REVIEW

of

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of the materials submitted for participation in the competition for the academic position "Professor" for the needs of the Department of Mathematical Analysis, Faculty of Mathematics and Informatics (FMI) of Plovdiv University "Paisii Hilendarski" (PU)

Field of higher education: 4. Natural sciences, mathematics and informatics;
Professional field: 4.5. Mathematics (Mathematical Analysis)

The competition for "Professor" was announced in the State Gazette, issue 94 of 12.11. 110

2021, as well as on the website of Plovdiv University. The academic position is for the needs of the Department of Mathematical Analysis of the FMI. The only candidate for participation in the competition is Assoc. Prof. Dr. **Hristo Stefanov Kiskinov** from the same department.

For this review, I will use the relevant instructions of the PU.

1. GENERAL PRESENTATION OF THE MATERIALS RECEIVED

By order № PD-21-298 of 10.02. In 2022, the Rector of the University of Plovdiv was appointed me as a regular member of the Scientific Jury of the competition for the above academic position. At the first meeting of the Scientific Jury, I was chosen to prepare a review of the competition.

The set of materials on electronic media (duplicated on paper) presented by Assoc. Prof. Hristo Kiskinov is in accordance with the Regulations for the development of the academic staff of Plovdiv University "Paisii Hilendarski". The set includes the following (more important) documents:

1. Application to the rector of Plovdiv University for admission to the competition;
2. Curriculum vitae in European format;
3. Diploma for educational qualification degree (ACS) "Master";
4. Diploma for educational and scientific degree (PhD) "Doctor";
5. Certificate for holding the academic position of "Associate Professor";
6. List of all scientific papers and teaching aids by Hristo Kiskinov;
7. List of scientific publications and university teaching aids for participation in the competition for "Professor";
8. Information on compliance with the minimum national requirements;
9. Information on the solution of the minimum additional requirements of FMI;
10. Abstracts of the researchers submitted for participation in the competition;
11. Author's reference for the scientific contributions;
12. List of citations;
13. Declaration of originality and authenticity of the attached documents;
14. Certificate of work experience (total 32 years);

15. Documents for study work (including: reference for study employment, list of published study materials, work with training, etc.);
16. Documents for scientific work (including: reference for research work, reference for participation in scientific forums, reference for participation in scientific projects, reference for participation in professional organizations, etc.);
17. Copies of textbooks and scientific publications for participation in the competition.
The candidate Assoc. Prof. Hristo Kiskinov has submitted a total of 24 scientific publications and one textbook for participation in the competition. I accept for review all submitted materials, as:
They have not used in the preparation of the dissertation of the candidate for the acquisition of PhD (2012);
They have not used in the competition for the academic position of "Associate Professor" (2014);
They correspond to the field of higher education, the professional field and the scientific specialty of the peer-reviewed competition;
The results obtained in the various scientific papers submitted for the 'professor' competition do not match;
I have not noticed, and I have no doubt that these results had misappropriated by the other authors, i.e., I have not found plagiarism.

2. BRIEF BIOGRAPHY

The candidate for the academic position of "professor" successively completes the following educational qualification degrees:

Period		Qualification	School	Success
1978-1982	Secondary education		Math school "Acad. Kiril Popov", Plovdiv	6,00 (Bravo Hristo!)
1984-1988	bachelor master	Mathematician	PU "Paisii Hilendarski"“	5,29 (diplom) 5,88 (state exam)
2011-2012	PhD	Mathematics 4.5 (PhD Program Differential Equations)	PU "Paisii Hilendarski"“	

Table 1

The title of Dr. Kiskinov's dissertation is: "Ordinary differential equations with a dichotomous like linear part in Banach spaces", Field of higher education 4. Natural sciences, mathematics and informatics, Professional field 4.5. Mathematics, Doctoral Program "Differential Equations". He was a PhD student in independent training with supervisor Prof. Dr. Stepan Kostadinov from the University of Plovdiv. The dissertation was defended in 2012.

