Foreign (English) language” (the mark of “The state attestation commission” “excellent”) according to the appr. protocol of meeting of the examination commission №3 from the 04th of April 2003 y.

8.3.4. Vetrov A.N. The dialectic-materialistic approach in philosophy of science and technics: the scientific report for the scientific seminar in the form of scientific monography on the rights of manuscript (philosophical sciences – “Philosophy of science”) (spec. 05.13.01, 08.00.10, 09.00.03, 09.00.08, 09.00.11, 09.00.13) / A.N. Vetrov; “SPbSETU “LETI””. – SPb.: “SPbSETU “LETI””, 2003. – 64 p.

The contribution of the applicant consists in the independent development of structure and content of the obligatory scientific report for the scientific seminar in the form of scientific monography on the rights of manuscript with the purpose of passing of the planned obligatory candidate examination on the discipline “Philosophy of science” (the mark “excellent”).

8.3.5. Vetrov A.N. The international standards of financial report documentation: the features of transformation (of the financial report documentation on RAS in to the financial report documentation on IAS based on the cognitive modeling technology): the attestation work in the form of scientific monography on the rights of manuscript (economic sciences) (spec. 08.00.10, 08.00.12, 08.00.13, 08.00.14) / A.N. Vetrov; “IBI”. – SPb.: “IBI”, 2004. – 352 p.

The contribution of the applicant consists in the independent development of structure and content of the obligatory attestation work in the form of scientific monography on the rights of manuscript and the simultaneous defence of the planned diploma project (the mark of “The state attestation commission” “excellent”) according to the appendix to the diploma about the prof. retraining the series PP №548008 from the 24th of June 2004 y.

- 8.3.6. Vetrov A.N. The features of the system, financial and complex analysis based on the cognitive modeling technology: the collection of scientific reports and multimedia-presentations (slides) in the form of scientific monography on the rights of manuscript (physical-mathematical, technical, economic and medical sciences) (spec. 01.02.01, 05.13.01, 05.13.10, 19.00.02 (19.00.03), 08.00.10) / A.N. Vetrov; "SIO "ACNS"". – SPb.: "SIO "ACNS"", "SPbSETU "LETI"", "IBI", 2003. – 13 p. (+ 5 slides); [(not) published materials to the international scientific-practical conference "Actual problems of economics and new technologies of teaching (Smirnov readings)" of "IHEAS" on the 12th-13th of March 2003 y. ("IBI"), (not) published materials to the international scientific-methodical conference "Modern education: contents, technologies, quality" of "IHEAS" on the 23rd of April 2003 y. ("SPbSETU "LETI"")].
The contribution of the applicant consists in the independent development of structure and content of the collection of scientific reports and multimedia-presentations (slides) in the form of scientific monography on the rights of manuscript.
- 8.3.7. Vetrov A.N. The features of the system, financial and complex analysis based on the cognitive modeling technology: the collection of scientific reports and multimedia-presentations (slides) in the form of scientific monography on the rights of manuscript (physical-mathematical, technical, economic and medical sciences) (spec. 01.02.01, 05.13.01, 05.13.10, 19.00.02 (19.00.03), 08.00.10) / A.N. Vetrov; "SIO "ACNS"". – SPb.: "SIO "ACNS"", "IBI", 2004. – 13 p. (+ 23 slides); [(not) published materials to the international scientific-practical conference "Actual problems of economics and new technologies of teaching (Smirnov readings)" of "IHEAS" on the 11th-13th of March 2004 y. ("IBI"), (not) published materials to the international scientific-methodical conference "Quality management in modern High school (HEI)" of "IHEAS" on the 17th-18th of June 2004 y. ("IBI")].
The contribution of the applicant consists in the independent development of structure and content of the collection of scientific reports and multimedia-presentations (slides) in the form of scientific monography on the rights of manuscript.
- 8.3.8. Vetrov A.N. The features of the system, financial and complex analysis based on the cognitive modeling technology: the collection of scientific reports and multimedia-presentations (slides) in the form of scientific monography on the rights of manuscript (physical-mathematical, technical, economic and medical sciences) (spec. 01.02.01, 05.13.01, 05.13.10, 19.00.02 (19.00.03), 08.00.10) / A.N. Vetrov; "SIO "ACNS"". – SPb.: "SIO "ACNS"", "IBI", 2005. – 9 p. (+ 12 slides); [(not) published materials to the international scientific-practical conference "Actual problems of economics and new technologies of teaching (Smirnov readings)" of "IHEAS" on the 15th-16th of March 2005 y. ("IBI"), (not) published materials to the international scientific-methodical conference "Quality management in modern High school (HEI)" of "IHEAS" on the 21st-22nd of June 2005 y. ("IBI")].
The contribution of the applicant consists in the independent development of structure and content of the collection of scientific reports and multimedia-presentations (slides) in the form of scientific monography on the rights of manuscript.
- 8.3.9. Vetrov A.N. The features of the system, financial and complex analysis based on the cognitive modeling technology: the collection of scientific reports and multimedia-presentations (slides) in the form of scientific monography on the rights of manuscript (physical-mathematical, technical, economic and medical sciences) (spec. 01.02.01, 05.13.01, 05.13.10, 19.00.02 (19.00.03), 08.00.10) / A.N. Vetrov; "SIO "ACNS"". – SPb.: "SIO "ACNS"", "SPbSETU "LETI"", "IBI", 2006. – 16 p. (+ 74 slides); [(not) published materials to The All-Russian scientific conference "Control and information technologies" of "RAS" on the 10th-12th October 2006 y. ("CSRI "Electric-device"", "SPbSETU "LETI""), (not) published materials to the international conference "Problems of cybernetics and informatics (computer science)" of "ANAS" on the 24th-26th of October 2006 y. ("ANAS")].
The contribution of the applicant consists in independent development of structure and content of the collection of scientific reports and multimedia-presentations (slides) in the form of scientific monography on the rights of manuscript.

8.3.10. Vetrov A.N. The features of evolution of the theory of information and information technologies on a threshold of the XXIst century: the attestation work in the form of scientific monography on the rights of manuscript (philosophical sciences – “Philosophy of science”) (spec. 01.02.01, 05.13.01, 05.13.10, 19.00.02 (19.00.03), 08.00.10) “To the 60th anniversary of “The Victory in GPW 1941-1945 y.”” / A.N. Vetrov; “SPbSETU “LETI””. – SPb.: “SPbSETU “LETI””, 2004, M.: “VINITI” of “RAS””, 2004, M.: “RAS”, 2007. – 141 p.: pic. – Bibliogr. 16 nom. – Rus. – Dep. in “VINITI” of “RAS””, 2004, “RAS”, 2007.

The contribution of the applicant consists in the independent development of structure and content of the obligatory attestation work in the form of scientific monography on the rights of manuscript and the passing of the planned obligatory candidate examination on the discipline “Philosophy of science” (the mark of “The state attestation commission” “excellent”) according to the appr. protocol of meeting of the examination commission №85 from the 03rd of June 2004 y.

8.3.11. Vetrov A.N. The environment of automated training with the properties of adaptation based on the cognitive models: the attestation work in the form of scientific monography on the rights of manuscript (technical, physical-mathematical and medical sciences) (spec. 05.13.01, 05.13.10, 19.00.02 (19.00.03)) / A.N. Vetrov; “SPbSETU “LETI””. – SPb.: “SPbSETU “LETI””, 2005, M.: “VINITI” of “RAS””, 2005, M.: “RAS”, 2007. – 256 p.: pic. – Bibliogr. 68 nom. – Rus. – Dep. in “VINITI” of “RAS””, 2005, “RAS”, 2007.

The contribution of the applicant consists in the independent development of structure and content of the obligatory attestation work in the form of scientific monography on the rights of manuscript and the passing of the planned obligatory candidate examination on the spec. 05.13.01 – “The system analysis, control and information processing” (the mark of “The state attestation commission” “excellent”) according to the appr. primary protocol of meeting of the examination commission from the 01st of November 2005 y. (it was lost in “DDP” of “SPbSETU “LETI””) in fact of the planned reception at him the candidate examination on the spec. 05.13.01 – “The system analysis, control and information processing”, the appr. secondary protocol of meeting of the examination commission №238 from the 05th of December 2006 y. in fact of the unplanned reception at him the candidate examination on the spec. 05.13.01 – “The system analysis, control and information processing”.

8.3.12. Vetrov A.N. The automation means of the system analysis of the information-educational environment based on the cognitive modeling technology: the collection of scientific articles in the form of scientific monography on the rights of manuscript (physical-mathematical and technical sciences) (spec. 05.13.01, 19.00.02 (19.00.03)) / A.N. Vetrov; “SIO “ACNS””. – SPb.: “SIO “ACNS””, “SPbSETU “LETI””, “IBI”, 2005, 2006, 2007. – 71 p.: pic. – Bibliogr. 57 nom. – Rus. – Dep. in “VINITI” of “RAS””, “RAS”.

The contribution of the applicant consists in the independent development of structure and content of the collection of scientific articles in the form of scientific monography on the rights of manuscript of 2005-2007 y.

8.3.13. Vetrov A.N. The features of the system, financial and complex analysis based on the cognitive modeling technology: the collection of scientific reports and multimedia-presentations (slides) in the form of scientific monography on the rights of manuscript (physical-mathematical, technical, economic and medical sciences) (spec. 01.02.01, 05.13.01, 05.13.10, 19.00.02 (19.00.03), 08.00.10) / A.N. Vetrov; “SIO “ACNS””. – SPb.: “SIO “ACNS””, “SPbSETU “LETI””, “IBI”, 2007, 2008. – 22 p. (+ 79 slides); [(not) published materials to the international scientific-practical conference “Actual problems of economics and new technologies of teaching (Srnimov readings)” of “IHEAS” on the 13th-14th of March 2007 y. and on the 13th-14th of March 2008 y. (“IBI”), (not) published materials to the international scientific-methodical conference “Modern education: contents, technologies, quality” of “IHEAS” on the 19th of April 2007 y. (“SPbSETU “LETI””), (not) published materials to the international scientific-methodical conference “Quality management in modern High school (HEI)” of “IHEAS” on the 21st-22nd of June 2007 y. (“IBI”)].

The contribution of the applicant consists in the independent development of structure and content of the collection of scientific reports and multimedia-presentations (slides) in the form of scientific monography on the rights of manuscript.

8.3.14. Vetrov A.N. The automation means of the system analysis of the information-educational environment based on the cognitive modeling technology: the collection of scientific articles in the form of scientific monography on the rights of manuscript (physical-mathematical and technical sciences) (spec. 05.13.01, 19.00.02 (19.00.03)) / A.N. Vetrov; "SIO "ACNS"". – SPb.: "SIO "ACNS"", "SPbSETU "LETI"", "IBI", 2008. – 59 p.: pic. – Bibliogr. 33 nom. – Rus. – Dep. in "VINITI" of "RAS", "RAS".

The contribution of the applicant consists in the independent development of structure and content of the collection of scientific articles in the form of scientific monography on the rights of manuscript of 2008 y.

8.3.15. Vetrov A.N. The features of the system, financial and complex analysis based on the cognitive modeling technology: the collection of scientific reports and multimedia-presentations (slides) in the form of scientific monography on the rights of manuscript (physical-mathematical, technical, economic and medical sciences) (spec. 01.02.01, 05.13.01, 05.13.10, 19.00.02 (19.00.03), 08.00.10) / A.N. Vetrov; "SIO "ACNS"". – SPb.: "SIO "ACNS"", "SPbSETU "LETI"", "IBI", 2009. – 17 p. (+ 163 slides); [(not) published materials to the international scientific-practical conference "Actual problems of economics and new technologies of teaching (Smirnov readings)" of "IHEAS" on the 11th-13th of March 2009 y. ("IBI"), (not) published materials to the international scientific-methodical conference "Modern education: contents, technologies, quality" of "IHEAS" on the 22nd of April 2009 y. ("SPbSETU "LETI""), (not) published materials to the international scientific-methodical conference "Quality management in modern High school (HEI)" of "IHEAS" on the 18th-19th of June 2009 y. ("IBI")].

The contribution of the applicant consists in the independent development of structure and content of the collection of scientific reports and multimedia-presentations (slides) in the form of scientific monography on the rights of manuscript.

8.3.16. Vetrov A.N. The automation means of the system and financial analysis of the information-educational environments and (credit) organizations based on the cognitive modeling technology: the collection of scientific articles in the form of scientific monography on the rights of manuscript (physical-mathematical, technical and economic sciences) (spec. 05.13.01, 19.00.02 (19.00.03), 08.00.10) / A.N. Vetrov; "SIO "ACNS"". – SPb.: "SIO "ACNS"", "SPbSETU "LETI"", "IBI", 2009. – 101 p.: pic. – Bibliogr. 56 nom. – Rus. – Dep. in "VINITI" of "RAS", "RAS".

The contribution of the applicant consists in the independent development of structure and content of the collection of scientific articles in the form of scientific monography on the rights of manuscript of 2009 y.

8.3.17. Vetrov A.N. The features of the system, financial and complex analysis based on the cognitive modeling technology: the collection of scientific reports and multimedia-presentations (slides) in the form of scientific monography on the rights of manuscript (physical-mathematical, technical, economic and medical sciences) (spec. 01.02.01, 05.13.01, 05.13.10, 19.00.02 (19.00.03), 08.00.10) / A.N. Vetrov; "SIO "ACNS"". – SPb.: "SIO "ACNS"", "SPbSETU "LETI"", "IBI", 2010. – 16 p. (+ 82 slides); [(not) published materials to the international scientific-practical conference "Actual problems of economics and new technologies of teaching (Smirnov readings)" of "IHEAS" on the 16th-17th of March 2010 y. ("IBI"), (not) published materials to the international scientific-methodical conference "Modern education: contents, technologies, quality" of "IHEAS" on the 21st-22nd of April 2010 y. ("SPbSETU "LETI""), (not) published materials to the international scientific-methodical conference "Quality management in modern High school (HEI)" of "IHEAS" on the 16th-19th of June 2010 y. ("IBI")].

The contribution of the applicant consists in the independent development of structure and content of the collection of scientific reports and multimedia-presentations (slides) in the form scientific monography on the rights of manuscript.

8.3.18. Vetrov A.N. The features of the system, financial and complex analysis based on the cognitive modeling technology: the collection of scientific reports and multimedia-presentations (slides) in the form of scientific monography on the rights of manuscript (physical-mathematical, technical, economic and medical sciences) (spec. 01.02.01, 05.13.01, 05.13.10, 19.00.02 (19.00.03), 08.00.10) / A.N. Vetrov; "SIO "ACNS"". – SPb.: "SIO "ACNS"", "SPbSETU "LETI"", "IBI", 2011. – 21 p. (+ 185 slides); [(not) published materials to the international scientific-practical conference "Actual problems of economics and new technologies of teaching (Smirnov readings)" of "IHEAS" on the 01st of April 2011 y. ("IBI"), (not) published materials to the international scientific-methodical conference "Modern education: contents, technologies, quality" of "IHEAS" on the 20th of April 2011 y. ("SPbSETU "LETI""), (not) published materials to the international scientific-methodical conference "Quality management in modern High school (HEI)" of "IHEAS" on the 16th 19th of June 2011 y. ("IBI")].

The contribution of the applicant consists in the independent development of structure and content of the collection of scientific reports and multimedia-presentations (slides) in the form of scientific monography on the rights of manuscript.