The professional realization of the candidate consistently in time is indicated in the following table:

Period	Academic position	University
1989-1997	“Assistant”	PU "Paisii Hilendarski"
1997-2005	“Senior Assistant“	PU "Paisii Hilendarski"

2005-2014	“Chief Assistant“	PU "Paisii Hilendarski"
2014 - …	“Associate Professor”	PU "Paisii Hilendarski"
2019 - …	Head of Department "Mathematical analysis"	PU "Paisii Hilendarski"

Table 2

The academic position of “Associate Professor” in the field of higher education 4. Natural Sciences, Mathematics and Informatics, professional field 4.5. Mathematics (Mathematical Analysis) and was occupied by Dr. Hristo Kiskinov in 2014.

The main teaching activity of the candidate is related to the preparation of lecture material and lecturing and conducting seminars and laboratory exercises in several mathematical disciplines of students from different specialties in FMI at PU. He has led the following lecture courses:

"Mathematical foundations of informatics";

"Discrete math";

"Discrete Mathematics in Business";

"Discrete structures";

"Theoretical Informatics";

"Translation methods";

"Programming of Post and Turing machines and unsolvable algorithmic problems";

"Chaos Theory and Computer Applications".

The Dean of FMI states the following: "Information on auditory and extracurricular activities of Assoc. Prof. Dr. Hristo Kiskinov" (quote):

"The lectures and seminars led by Assoc. Prof. Dr. Hristo Kiskinov are at a high scientific and methodological level. Demonstrates high professionalism and responsibility in his work… “.

I have no reason to disagree with the conclusions made by the dean.

The level and merits of the candidate's research work are determined most accurately and objectively through the achievements of his overall scientific activity. H. Kiskinov's scientific work contains a total of 52 articles. Some of these articles were included for the acquisition of PhD degree, for the academic position of "Associate Professor", for participation in the competition for "Professor", and some of them are not used. 37 of the discussed articles are with impact rank (SJR), and 16 with impact factor (IF). There are three textbooks, one of which is in electronic format.

- Two of these textbooks are used in the last competition for "Associate Professor", and one peer-reviewed for this competition. The candidate has participated with reports in the work of 9 international scientific forums, one of which was held abroad and the rest are in Bulgaria. I will mention: International Conference on Recent Advances in Pure and Applied Mathematics, held in Istanbul in 2015, as well as the participation in the period from 2015 to 2020 (inclusive) in the annual international conferences held in Sozopol under the general name: "Applications of Mathematics in Engineering and Economics". He has participated in a total of 10 research or educational projects, of which:

2 are national;

- 2 are regional;

- 6 are university projects (to the Research Fund at the Plovdiv University).

In his scientific activity we can also include:

- research supervisor has successfully defended his doctoral dissertation at FMI;
- research supervisor of 3 successfully defended graduates at FMI;
- Reviewer of 3 diploma theses at FMI

The public work of the colleague is related to:

- Regular participation in commissions for conducting State exams and defense of diploma theses in FMI;
- Regular participation in the candidate-student campaign of PU;
- Member of the Control Board of the University of Plovdiv since 2015;
- Member of the Union of Mathematicians in Bulgaria;
- Member of the American Mathematical Society;
- He is a reviewer for the abstract journals Mathematical Reviews (prepared 33 references so far) and Zentralblatt Math (19 references made).

3. MAIN QUANTITATIVE AND QUALITATIVE INDICATORS OF THE APPLICANT'S ACTIVITY SUBMITTED FOR PARTICIPATION IN THE COMPETITION

3.1. Publications for participation in the competition: The list of these publications includes one university textbook and 24 scientific publications.

The textbook is entitled "Introduction to Discrete Mathematics" and is published this year (2022) in the University publishing house "Paisii Hilendarski". The manual is placed on 339 typewritten pages with a single author assoc. prof. H. Kiskinov. The content of the textbook is on the basis of the author's lectures on the subjects:

"Discrete math",
"Discrete Mathematics in Business",
"Mathematical foundations of informatics",
"Discrete structures", etc.
of students from some bachelor's degrees at FMI**.**

Seven of these scientific publications are published in volumes of conferences with impact rank (seven publications are in AIP Conference Proceedings). The other 17 publications of the candidate, with which he participates in the competition, are published in renowned scientific journals, some of which have an impact factor (11 of the presented publications have an impact factor). Almost all of them have an impact rank and are referred to in Web of Science and Scopus. The quality of these scientific articles can be indirectly judged by the high classification of the journals in which they are published, namely