8.3.19. Vetrov A.N. The features of the system, financial and complex analysis based on the cognitive modeling technology: the collection of scientific reports and multimedia-presentations (slides) in the form of scientific monography on the rights of manuscript (physical-mathematical, technical, economic and medical sciences) (spec. 01.02.01, 05.13.01, 05.13.10, 19.00.02 (19.00.03), 08.00.10) / A.N. Vetrov; "SIO "ACNS"". – SPb.: "SIO "ACNS"", "SPbSETU "LETI"", "IBI", 2012. – 26 p. (+ 107 slides); [(not) published materials to the international scientific-practical conference "Actual problems of economics and new technologies of teaching (Smirnov readings)" of "IHEAS" on the 16th of March 2012 y. ("IBI"), (not) published materials to the international scientific-methodical conference "Modern education: contents, technologies, quality" of "IHEAS" on the 18th of April 2012 y. ("SPbSETU "LETI""), (not) published materials to the international scientific-methodical conference "Quality management in modern High school (HEI)" of "IHEAS" on the 30th-31st of October 2012 y. ("IBI")].

The contribution of the applicant consists in the independent development of structure and content of the collection of scientific reports and multimedia-presentations (slides) in the form of scientific monography on the rights of manuscript.

8.3.20. Vetrov A.N. History and philosophy of technics and informatics (computer science): the attestation work in the form of scientific monography on the rights of manuscript (philosophical sciences – "History and philosophy of science") (spec. 07.00.10, 09.00.08) "To the 70th anniversary of "UNESCO"" / A.N. Vetrov; "IBI". – SPb.: "IBI", 2015, M.: "VINITI" of "RAS", 2015. – 36 p.: pic. – Bibliogr. 40 nom. – Rus. – Dep. in "VINITI" of "RAS".

The contribution of the applicant consists in the independent development of structure and content of the obligatory attestation work in the form of scientific monography on the rights of manuscript and the passing of the unplanned obligatory candidate examination on the discipline "History and philosophy of science" (the mark of "The state attestation commission" "excellent") according to the appr. protocol of meeting of the examination commission from the 21st of August 2015 y. in fact of the unplanned reception at him the cand. examination on the disc. "History and philosophy of science" (according to the certificate about the period of training from the 20th August 2015 y. to the 27th August 2015 y. in fact of transfer as an extern for the intermediate attestation in "ANO HPE "IBI"").

8.4. The reports on the scientific-research work.

8.4.1. Vetrov A.N. The report on the individual initiative SRW “The research of the environment of automated training with the properties of adaptation based on the cognitive models” for 2003-2005 y., carried out during writing of my dissertations: the report on SRW (physical-mathematical, technical, humanitarian, social and medical sciences) (spec. 01.02.01, 05.13.01, 05.13.10, 19.00.02 (19.00.03)), SPb.: “SPbSETU "LETI"”, “IBI”, “SPbSUEF "FINEC"”, M.: “"VNTIC" of "RAS"”, 2005 (2006). – 451 p.

The contribution of the applicant consists in the independent statement and carrying out (from 2003 y. to 2005 y.) the series of automated experiments in “SPbSETU "LETI"” and “IBI” by means of the developed adaptive means of training, the main and applied diagnostic modules with registration on the created personal cards for the registration of a posteriori data, the primary and secondary processing of a posteriori data in the programs “Excel” and “SPSS”, the development of structure and content of the report on the ind. init. SRW on the main spec. 05.13.01.

8.4.2. Vetrov A.N. Appendix to the report on the individual initiative SRW “The research of the environment of automated training with the properties of adaptation based on the cognitive models” for 2003-2005 y., carried out during writing of my dissertations: the appendix to the report on SRW (physical-mathematical, technical, humanitarian, social and medical sciences) (spec. 01.02.01, 05.13.01, 05.13.10, 19.00.02 (19.00.03)), SPb.: “SPbSETU "LETI"”, “IBI”, “SPbSUEF "FINEC"”, M.: “"VNTIC" of "RAS"”, 2005 (2006). – 654 p.

The contribution of the applicant consists in the independent statement and carrying out (from 2003 y. to 2005 y.) the series of automated experiments in “SPbSETU "LETI"” and “IBI” by means of the developed adaptive means of training, the main and applied diagnostic modules with registration on the created personal cards for the registration of a posteriori data, the primary and secondary processing of a posteriori data in the programs “Excel” and “SPSS”, the development of structure and content of the append. to the report on the ind. init. SRW on the main spec. 05.13.01.

8.4.3. Vetrov A.N. The report on the individual initiative SRW “The research of the information environment of automated training with the properties of adaptation based on the cognitive models and the financial analysis of the organization by means of the cognitive modeling technology” for 2006-2008 y., carried out during writing of my dissertations: the report on SRW (physical-mathematical, technical, economic, humanitarian, social and medical sciences) (spec. 01.02.01, 05.13.01, 05.13.10, 19.00.02 (19.00.03), 08.00.10), SPb.: “SPbSETU "LETI"”, “IBI”, “SPbSUEF "FINEC"”, M.: “"VNTIC" of "RAS"”, 2008 (2009). – 716 p.

The contribution of the applicant consists in the independent statement and carrying out (from 2006 y. to 2008 y.) the series of automated experiments in “SPbSETU "LETI"” and “IBI” by means of the developed adaptive means of training, the main and applied diagnostic modules with registration on the created personal cards for the registration of a posteriori data, the primary and secondary processing of a posteriori data in the programs “Excel” and “SPSS”, the development of structure and content of the report on the ind. init. SRW on the main spec. 05.13.01 and 08.00.10.

8.5. The scientific articles (in the scientific journals, recommended by “HAC of RF”).

8.5.1. Vetrov A.N. The approach to the synthesis of the information-educational environment of the adaptive remote training with the usage of the cognitive modeling methods and technologies / A.N. Vetrov // “Proceedings of “IHEAS”” (“The Ukrainian branch”), №1, 2005. – SPb.: “SPbSETU “LETI””, 2005, Kiev: “IHEAS”, 2005. – 21 p. (P.102-121).

The contribution of the applicant consists in the independent development of approach to the synthesis of the information-educational environment of the adaptive remote training with the use of methods and technologies of the cognitive modeling.

8.5.2. Vetrov A.N. The approach to the synthesis of the information-educational environment of the adaptive (remote) training with the usage of the cognitive modeling methods and technologies / A.N. Vetrov, E.E. Kotova, N.N. Kuzmin // “Proceedings of “The Volgograd state technical university””, №8, 2006. – SPb.: “SPbSETU “LETI””, 2005, Volgograd: “VSTU”, 2006. – 9 p. (P.194-196).

The contribution of the applicant consists in the independent development of approach to the synthesis of the information-educational environment of adaptive (remote) training with the use of methods and technologies of the cognitive modeling.

8.5.3. Vetrov A.N. The information environment of the automated training based on the cognitive models / A.N. Vetrov, E.E. Kotova, N.N. Kuzmin // “Proceedings of “IHEAS”” (“The Moscow branch”), №3 (37), 2006. – SPb.: “SPbSETU “LETI””, 2006, M.: “IHEAS”, 2006. – 15 p. (P.100-112).

The contribution of the applicant consists in the independent development of the information environment of the automated training based on the cognitive models.

8.5.4. Vetrov A.N. The adaptive information-educational environment of the automated (remote) training based on the parametrical cognitive models / A.N. Vetrov, E.E. Kotova, N.N. Kuzmin // “Proceedings of “SPbSETU “LETI”””, №1, 2006. – SPb.: “SPbSETU “LETI””, 2006. – 14 p. (P.101-111).

The contribution of the applicant consists in the independent development of the adaptive information-educational environment of the automated (remote) training based on the innovative parametrical cognitive models.

8.5.5. Vetrov A.N. The realization of the adaptive training in the automated educational environment based on the cognitive models / A.N. Vetrov // “Proceedings of “SPbSETU “LETI”””, №1, 2007. – SPb.: “SPbSETU “LETI””, 2007. – 8 p. (P.10-16).

The contribution of the applicant consists in the independent realization of the adaptive training in the automated educational environment based on the cognitive models [there was prepared by the results of statement and carrying out (from 2003 y. to 2005 y.) of the series of the automated experiments in “SPbSETU “LETI”” and “IBI” by means of the developed adaptive means of training, the main and applied diagnostic modules with registration on the created personal cards for the registration of a posteriori data].

8.5.6. Vetrov A.N. The cognitive modeling technology in the automated educational environment / A.N. Vetrov // “Proceedings of “RUPF (RUDN)””, №4, 2008. – SPb.: “SPbSETU “LETI””, 2006, M.: “RUPF (RUDN)”, 2008 (Bibliogr. 13 nom. – Rus. – Dep. in ““VINITI” of “RAS””, 2008). – 18 p. (P.26-42).

The contribution of the applicant consists in the independent development of the cognitive modeling technology in the automated educational environment (at distance).

8.5.7. Vetrov A.N. The features of realization of the information-educational environments of the automated training / A.N. Vetrov // “Automation and modern technologies”, №8, 2008. – SPb.: “SPbSETU “LETI””, 2007, M.: “Mechanical engineering”, 2008 (Bibliogr. 8 nom. – Rus. – Dep. in ““VINITI” of “RAS””, 2008). – 15 p. (P.16-25).

The contribution of the applicant consists in the independent research of the features of realization of the information-educational environments of the automated training (there was developed the standard topology of organization of the territorially distributed information-educational environment of the educational and scientific establishment, which is put in the basis of the innovative topology of organization and realization of the unique innovative “The scientific-educational consortium “System and financial analysis based on the cognitive modeling technology””).

- 8.5.8. Vetrov A.N. The electronic textbook based on the adaptive representation of information fragments processor in the automated educational environment / A.N. Vetrov // "The bulletin of computer and information technologies", №11, 2008. – SPb.: "SPbSETU "LETI"", 2007, M.: "Mechanical engineering", 2008 (Bibliogr. 12 nom. – Rus. – Dep. in ""VINITI" of "RAS"", 2008). – 22 p. (P.38-50).
The contribution of the applicant consists in the independent development of structure and implementation of the adaptive electronic textbook based on his adaptive representation of information fragments processor in the automated educational environment (at distance).
- 8.5.9. Vetrov A.N. The program complex for the tasks of research of the adaptive environment of the automated training based on the cognitive models / A.N. Vetrov // "Automation and modern technologies", №10, 2010. – SPb.: "SPbSETU "LETI"", 2009, M.: "Mechanical engineering", 2010 (Bibliogr. 12 nom. – Rus. – Dep. in ""VINITI" of "RAS"", 2009). – 19 p. (P.20-33).
The contribution of the applicant consists in the independent development of the program complex for the tasks of research of the adaptive environment of the automated training based on the innovative block of parametrical cognitive models.
- 8.5.10. Vetrov A.N. The applied diagnostic module for the diagnostics of parameters of the cognitive model of the subject of training in the adaptive environment / A.N. Vetrov // "Herald of "The Dagestan state technical university"", №1 (44), 2017. – SPb.: "SPbSETU "LETI"", 2009, Makhachkala: "DSTU", 2017 (Bibliogr. 12 nom. – Rus. – Dep. in ""VINITI" of "RAS"", 2009). – 25 p. (P.70-85).
The contribution of the applicant consists in the independent development of the applied diagnostic module for the diagnostics of parameters of the cognitive model of the subject of training in the adaptive environment.
- 8.5.11. Vetrov A.N. The basic diagnostic module in the automated training system with the properties of adaptation (based on the parametrical cognitive model block) / A.N. Vetrov // "Automation of control processes", №1, 2016. – SPb.: "SPbSETU "LETI"", 2009, Ulyanovsk: "FSUE ŠPA "Mars"", 2016 (Bibliogr. 12 nom. – Rus. – Dep. in ""VINITI" of "RAS"", 2010). – 18 p. (P.47-58).
The contribution of the applicant consists in the independent development of the main diagnostic module for the diagnostics of the level of residual knowledge in the automated training system with the properties of adaptation based on the innovative parametrical cognitive models block.
- 8.5.12. Vetrov A.N. The parametrical cognitive models block for the analysis of the efficiency of information exchange in the adaptive environment of the automated training / A.N. Vetrov // "Herald of "The Dagestan state technical university"", №3 (44), 2017. – SPb.: "SPbSETU "LETI"", 2009, Makhachkala: "DSTU", 2017 (Bibliogr. 10 nom. – Rus. – Dep. in ""VINITI" of "RAS"", 2010). – 23 p. (P.112-125).
The contribution of the applicant consists in the independent development of the innovative parametrical cognitive models block for the system analysis of the efficiency of information exchange in the adaptive environment of the automated training.
- 8.5.13. Vetrov A.N. The cognitive modeling technology for the financial analysis of the financial-economy activity of the organization / A.N. Vetrov // "Herald of "The Dagestan state technical university"", №4 (45), 2018. – SPb.: "SPbSETU "LETI"", 2009, Makhachkala: "DSTU", 2018 (Bibliogr. 10 nom. – Rus. – Dep. in ""VINITI" of "RAS"", 2010). – 23 p.
The contribution of the applicant consists in the independent development of the innovative cognitive modeling technology for the financial analysis of the financial-economy activity of the organization.
- 8.5.14. Vetrov A.N. The cognitive approach as the basis of the analysis of the difficult objects of research (The appearance of cognitive approach, the bases of the system and financial analysis of the difficult objects of research) / A.N. Vetrov // "Herald of "The Dagestan state technical university"", №1 (45), 2018. – SPb.: "SIO "ACNS"", 2015, Makhachkala: "DSTU", 2018 (Bibliogr. 30 nom. – Rus. – Dep. in ""VINITI" of "RAS""). – 17 p. (P.113-128).
The contribution of the applicant consists in the independent development of the innovative cognitive approach as the basis of the analysis of the difficult objects of research (in the justification of emergence of the innovative cognitive approach and bases of the system and financial analysis of the difficult objects of research).

8.6. The scientific reports at the congresses, conferences, symposiums, seminars, exhibitions and olympiads.

8.6.1. Vetrov A.N. The influence of the development of information and communication technologies on society and education / A.N. Vetrov, N.A. Vetrov // "Actual problems of economics and new technologies of teaching (Smirnov readings)", the section "Modern technologies of training": the materials of "The IInd international scientific-practical conference" ("IHEAS"), RF, Saint-Petersburg city, the 12th-13th of March 2003 y. – SPb.: "IBI", 2003. – Vol.2. – P.13-15.

The contribution of the applicant consists in the independent research of the degree of influence of the new information and communication technologies on society and education.

8.6.2. Vetrov A.N. The conception of development of the intellectual training systems based on the fast prototyping technology / A.N. Vetrov // "Actual problems of economics and new technologies of teaching (Smirnov readings)", the section "Educational politics and new technologies of teaching": the materials of "The IInd international scientific-practical conference" ("IHEAS"), RF, Saint-Petersburg city, the 12th-13th of March 2003 y. – SPb.: "IBI", 2003. – Vol.2. – P.15-17.

The contribution of the applicant consists in the independent wording of the conception and the definition of the task of development of the intellectual training systems on the basis of the existing fast prototyping technology.

8.6.3. Vetrov A.N. The working demonstration prototype of the expert system of training as the pedagogical program-diagnosing means / A.N. Vetrov // "Actual problems of economics and new technologies of teaching (Smirnov readings)", the section "Educational politics and new technologies of teaching": the materials of "The IInd international scientific-practical conference" ("IHEAS"), RF, Saint-Petersburg city, the 12th-13th of March 2003 y. – SPb.: "IBI", 2003. – Vol.2. – P.18-20.

The contribution of the applicant consists in the independent definition of task, the development of decision and the development of the working demonstration prototype of the expert system of training.

8.6.4. Vetrov A.N. The application of the artificial intelligence systems in the problem training: on the example of the program-diagnosing module of the expert training system / A.N. Vetrov, E.E. Kotova // "Modern technologies of training", the section "Technologies of training": the materials of "The IXth international scientific-methodical conference" ("IHEAS"), RF, Saint-Petersburg city, the 23rd of April 2003 y. – SPb.: "SPbSETU"LETT", 2003. – Vol.2. – P.16-18.