Classification of the journals	Number of publications of the candidate	Average indicator
Impact factor	11	IF=1,443
Q1 (JCR)	4	IF=2,674
Q2 (JCR)	3	IF=1,151
Q3 (JCR)	1	IF=0,548
Q4 (JCR)	3	IF=0,393
Scopus	22	SJR=0,426

Table 3

I will point out the following authoritative scientific journals in which the candidate for professor has published his works:
- Fractional Calculus and Applied Analysis;
- Integral Transforms and Special Functions;
- Mathematics;
- Fractal and Fractional.

According to the number of authors, the publications can be divided as follows:
5 - two authors;
10 - three authors;
9 - four authors.

3.2. **Citation of the candidate's scientific works**: An important factor reflecting the quality of the candidate's scientific work is the reflection of his results by other members of the scientific community. A total of 131 citations of 29 scientific papers of the candidate for the academic position "Professor" are duly indicated in the relevant reference, accompanied by a complete and accurate description. The citations are in accordance with accepted standards, i.e., auto citations are excluded. Quotes can be divided into several sets:
- First group: 44 citations in journals with impact factor;
- Second group: 66 citations in journals referred to in Scopus;
- Third group: 65 citations in journals not referred to in Scopus.

The above numbers are indicative, as they are obtained through external observation (which of course is not comprehensive and perfect) of objects whose number changes (grows monotonically) over time.

3.3. **Information on the fulfilment** of the minimum national requirements: The fulfilment of the minimum national requirements for holding the academic position "Professor" is shown in the following table:

National indicators	Minimal number of points	Materials provided by the applicant	Points obtained
A. Dissertation for the award of PhD degree	**50**	Thesis	**50**
B. Habilitation paper (monograph) Or scientific publications corresponding to habilitation paper	**100**	Scientific publications in the journals referred to Web of Science, Scopus, and Zentralblatt Math: Q1 0 publications x 75 p.= 0 p.; Q2 1 publication x 60 p.= 60 p.; Q3 1 publication x 45 p.= 45 p.; Q4 2 publications x 36 p.= 72 p.; SJR 4 publications x 30 p.=120 p.; Zentralblatt Math 1 publications x 18 p.= 18 p.; Total 315 p.	**315**
D. Scientific publications (out of the habilitation thesis or its relevant scientific publications)	**200**	Scientific publications in the journals referred to Web of Science, Scopus, and Mathematical Reviews: Q1 4 publications x 75 p.=300 p.; Q2 2 publications x 60 p.=120 p.; Q3 0 publications x 45 p.= 0 p.; Q4 1 publication x 36 p.= 36 p.; SJR 7 publications x 30 p.=210 p.; Mathematical Rev. 1 publication x 18 p.= 18 p.; Total 684 p.	**684**
E. Citations in the scientific journals	**100**	Presented citations in the publications in journals, which are referred to Web of Science and Scopus: WoS, Sc 66 citations x 8 p.=528 p.; Others 0 citations x 4 p.= 0 p.; Total 528 p.	**528**
F. Management of PhD	**100**	Defended PhDl students 1 PhD student x 50 p. = 50 p.;	**110**

students, participation in national projects and published textbooks		National projects 1 project x 20 points = 20 p.; Published textbooks 1 textbook x 40 points = 40 p.; Total 110 p.	

Table 4

I will make three remarks in connection with the numerical data presented in this point:
Remark 1. In the last column of the row, indicator B of table 4, the number of the points (315) does not coincide with the points (303) that the applicant has stated in the relevant report entitled Report on compliance with the minimum national requirements. This discrepancy is due to the fact that the journal "Communications in Applied Analysis", in which the author has one publication, was not reported by Assoc. Prof. H. Kiskinov in the reference as a journal with SJR (for which 30 points are due), and is reported as a journal referred to Zentralblat (for which 18 points are given). However, I will specify that the number of the points received in the review is greater than those presented by the author.
Remark 2. In indicator E (Table 4) only citations that are in journals referred to by Web of Science and Scopus are reported (66 citations in total). The remaining 65 citations are not been reported in the report. Probably due to the "exhausting" check that needs to be done to check exactly where the journals containing these quotes are referenced. The author has spared these efforts. This is permissible once the candidate for the academic position are cited a sufficient number of times in high-ranking journals, i.e., he doesn't need the lost points.
Remark 3. According to Table 4, each of the minimum national indicators is exceeded by the applicant, provided that not all his achievements are taken into account. I will note that (in total), the minimum required points of the indicators, related to this competition, are met by the candidate more than three times.