The contribution of the applicant consists in the independent carrying out of research of the use of the artificial intelligence systems in the problem training, the definition of task and the development of the program-diagnosing module of the expert training system for the information-educational environment.

8.6.5. Vetrov A.N. The cognitive model of the user as the means of communicative interaction with the remote training system / A.N. Vetrov, E.E. Kotova // "Actual problems of economics and new technologies of teaching (Smirnov readings)", the section "Educational politics and new technologies of teaching": the materials of "The IIIrd international scientific-practical conference" ("IHEAS"), RF, Saint-Petersburg city, the 11th-13th of March 2004 y. – SPb.: "IBI", 2004. – P.33-35.

The contribution of the applicant consists in the independent definition of task and the development of the structure of the cognitive model for the automated training systems at distance.

8.6.6. Vetrov A.N. The bases of the technology of construction of the parametrical cognitive models for the tasks of the remote training environment / A.N. Vetrov, E.E. Kotova // "Actual problems of economics and new technologies of teaching (Smirnov readings)", the section "Educational politics and new technologies of teaching": the materials of "The IIIrd international scientific-practical conference" ("IHEAS"), RF, Saint-Petersburg city, the 11th-13th of March 2004 y. – SPb.: "IBI", 2004. – P.35-36.

The contribution of the applicant consists in the independent development and the description of purpose of the structure of the cognitive model and the cognitive modeling technology.

8.6.7. Vetrov A.N. The features of support of the information safety at the level of applications in the environment of WWW with the use of PHP / A . N . V e t r o v , N . A . V e t r o v , E . E . K o t o v a // "Actual problems of economics and new technologies of teaching (Smirnov readings)", the section "Mathematical methods and information technologies in economics": the materials of "The IIIrd international scientific-practical conference" ("IHEAS"), RF, Saint-Petersburg city, the 11th-13th of March 2004 y. – SPb.: "IBI", 2004. – P.265-269.

The contribution of the applicant consists in the independent research of features of the support of information security at the level of applications in the environment of WWW.

8.6.8. Vetrov A.N. The features of professional activity of the personality in the conditions of globalization of the information environment / A.N. Vetrov, E.E. Kotova // "Actual problems of economics and new technologies of teaching (Smirnov readings)", the section "Humanitarian and social knowledge and their role in economics and education": the materials of "The IIIrd international scientific-practical conference" ("IHEAS"), RF, Saint-Petersburg city, the 11th-13th of March 2004 y. – SPb.: "IBI", 2004. – P.306-308.

The contribution of the applicant consists in the independent research of a number of the features of professional activity of the personality in the conditions of globalization of the information environment.

8.6.9. Vetrov A.N. The application of the expert training systems for the automation of control of the level of knowledge on the subject areas / A.N. Vetrov, N.A. Vetrov // "Quality management in modern High school (HEI)", the section "Quality management in High school (HEI)": the materials of "The IInd international scientific-methodical conference" ("IHEAS"), RF, Saint-Petersburg city, the 17th-18th of June 2004 y. – SPb.: "IBI", 2004. – Vol.2. – P.19-23.

The contribution of the applicant consists in the independent creation and research of the results of application (use) of the expert training systems for the automation of estimation of the level of residual knowledge of the contingent of trainees.

8.6.10. Vetrov A.N. The features of application of the expert training systems for the automated estimation of qualification of the professional participants of the securities market / A.N. Vetrov, E.E. Kotova // "Quality management in modern High school (HEI)", the section "Quality management in High school (HEI)": the materials of "The IInd international scientific-methodical conference" ("IHEAS"), RF, Saint-Petersburg city, the 17th-18th of June 2004 y. – SPb.: "IBI", 2004. – Vol.2. – P.23-26.

The contribution of the applicant consists in the independent creation and research of the features of application (use) of the expert training systems for the estimation of qualification of the professional participants of the securities market, and also the organization by him the practical approbation of scientific result at the preparation of the diploma-student Zinovyeva N.N., "SPbSETU "LETI"", gr. 8832 (2004 y.), the mark of "The state attestation commission" "excellent", the theme "The development of the program toolkit of qualification estimation of the professional participants of the securities market" (spec. 05.13.01, 08.00.10).

8.6.11. Vetrov A.N. The features of the information environment structure of the adaptive remote training systems / A.N. Vetrov, N.A. Vetrov // "Actual problems of economics and new technologies of teaching (Smirnov readings)", the section "Innovative technologies of education": the materials of "The IVth international scientific-practical conference" ("IHEAS"), RF, Saint-Petersburg city, the 15th-16th of March 2005 y. – SPb.: "IBI", 2005. – Vol.1. – P.45-46.

The contribution of the applicant consists in the independent creation and research of the structure of the information-educational environment of the adaptive system of automated training based on the parametrical cognitive models.

8.6.12. Vetrov A.N. The cognitive model structure for the support of the information environment of the adaptive training / A.N. Vetrov, E.E. Kotova // "Actual problems of economics and new technologies of teaching (Smirnov readings)", the section "Innovative technologies of education": the materials of "The IVth international scientific-practical conference" ("IHEAS"), RF, Saint-Petersburg city, the 15th-16th of March 2005 y. – SPb.: "IBI", 2005. – Vol.1. – P.47-48.

The contribution of the applicant consists in the independent definition of task, the development and description of the structure of the cognitive model in the environment of the adaptive training (at distance).

8.6.13. Vetrov A.N. The research of the convergent and the divergent intellectual abilities of the cognitive model of the examinee for the tasks of the information environment of the adaptive training / A.N. Vetrov, E.E. Kotova // "Actual problems of economics and new technologies of teaching (Smirnov readings)", the section "Innovative technologies of education": the materials of "The IVth international scientific-practical conference" ("IHEAS"), RF, Saint-Petersburg city, the 15th-16th of March 2005 y. – SPb.: "IBI", 2005. – Vol.1. – P.49-50.

The contribution of the applicant consists in the independent statement and carrying out of a series of experiments, the description of the process of research of the convergent and divergent intellectual abilities of examinees for the formation of the cognitive models.

8.6.14. Vetrov A.N. The application of the intellectual training systems (for the automated estimation of the level of residual knowledge in the subjects of training and the diagnostics of the convergent and the divergent intellectual abilities of the cognitive model of the subjects of the information environment of the adaptive automated training) / A.N. Vetrov, N.A. Vetrov, E.E. Kotova // "Quality management in modern High school (HEI)", the section "Monitoring and support of the quality management system": the materials of "The IIIrd international scientific-methodical conference" ("IHEAS"), RF, Saint-Petersburg city, the 21st-22nd of June 2005 y. – SPb.: "IBI", 2005. – Vol.3. – P.80-84.

The contribution of the applicant consists in the independent definition of task and the development of the diagnostic modules for the automated estimation of the level of residual knowledge and the various individual features of the contingent of trainees, and also the organization by him the practical approbation of scientific results at the preparation of the diploma-student Blinkov R.Y., "SPbSETU "LETI"", gr. 9832 (2005 y.), the mark of "The state attestation commission" "excellent", the theme "The development of the diagnostic module of the open educational portal for the tasks of the information environment of the automated remote training" (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)), at the preparation of the diploma-student Tasoyeva E.B., "SPbSETU "LETI"", gr. 9832 (2005 y.), the mark of "The state attestation commission" "excellent", the theme "The development of the program toolkit of diagnostics of the level of convergent intellectual abilities of the cognitive model of the examinee for the tasks of the information environment of the adaptive training" (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)), at the preparation of the diploma-student Fedoseyeva N.A., "SPbSETU "LETI"", gr. 9832 (2005 y.), the mark of "The state attestation commission" "good", the theme "The development of the program toolkit of diagnostics of the level of divergent intellectual abilities of the cognitive model of the examinee for the tasks of the information environment of the adaptive training" (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)).

8.6.15. Vetrov A.N. The adaptive information environment of the automated training based on the cognitive models / A.N. Vetrov, E.E. Kotova, N.N. Kuzmin // "Control and information technologies", the section "Information technologies of control and modeling": the materials of "The 4th All-Russian scientific conference" ("RAS"), RF, Saint-Petersburg city, the 10th-12th of October 2006 y. – SPb.: "The CSRI "Electric-device"", "SPbSETU "LETI"", 2006. – P.170-175.