3.4. Information for fulfilment of the minimum requirements of FMI:
The fulfillment of the minimum requirements of FMI for holding the academic position "Professor" is shown in the following table:

Additional requirements of FMI	Minimum number	Obtained results
1. Publications not submitted for the acquisition of the ONS "Doctor" and for the academic position of "Associate Professor"	20 publications	24 publications
2. Publications in scientific journals	12 publications	24 publications
3. Publications in scientific journals with IF and SJR	8 publications	11 publications
4. Teaching aids	1 textbook	1 textbook
5. Citations	20 citations	131 citations
6. PhD students	1 PhD student	1 PhD student

Table 5

Assoc. Prof. H. Kiskinov was the supervisor of the PhD student Magdalena Veselinova, who successfully defended in 2017 a dissertation on "Fractional differential equations with distributed delay".

Table 5 shows that the additional minimum requirements of the FMI are met by the candidate for the academic position of “Professor”.

4. GENERAL CHARACTERISTICS OF THE CANDIDATE'S EDUCATIONAL AND SCIENTIFIC CREATIVITY

- **4.1. Assessment of the educational and pedagogical creativity of the candidate:** H. Kiskinov has a rich long-term teaching experience, acquired mainly in PU. From 1989 until now (i.e., more than 32 years) the candidate for “professor” has conducted lectures and seminars in a dozen disciplines at Plovdiv University. He is a supervisor of three students theses, and a supervisor of a successfully defended PhD student.

- The presented textbook "Introduction to Discrete Mathematics" is written on 339 pages. It is divided into an introduction, 6 chapters, and a bibliography, which consists of 74 titles. The book is for Bulgarian universities, training students in specialties of the professional fields: Mathematics, Informatics and Computer Science, Pedagogy of Mathematics, Informatics, and Information Technology in some bachelor's degrees from the Plovdiv University: "Mathematics", "Applied Mathematics", "Business Mathematics", "Informatics", "Software Engineering", "Mathematics, Informatics and Information Technology", "Information Technology" , Mathematics and Educational Management and Mathematics and Informatics. The choice of specific topics that:

- Depending on the objectives of the training, should be included in the textbook (generally speaking) in Discrete Mathematics,
- The level and detail of consideration of these topics,
- The use of an appropriate apparatus at their exhibition is a difficult and ambiguous task. The reasons for this are: the large and varied scope of this branch of mathematics, which is based on several other mathematical sciences (Algebra, Mathematical Logic, Set Theory, Function Theory, Combinatorics, Graph Theory, Graph Theory, Number Theory, Probability Theory, etc.);
- The large number (although related) of different specialties, students of which could use the textbook;
- The objectives set for the respective discrete mathematics subjects that could potentially benefit from the manual;
- The connection between the studied topics and the topics of other (founding or upgrading) disciplines;
- The time provided in the curricula of the individual specialties, users of the textbook;
- The quality of the listeners of the respective study material and more.

My personal view is that the author has done very well with the above challenges. There are some technical inaccuracies, for example:

- On p. 41, line 11 below, the expression $m \in f(m)$ should be replaced by $m \notin f(m)$;

- On p. 50, line 3 below, I would replace the phrase "I find nothing" by the phrase "I do not find anything";

- The text on 181 p., 1 line above (quote): "And changing the final states to non-final and the final to non-final" should be edited, and others, but in no way hinder the adoption of the proposed text. By the way, my efforts to find inaccuracies (which are not related to my

personal preferences) were not successful. The approach adopted by Assoc. Prof. H. Kiskinov in writing the manual is subject to the following rules:

- The included material is based mainly on the achievements in mathematical sciences, i.e., this manual is a textbook in mathematics.
- The text constantly emphasizes the deep logical connection between mathematics and computer science (in this regard, important applications of mathematics in specific examples of computer science are indicated);
- A clear statement of the topics included in the manual, which can serve as a basis for further (probably independent) in-depth and detailed study of the basics of informatics;
- A modern approach to the presentation of evidence, different from the so-called classical style, has been adopted. For example, the textbook uses:
- Constructive schemes of evidence,
- Only the ideas of concrete evidence are given,
- “Lines of evidence" are given,
- Elements of the evidence are presented as separate tasks;
- As is customary in our textbook practice, the individual topics follow the following scheme of presentation:
- First part: "concise" presentation of the necessary theoretical material, covering basic definitions, introducing the concepts and relations between them; main statements on the topic; important remarks and examples clarifying the meaning of definitions and theorems;
- Second part: examples (or tasks) through which the theory is made meaningful and the applied nature of the discipline is strengthened.

I think the guide is useful for students. Personally, I was very impressed by its content and professional layout (I would use the metaphor of "living style"). Moreover, if my colleague Kiskinov does not give me a copy of the textbook, I will be forced to buy it.

4.2. Assessment of the candidate's scientific work: In this part of my review I will use the numbering of the titles of the peer-reviewed scientific papers according to the List of scientific papers for participation in the competition. In general, the scientific results of the candidate for "professor" consist in supplementing, enriching and summarizing the scientific knowledge on specific topics from the theory of:

- Impulsive differential equations in Banach spaces ([4], and [5]);
- Research of mathematical objects in abstract spaces ([3], [12], and [22]);
- Properties of comfort and fractional derivatives ([18], and [21]);
- Fractional differential equations with delays ([16]);
- Fractional differential equations with distributed delay ([7], [8], [10], [13], [14], [17], [20], and [23]);
- Neutral fractional differential equations ([6], [9], [11], [19], and [24]);
-Mathematical modeling in population dynamics ([1], [2], and [15]).

Impulsive differential equations in Banach spaces: The object of investigation in [4] are linear impulsive differential systems (homogeneous and non homogeneous) in Banach

spaces. The impulsive moments are fixed in advance. This type of differential equations was studied by D. Bainov, S. Kostadinov and P. Zabreiko in 1987.

The concepts ψ - boundedness, and ψ - stability (for extreme Euclidean spaces) were introduced and studied by O. Akinyele in 1975. Let X be a Banach space, $LB(X)$ is the set of all linear bounded operators operating in X. Homogeneous and the corresponding non homogeneous linear systems of impulsive differential equations of the form below are studied in the paper:

(i) $$\frac{dx}{dt} = A(t)x,\ t \neq T = \{t_1, t_2, ...\};$$
$$x(t_i + 0) = Q_i x(t_i),\ i = 1, 2, ...,$$

(ii) $$\frac{dx}{dt} = A(t)x + f(t),\ t \neq T = \{t_1, t_2, ...\};$$
$$x(t_i + 0) = Q_i x(t_i) + h_i,\ i = 1, 2, ...,$$

where $A: R^+ \to LB(X)$, $f: R^+ \to X$, $Q_i \in LB(X)$, $h_i \in X$. Let be given continuous operator function $\psi: R^+ \to RBL(X) \subset LB(X)$, where $RBL(X)$ is a set of all reversible operators Then the function $u: R^+ \to X$ are named ψ - bounded in R^+, if the function $\psi(t)u(t)$ is bounded in R^+. In a similar way (using an evolutionary operator of impulsive equations), the following concepts are introduced ψ - dichotomy and ψ - exponential dichotomy equation in R^+. One of the main results in this study is to find a set of conditions under which if one homogeneous linear impulsive differential equation (i) is ψ - exponential dichotomy in R^+, then the corresponding non homogeneous equation (ii) for each choice of nonhomogeneous parts (with certain standard qualities) has a solution, which is ψ - bounded. In this paper (it seems to me) that the numbering of theorems is inconsistent. This is probably due to the peculiarities of the widely used word processing system LaTeX.