The contribution of the applicant consists in the independent development of the structure of the adaptive information environment of the automated training based on the innovative parametrical cognitive models block.

8.6.16. Vetrov A.N. The cognitive modeling for the analysis of the information-educational environment / A.N. Vetrov, E.E. Kotova, N.N. Kuzmin // "Control and information technologies", the section "Information technologies of control and modeling": the materials of "The 4th All-Russian scientific conference" ("RAS"), RF, Saint-Petersburg city, the 10th-12th of October 2006 y. – SPb.: "The CSRI "Electric-device"", "SPbSETU "LETI"", 2006. – P.176-181.

The contribution of the applicant consists in the independent definition of task and the development of the innovative cognitive modeling technology for the system analysis of the information-educational environment (of remote training).

8.6.17. Vetrov A.N. The information environment of the automated training with the properties of adaptation based on the cognitive models / A.N. Vetrov, E.E. Kotova, N.N. Kuzmin // "Problems of cybernetics and informatics (computer science)", the section "Problems of control and the system analysis": the materials of "The international conference" ("ANAS"), The republic of Azerbaijan, Baku city, the 24th-26th of October 2006 y. – Baku: "The Azerbaijan national academy of sciences" ("ANAS"), 2006. – Vol.2. – P.202-205.

The contribution of the applicant consists in the independent statement of the complex task, the development and representation of modifications in the organization of the information-educational environment, including the automated (remote) training system with the properties of adaptation based on the parametrical cognitive models block, which includes the cognitive models of the subject of training and the means of training.

8.6.18. Vetrov A.N. The analysis of the information environment of the automated training with the properties of adaptation based on the cognitive models / A.N. Vetrov // "Actual problems of economics and new technologies of teaching (Smirnov readings)", the section "Educational politics and new technologies of teaching": the materials of "The VIth international scientific-practical conference" ("IHEAS"), RF, Saint-Petersburg city, the 13th-14th of March 2007 y. – SPb.: "IBI", 2007. – Vol.1. – P.68-71.

The contribution of the applicant consists in the independent development of the conception of the system analysis of the information environment of the automated training with the properties of adaptation based on the innovative parametrical cognitive models block.

8.6.19. Vetrov A.N. The software of the automated educational environment with the properties of adaptation based on the cognitive models / A.N. Vetrov // "Actual problems of economics and new technologies of teaching (Smirnov readings)", the section "Educational politics and new technologies of teaching": the materials of "The VIth international scientific-practical conference" ("IHEAS"), RF, Saint-Petersburg city, the 13th-14th of March 2007 y. – SPb.: "IBI", 2007. – Vol.1. – P.71-74.

The contribution of the applicant consists in the independent development of the software of the automated educational environment with the properties of adaptation based on the innovative parametrical cognitive models block.

8.6.20. Vetrov A.N. The program complex for the research of the adaptive information-educational environment based on the cognitive models / A.N. Vetrov // "Modern education: contents, technologies, quality", the section "Perspective technologies of training": the materials of "The XIIIth international scientific-practical conference" ("IHEAS"), RF, Saint-Petersburg city, the 19th of April 2007 y. – SPb.: "SPbSETU "LETI"", 2007. – Vol.1. – P.142-144.

The contribution of the applicant consists in the independent development of the program complex for the research of the adaptive information-educational environment based on the innovative parametrical cognitive models block.

8.6.21. Vetrov A.N. The techniques and algorithms in the basis of the cognitive modeling technology / A.N. Vetrov // "Quality management in modern High school (HEI)", the section "Creation of the quality management system": the materials of "The Vth international scientific-methodical conference" ("IHEAS"), RF, Saint-Petersburg city, the 21st-22nd of June 2007 y. – SPb.: "IBF", 2007. – Vol.5. – P.86-89.

The contribution of the applicant consists in the independent development of techniques and algorithms at the basis of the innovative cognitive modeling technology.

8.6.22. Vetrov A.N. The adaptive means of training in the automated educational environment based on the parametrical cognitive models block / A.N. Vetrov // "Quality management in modern High school (HEI)", the section "Improvement of the quality management system in HEI": the materials of "The Vth international scientific-methodical conference" ("IHEAS"), RF, Saint-Petersburg city, the 21st-22nd of June 2007 y. – SPb.: "IBF", 2007. – Vol.5. – P.110-113.

The contribution of the applicant consists in the independent development of the adaptive means of training in the automated educational environment (at distance) based on the innovative parametrical cognitive models block.

8.6.23. Vetrov A.N. The features of the automation of diagnostics of the field of vision of the cognitive model of the subject of training for the analysis of the information environment of the adaptive training / A.N. Vetrov // "Actual problems of economics and new technologies of teaching (Smirnov readings)", the section "New technologies of teaching": the materials of "The VIIth international scientific-practical conference" ("IHEAS"), RF, Saint-Petersburg city, the 13th-14th of March 2008 y. – SPb.: "IBF", 2008. – Vol.1. – P.76-79.

The contribution of the applicant consists in the independent research of features of the automation of diagnostics of the field of vision of the cognitive model of the subject of training for the system analysis of the information environment of the adaptive training, and also the organization by him the practical approbation of scientific results at the preparation of the diploma-student Prikhodko D.Y., "SPbSETU "LETI"", gr. 2321 (2008 y.), the mark of "The state attestation commission" "good", the theme "The program realization of the procedure of diagnostics of the achromatic and chromatic field of vision of the cognitive model of the subject of training for the analysis of the automated educational environment" (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)).

8.6.24. Vetrov A.N. The features of the automation of diagnostics of the color perception of the cognitive model of the subject of training for the analysis of the information environment of the adaptive training / A.N. Vetrov // "Actual problems of economics and new technologies of teaching (Smirnov readings)", the section "Educational politics and new technologies of teaching": the materials of "The VIIIth international scientific-practical conference" ("IHEAS"), RF, Saint-Petersburg city, the 13th-14th of March 2009 y. – SPb.: "IBI", 2009. – Vol.1. – P.77-80.

The contribution of the applicant consists in the independent research of features of the automation of diagnostics of the color perception of the cognitive model of the subject of training for the system analysis of the information environment of the adaptive training, and also the organization by him the practical approbation of scientific results at the preparation of the diploma-student Shaposhnikov A.V., "SPbSETU "LETI"", gr. 3321 (2009 y.), the mark of "The state attestation commission" "excellent", the theme "The program realization of the procedure of diagnostics of the parameters of color perception of the cognitive model of the trainee for the analysis of the information environment of automated training" (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)).

8.6.25. Vetrov A.N. The practical usage of the created complex of programs for the automation of research tasks of the adaptive information-educational environments / A.N. Vetrov // "Modern education: contents, technologies, quality", the section "Perspective technologies of training": the materials of "The XVth international conference" ("IHEAS"), RF, Saint-Petersburg city, the 22nd of April 2009 y. – SPb.: "SPbSETU "LETI"", 2009. – Vol.1. – P.252-254.

The contribution of the applicant consists in the independent research of practical use of the created complex of programs for the automation of the tasks of research of the adaptive information-educational environments (at distance).

8.6.26. Vetrov A.N. The practice of the analysis of the infrastructure of the information-educational environment based on the cognitive modeling technology / A.N. Vetrov // "Modern education: contents, technologies, quality", the section "Quality management of education": the materials of "The XVth international conference" ("IHEAS"), RF, Saint-Petersburg city, the 22nd of April 2009 y. – SPb.: "SPbSETU "LETI"", 2009. – Vol.2. – P.115-117.

The contribution of the applicant consists in the independent research of practice of the system analysis of the infrastructure of the information-educational environment on the basis of the cognitive modeling technology developed by him.