The other publication on this topic (paper [5]), nonlinear systems of impulsive differential equations in Banach spaces, are studied, which are generalizations of the system (ii):

(iii) $$\frac{dx}{dt} = A(t)x + F(t, x),\ t \neq T = \{t_1, t_2, ...\};$$
$$x(t_i + 0) = Q_i x(t_i) + H_i(x(t_i)),\ i = 1, 2, ...,$$

i.e., function f of (ii) has been replaced by a function $F: R^+ \times X \to X$ in (iii), and h_i (again from (ii)) has been replaced by $H_i(x(t_i))$ from (iii). Here, $H_i: X \to X$, $i = 1, 2, ...$. Through the Banach fixed point scheme, the sufficient conditions for the existence of ψ - bounded solution of (iii) in the cases of ψ - exponential or ψ - ordinary dichotomy of the corresponding linear system of differential equations (of the form (i)) have been found.

Investigations of mathematical objects in abstract spaces: In [3], the main object of study are Volterra integral equations of the second type. Here the variable belongs to a regular Hausdorff space. The main issues of the fundamental theory of the existence and uniqueness of the solution is considered. The set goals are achieved by using a class of fixed points introduced and studied by the authors for nonlinear operators in appropriate classes of Hausdorff spaces.

According to the authors of [12], the complexity of the evidence for integral inequalities largely depends on the dimension and geometry of the integration areas. This circumstance is eliminated in the most general formulation of the integral equation and the corresponding inequalities. Integration into compact sets is allowed in the paper. This eliminates the dependence on the dimension and geometry of the integration area. The attention is focused on solving the set tasks, relying only on the most general topological properties of the spaces in which the studied objects are placed. Abstract integral equations (and their corresponding inequalities) of the second-order Volterra type in metric spaces are studied. Characteristically, the studied equations have two nonlinear integral operators. Sufficient conditions for the existence and uniqueness of the solutions of integral equations of this class are given. The authors' research builds on their previous results (including those in the work discussed above [3]).

In 2014, R. Khalil, M. Al Horani, A. Yousef and M. Sababheh introduced the so-called conformal (fractional) derivative for real functions. It turns out that this derivative satisfies many of the basic properties of the ordinary integer derivative. In the previous studies of the candidate, it was found that a real function has a conformal derivative at a point, if and only if the function has a (ordinary) first derivative at this point and this applies to all points except the lower terminal. In [22] conformal derivatives in arbitrary Banach spaces are studied. Let B is Banach space with norm $\|.\|_B$, function $f:R\to B$, possess norm $\|f\|_B$, which is integrable in the Lebesgue sense in the compact intervals. Let the constants $a\in R$ and $\alpha\in(0,1]$. The conformal derivative $T_a^\alpha f(t)$ in degree α at a point $t>a$ is defined by equality

$$T_a^\alpha f(t)=\lim_{\theta\to 0}\frac{f\left(t+\theta(t-a)^{1-\alpha}\right)-f(t)}{\theta}\ \Leftrightarrow\ \lim_{\theta\to 0}\left\|\frac{f\left(t+\theta(t-a)^{1-\alpha}\right)-f(t)}{\theta}-T_a^\alpha f(t)\right\|_B.$$

The expected properties of the conformal derivatives of functions in abstract spaces have been established, of which I will point out here:

- From the existence of a conformal derivative of an arbitrary order at a given point follows the continuity of the function at that point;
- It is proved that if a function in Banach space has a conformal derivative in order $\alpha\in(0,1]$ at a point $t>a$, then at the same point, this function possesses a conformal derivative in order $\beta\in(0,1]$, $\beta\neq\alpha$, in addition, the equality is valid $T_a^\alpha f(t)=(t-a)^{\beta-\alpha}T_a^\beta f(t)$;
- - the case of the investigated derivative is in the lower terminal is considered, i.e., $t=a$.

An important result has been obtained (from my point of view): analogous to the real case. More precisely: an abstract function has a conformal derivative at a given point (which does not coincide with the lower terminal of the conformal derivative), if and only if there is a simple integer first-order derivative at the same point. An interesting application of this type of derivatives on a mixed problem for parabolic partial differential equations has been made. In my opinion, this work (which is an integral part of the candidate's previous research cycle) is very interesting and worth noting.