8.6.27. Vetrov A.N. The features of the analysis of the infrastructure of the information-educational environment based on the cognitive modeling technology and the cognitive models / A.N. Vetrov // "Quality management in modern High school (HEI)", the section "Monitoring and support of quality management system": the materials of "The VIIth international scientific-methodical conference" ("IHEAS"), RF, Saint-Petersburg city, the 18th-19th of June 2009 y. – SPb.: "IBI", 2009. – 3 p.

The contribution of the applicant consists in the independent research of features of the system analysis of the infrastructure of the information-educational environment on the basis of the cognitive modeling technology and the cognitive models.

8.6.28. Vetrov A.N. The features of the program realization of the laboratory practical work for the automated training system with the properties of adaptation based on the cognitive models / A.N. Vetrov // "Actual problems of economics and new technologies of teaching (Smirnov readings)", the section "Quality management of education in modern High school (HEI)": the materials of "The IXth international scientific-practical conference" ("IHEAS"), RF, Saint-Petersburg city, the 16th-17th of March 2010 y. – SPb.: "IBI", 2010. – Vol.1. – P.32-36.

The contribution of the applicant consists in the independent research of features of the program realization of the electronic laboratory practical work for the automated training system with the properties of adaptation based on the innovative parametrical cognitive models, and also the organization by him the practical approbation of scientific results at the preparation of the diploma-student Bocharova L.N., "SPbSETU "LETI"", gr. 4832 (2010 y.), the mark of "The state attestation commission" "excellent", the theme "The program realization of the procedure of the electronic laboratory practical work of the automated training system with the properties of adaptation based on the parametrical cognitive models block" (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)).

8.6.29. Vetrov A.N. The features of the automation of diagnostics of the equity of vision of the cognitive model of the subject of training for the analysis of the information environment of the adaptive training / A.N. Vetrov // "Modern education: contents, technologies, quality", the section "Perspective technologies of training": the materials of "The XVIth international scientific-methodical conference" ("IHEAS"), RF, Saint-Petersburg city, the 21st-22nd of April 2010 y. – SPb.: "SPbSETU "LETI"", 2010. – Vol.2. – P.45-48.

The contribution of the applicant consists in the independent research of features of the automation of diagnostics of the acuity of vision of the cognitive model of the subject of training for the system analysis of the information environment of the adaptive training (at distance), and also the organization by him the practical approbation of scientific results at the preparation of the diploma-student Karyukhina A.P., "SPbSETU "LETI"", gr. 3831 (2009 y.), the mark of "The state attestation commission" "good", the theme "The program realization of the procedure of diagnostics of the acuity of vision of the cognitive model of the trainee for the analysis of the information environment of automated training" (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)).

8.6.30. Vetrov A.N. The features of the program realization of the electronic dean's office for the applied tasks of the system analysis based on the cognitive modeling technology / A.N. Vetrov // "Modern education: contents, technologies, quality", the section "Perspective technologies of training": the materials of "The XVIth international scientific-methodical conference" ("IHEAS"), RF, Saint-Petersburg city, the 21st-22nd of April 2010 y. – SPb.: "SPbSETU "LETI"", 2010. – Vol.2. – P.48-50.

The contribution of the applicant consists in the independent research of features of the program realization of the electronic dean's office for the applied tasks of the system analysis on the basis of the cognitive modeling technology, and also the organization by him the practical approbation of scientific results at the preparation of the diploma-student Andreyeva K.A., "SPbSETU "LETI"", gr. 4832 (2010 y.), the mark of "The state attestation commission" "good", the theme "The program realization of the procedure of the electronic dean's office for the support of the system analysis of the information-educational environment based on the cognitive modeling technology" (spec. 05.13.01, 19.00.02 (19.00.03)).

8.6.31. Vetrov A.N. The features of the automation of diagnostics of the cognitive styles of the cognitive model of the subject of training for the analysis of the information environment of the adaptive training / A.N. Vetrov // "Quality management in modern High school (HEI)", the section "Information-telecommunication environment and its influence on the quality of High school (HEI)": the materials of "The VIIIth international scientific-methodical conference" ("IHEAS"), RF, Saint-Petersburg city, the 16th-19th of June 2010 y. – SPb.: "IBI", 2010. – 3 p.

The contribution of the applicant consists in the independent research of features of the automation of diagnostics of the cognitive styles of the cognitive model of the subject of training for the system analysis of the information environment of the adaptive training, and also the organization by him the practical approbation of scientific results at the preparation of the diploma-student Anufriyeva O.K., "SPbSETU "LETI"", gr. 3831 (2009 y.), the mark of "The state attestation commission" "good", the theme "The program realization of the procedure of diagnostics of the cognitive styles of the cognitive model of the trainee for the analysis of the information environment of automated training" (spec. 01.02.01, 05.13.01, 19.00.02 (19.00.03)).

8.6.32. Vetrov A.N. The realization of the automation of diagnostics of the cognitive styles of the cognitive model of the subject of training for the system analysis of the information environment of the adaptive training / A.N. Vetrov // "Actual problems of economics and new technologies of teaching (Smirnov readings)", the section "Educational politics and new technologies of teaching": the materials of "The Xth international scientific-practical conference" ("IHEAS"), RF, Saint-Petersburg city, the 01st of April 2011 y. – SPb.: "IBI", 2011. – 3 p.

The contribution of the applicant consists in the independent research of the features of realization of the automation of diagnostics of the cognitive styles of the cognitive model of the subject of training for the system analysis of the information environment of the adaptive training (at distance).

8.6.33. Vetrov A.N. The features of the cognitive cylinder and the cognitive sphere for the tasks of the system and financial analysis of the difficult object, process and phenomenon / A.N. Vetrov // "Actual problems of economics and new technologies of teaching (Smirnov readings)", the section "Mathematical methods and information technologies in economics": the materials of "The Xth international scientific-practical conference" ("IHEAS"), RF, Saint-Petersburg city, the 01st of April 2011 y. – SPb.: "IBI", 2011. – 3 p.

The contribution of the applicant consists in the independent research of features of the cognitive cylinder and the cognitive sphere for the applied tasks of the system and financial analysis of the difficult object, process and phenomenon.

8.6.34. Vetrov A.N. The cognitive cylinder and the cognitive sphere for the tasks of the system and financial analysis based on the cognitive modeling technology / A.N. Vetrov // "Modern education: contents, technologies, quality", the section "Perspective technologies of training": the materials of "The XVIIth international scientific-methodical conference" ("IHEAS"), RF, Saint-Petersburg city, the 20th of April 2011 y. – SPb.: "SPbSETU"LETT", 2011. – Vol.2. – P.262-264.

The contribution of the applicant consists in the independent development and the research of the cognitive cylinder and the cognitive sphere for the tasks of the system and financial analysis on the basis of the innovative cognitive modeling technology.

8.6.35. Vetrov A.N. The genesis and the differences of cognitive circle, cognitive disc, cognitive cylinder, cognitive cone and cognitive sphere / A.N. Vetrov // "Quality management in modern High school (HEI)", the section "Monitoring and estimation of the quality of university education and scientific activity": the materials of "The IXth international scientific-methodical conference" ("IHEAS"), RF, Saint-Petersburg city, the 16th-19th of June 2011 y. – SPb.: "IBI", 2011. – 3 p.

The contribution of the applicant consists in the independent research of genesis and differences of the cognitive circle, cognitive disk, cognitive cylinder, cognitive cone and cognitive sphere as the difficult cognitive models.

8.6.36. Vetrov A.N. The features of the cognitive disc for the tasks of the system and financial analysis / A.N. Vetrov // "Quality management in modern High school (HEI)", the section "Monitoring and estimation of the quality of university education and scientific activity": the materials of "The IXth international scientific-methodical conference" ("IHEAS"), RF, Saint-Petersburg city, the 16th-19th of June 2011 y. – SPb.: "IBI", 2011. – 3 p.

The contribution of the applicant consists in the independent research of features of the cognitive disk for the tasks of the system and financial analysis.

8.6.37. Vetrov A.N. The features of the cognitive cone for the tasks of the system and financial analysis / A.N. Vetrov // "Quality management in modern High school (HEI)", the section "Monitoring and estimation of the quality of university education and scientific activity": the materials of "The IXth international scientific-methodical conference" ("IHEAS"), RF, Saint-Petersburg city, the 16th-19th of June 2011 y. – SPb.: "IBI", 2011. – 3 p.

The contribution of the applicant consists in the independent research of features of the cognitive cone for the tasks of the system and financial analysis.

- 8.6.38. Vetrov A.N. The electronic library for the automated training system with the properties of adaptation based on the cognitive models / A.N. Vetrov // "Actual problems of economics and new technologies of teaching (Smirnov readings)", the section "Educational politics and new technologies of teaching": the materials of "The XIth international scientific-practical conference" ("IHEAS"), RF, Saint-Petersburg city, the 16th of March 2012 y. – SPb.: "IBI", 2012. – 2 p.
The contribution of the applicant consists in the independent development and research of the electronic library for the automated training system with the properties of adaptation based on the parametrical cognitive models.
- 8.6.39. Vetrov A.N. The electronic card for the automated training system with the properties of adaptation based on the cognitive models / A.N. Vetrov // "Actual problems of economics and new technologies of teaching (Smirnov readings)", the section "Educational politics and new technologies of teaching": the materials of "The XIth international scientific-practical conference" ("IHEAS"), RF, Saint-Petersburg city, the 16th of March 2012 y. – SPb.: "IBI", 2012. – 3 p.
The contribution of the applicant consists in the independent development and research of the electronic card for the automated training system with the properties of adaptation based on the parametrical cognitive models.
- 8.6.40. Vetrov A.N. The features of the cognitive modeling technology for the complex analysis / A.N. Vetrov // "Modern education: contents, technologies, quality", the section "Perspective technologies of training": the materials of "The XVIIIth international scientific-methodical conference" ("IHEAS"), RF, Saint-Petersburg city, the 18th of April 2012 y. – SPb.: "SPbSETU "LETI"", 2012. – 2 p.
The contribution of the applicant consists in the independent development and research of features of the cognitive modeling technology for the complex analysis.
- 8.6.41. Vetrov A.N. The semantic model of saving, extraction and search of information for the electronic library based on the cognitive models / A.N. Vetrov // "Quality management in modern High school (HEI)", the section "Educational politics and new technologies of teaching": the materials of "The Xth international scientific-methodical conference" ("IHEAS"), RF, Saint-Petersburg city, the 30th-31st of October 2012 y. – SPb.: "IBI", 2012. – 2 p.
The contribution of the applicant consists in the independent development and research of the semantic model of saving, extraction and search of information for the electronic library based on the parametrical cognitive models.
- 8.6.42. Vetrov A.N. The processor of parallel processing of data of the automated training system with the properties of adaptation based on the cognitive models / A.N. Vetrov // "Quality management in modern High school (HEI)", the section "Educational politics and new technologies of teaching": the materials of "The Xth international scientific-methodical conference" ("IHEAS"), RF, Saint-Petersburg city, the 30th-31st of October 2012 y. – SPb.: "IBI", 2012. – 3 p.
The contribution of the applicant consists in the independent development and research of the processor of parallel processing of data of the automated training system with the properties of adaptation based on the parametrical cognitive models block.
- 8.6.43. Vetrov A.N. The features of practical use of the cognitive modeling technology for the complex analysis / A.N. Vetrov // "Quality management in modern High school (HEI)", the section "Mathematical methods and information technologies in economics": the materials of "The Xth international scientific-methodical conference" ("IHEAS"), RF, Saint-Petersburg city, the 30th-31st of October 2012 y. – SPb.: "IBI", 2012. – 3 p.
The contribution of the applicant consists in the independent research of the features of practical use of the cognitive modeling technology for the complex analysis.
- 8.6.44. Vetrov A.N. The environment of automated training with the properties of adaptation based on the cognitive models / A.N. Vetrov // "Informatics (computer science) and computer technologies", section "The theoretical bases of informatics (computer science) and informatization of society", section "Information systems and technologies", section "Modeling of system", section "The processing and analysis of big data": the materials of "The city seminar at "The scientific council on informatization of Saint-Petersburg city" at "The Government of Saint--Petersburg city"" ("RAS"), RF, Saint-Petersburg city, the 26th of June 2015 y. – SPb.: "SPbIT" of "RAS", 2015. – 3 p. (+ 28 slides).
The contribution of the applicant consists in the development of structure and content of the dissertation on the rights of manuscript on the competition of scientific degree of the cand. of tech. sciences on the spec. 05.13.01 – "The system analysis, control and information processing".

The specified dissertation of the applicant of scientific degree Vetrov A.N. is the completed scientific-qualification work, carried out personally by the author, which contains the solution of the relevant scientific task (problem), having essential value for the theory and practice of the system analysis of the open systems with the complex structure for the purpose of the improvement of quality of the made operating decisions in the problem sphere at the various stages of life cycle.

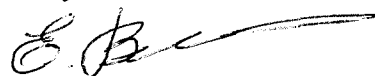
The dissertation "The environment of automated training with the properties of adaptation based on the cognitive models" of the applicant of scientific degree Vetrov Anatoly Nikolaevich is recommended to defence on the competition of scientific degree of the candidate of technical sciences on the specialty 05.13.01 – "The system analysis, control and information processing" (the adaptive systems of automatic control with the determined entrance influences and the reference cognitive models of the subject of training and the means of training, the reconstructed models of the cognitive processes) in "The dissertation council" of "SPbSU" (D.212.232.50) on the rights of "The Federal scientific centre of RF" and "The National research university of RF".

The conclusion of "FSBEEHE "SPbSU"" corresponds to the extract from the protocol of meeting of the chair "IS" of the faculty "AM – CP" of "SPbSU" from the "30th" of October 2018 y. №85.08/4-04-6 in fact of speech of the applicant of scientific degree Vetrov A.N. with the scientific report (multimedia-presentation and information materials) in the national Russian language and the international foreign English language at the preliminary defence of his dissertation on the rights of manuscript on the theme "The environment of automated training with the properties of adaptation based on the cognitive models", submitted to defence in "The dissertation council" of "SPbSU" (D.212.232.50) on the competition of scientific degree of the candidate of technical sciences on the spec. 05.13.01 – "The system analysis, control and information processing" (there were present at the meeting of the chair "IS" of the faculty "AM – CP" of "SPbSU" 07 persons, the results of vote: "in favour" – 07 persons, "against" – 00 persons and "abstained" – 00 persons).

The project of the conclusion of "FSBEEHE "SPbSU"" on the specified dissertation of the applicant Vetrov A.N. was accepted at the meeting of the expert group, formed by the decision of the dean of the faculty "AM – CP" of "SPbSU", d.ph.-m.s., prof. Petrosyan L.A. from the "04th" of December 2018 y. № 39 consisting of 6 persons.

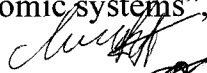
There were present at the meeting of the expert group (commission) 6 persons. The results of vote: "in favour" – 6 persons, "against" – 0 persons, "abstained" – 0 persons, the protocol from the "20th" of December 2018 y. № 1.

The chairman of the expert group of the faculty "AM – CP" of "SPbSU",
the head of the chair "Computer technologies and systems",
d.ph.-m.s., prof.



Veremey E.I.

The members of the expert group of the faculty "AM – CP" of "SPbSU":
the head of the chair "Modeling of social-economic systems",
d.ph.-m.s., prof.



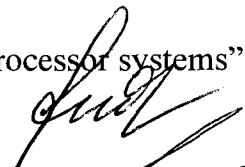
Malafeev O.A.

the head of the chair "Theory of control",
d.ph.-m.s., prof.



Zhabko A.P.

the head of the chair "Computer modeling and multiprocessor systems",
d.ph.-m.s., prof.



Andrianov S.N.

the head of the chair "Higher mathematics",
d.ph.-m.s., prof.



Kamachkin A.M.

prof. of the chair "Modeling of electromechanical and computer systems",
d.ph.-m.s., prof.



Kurbatova G.I.