Properties of the comfort and fractional derivatives: In article [18], some introductory remarks are made, analogous to the mentioned ones above in the publication [22] what I commented. In my opinion, the achievements in the paper are:

- Indication of a scheme for the transformation of an initial problem for a nonlinear system of differential equations with conformal derivatives: $T_a^{\alpha} x(t) = F\left(t, x(t)\right),\ x(t_0) = x_0 \in R$

in an equivalent initial problem for a nonlinear system in which the derivatives are integers of first order:

$$x'(t) = (t-a)^{\alpha-1} F\left(t, x(t)\right),\ x(t_0) = x_0;$$

- Indication of a scheme for the transformation of an initial problem for a nonlinear system of differential equations with delays and conformal derivatives into an equivalent initial problem for a nonlinear system with delays and integer first derivatives.

In the article [21], important properties of two main variants of the fractional derivatives of a given function $x: R \to R$, are studied which are defined through Gamma function Γ. Let the constant $\alpha \in (0,1)$, and point $t_0 \in R$. Then with some restrictions for the function $x = x(t)$, left and write derivatives at the selected point t_0 are considered:

- Riemann-Liouville derivatives:

(iv)
$$RLD_{t_0+}^{\alpha} x(t) = \frac{1}{\Gamma(1-\alpha)} \frac{d}{dt} \int_{t_0}^{t} (t-s)^{-\alpha} x(s) ds,\ \ t > t_0,$$
$$RLD_{t_0-}^{\alpha} x(t) = \frac{-1}{\Gamma(1-\alpha)} \frac{d}{dt} \int_{t}^{t_0} (s-t)^{-\alpha} x(s) ds,\ \ t < t_0;$$

- Caputo derivatives

(v)
$$CD_{t_0+}^{\alpha} x(t) = \frac{1}{\Gamma(1-\alpha)} \int_{t_0}^{t} (t-s)^{-\alpha} \frac{d}{ds} x(s) ds,\ \ t > t_0,$$
$$CD_{t_0-}^{\alpha} x(t) = \frac{-1}{\Gamma(1-\alpha)} \int_{t}^{t_0} (s-t)^{-\alpha} \frac{d}{ds} x(s) ds,\ \ t < t_0.$$

The main result in the publication can be summarized as follows:

$$\left(x \in C^2[a,b],\ CD_{t_0-}^{\alpha} x(t) = CD_{t_0+}^{\alpha} x(t),\ t \in [a,b]\right) \ \Rightarrow\ \left(x(t) = const,\ t \in [a,b]\right).$$

This statement does not meet expectations (caused by the integer variant of differentiation). Several erroneous studies by authors caused by neglect of the above property have been cited. For the first time, I come across a case where the citation is "not pleasant and prestigious" for the cited author.

Fractional Differential Equations with Delays: Differential equations with fractional derivatives and delay have an advantage over differential equations with integer order of derivatives, which can be defined as follows: It is possible to reflect the influence of "process history" on its evolution. The previous information is acquired in two directions:

- - the memory of the fractional derivative;
- - the impact of the process of the past caused by the belated arguments.

This advantage has been well clarified many times by the author.

It is known that the integral representation of the solutions of the initial problems for the differential equations is an important part in the construction of the fundamental and qualitative analysis of these solutions. The main tool for solving this problem is an existence of a fundamental matrix.
Nowadays, fractional calculus and the corresponding fractional differential equations are under intensive study. This proves to be an adequate tool for modeling many phenomena and processes in different fields of science. A systematic and fundamental presentation of the theory of fractional calculus is presented in the monographs of V. Kiryakova (1994) and A. Kilbas, H. Srivastava, J. Trujillo (2006).

In [16], the initial problem for a nonlinear fractional delay system with Caputo derivatives with rationally incommensurable differentiation series is investigated.:

(vi)
$$D_{a+}^{\alpha_k} x^k(t) = f^k\left(t, x^1(t+\theta), ..., x^n(t+\theta)\right);$$
$$x^k(a+\theta) = \phi^k(\theta),\ k = 1, ..., n,$$

where $D_{a+}^{\alpha_k}$ is a left Caputo fractional derivative (see (v)), $\alpha_k \in (0,1)$, $-h \le \theta \le 0$, $h = const > 0$, $\Phi = \left(\phi^1, ..., \phi^n\right) \in PC\left([-h, 0], R^n\right)$ i.e., a set of partially continuous functions in the interval $[-h, 0]$ with a finite number of first-order breakpoints in which the functions are continuous on the left. I will note that in the paper that features are given:

$F = \left(f^1, ..., f^n\right): E^* \to R^n$, where $E^* = J_a \times \Xi^* = J_{a+0} \times \Xi^* = [a-h, a] \times PC\left([-h, 0], R^n\right)$.

In other words, on the right side of the differential system, time t is excessively limited, which is inaccurate in my view. This circumstance due to the fact that the set $J_a = [a, \infty)$ is omitted to be defined as has been done in [17], [19] and other author's publications.
The paper lays the foundations of the fundamental theory (existence and uniqueness of the solution) of the initial problems (vi) for nonlinear fractional (in the sense of Caputo) delayed differential systems in the case of discontinuous initial functions. It is the interrupted initial conditions that represent "newer" in the author's considerations. The initial value problem is also studied:

(vii)
$$D_{a+}^{\alpha_k} x^k(t) = \sum_{i=0,...,m} \sum_{j=1,...,n} b_{kj}^i x^j(t-\tau_i) + w^k\left(t, x^1(t), ..., x^n(t)\right);$$
$$x^k(t) = \phi^k(t),\ t \in [-h, 0],\quad k = 1, ..., n.$$

We can assume that (vii) is a special case of (vi). The conditions are presented, from which it follows that if the zero solution of the linear part of the upper system

$$D_{a+}^{\alpha_k} x^k(t) = \sum_{i=0,...,m} \sum_{j=1,...,n} b_{kj}^i x^j(t-\tau_i)$$

is globally asymptotically stable, than the zero solution of the nonlinearly perturbed system is also globally asymptotically stable.

Fractional differential equations with distributed delay: In [7] a linear (autonomous and non-autonomous) fractional differential system with distributed delays is studied. An important feature is that the series of involved fractional derivatives are rationally disproportionate, and the fractional derivatives used are type of Riemann-Liouville or

Caputo type (see definition equations (iv) and (v) above). The corresponding Cauchy problem has the form:

(viii) $$D_{0+}^{\alpha_k} x_k(t) = \sum_{j=1,..,n} \int_{-\sigma}^{0} x_j(t+\theta)\, d_\theta u_j^k(t,\theta) + f_k(t), \quad k = 1,...,n;$$

(ix) $$D_{0+}^{\alpha_k - 1} x_k(t) = \phi_k(t), \quad t \in [-\sigma, 0], \quad k = 1,...,n,$$

where D is one of the derivatives type Riemann-Liouville or Caputo type, $\alpha_1, \alpha_2, ..., \alpha_n \in (0,1)$ are the orders of the derivatives, and they are rationally incommensurable, $\sigma = const > 0$, $u_k^j : R \times R \to R$, $f_k : R \to R$, $\phi_k : [-\tau, 0] \to R$. I will note (although it is unnecessary) that in publication [7] on page 3, line 2 above is incorrectly written $f : R \to R$ instead of $f_k : R \to R$, and in the equality (1), there is $\sum_{j=0}^{n} ...$ instead of $\sum_{j=1}^{n} ...$. The main results are contained in two statements. The sufficient conditions are specified:

- For the existence and uniqueness of the solution of non-homogeneous problem (viii), (ix);
- The zero solution of the corresponding (viii) homogeneous problem is globally asymptotically stable.

The proof of the second statement is a repetition of the classical result: If all the roots of the corresponding analogue of the characteristic equation have negative real parts, then the zero solution of the considered homogeneous linear fractional differential system is globally asymptotically stable.

In article [8], the autonomous system corresponding to (viii) is studied

(x) $$D_{0+}^{\alpha_k} x_k(t) = \sum_{j=1,..,n} \int_{-\sigma}^{0} x_j(t+\theta)\, du_j^k(\theta), \quad k = 1,...,n,$$

where the meaning of the parameters is indicated in the analysis of the previous publication. Sufficient conditions are obtained for the global asymptotic stability of the zero solution of (x), which are given by means of the zeroing quality of the determinant of the equivalent matrix, i.e., of the characteristic polynomial.

Among the mathematical objects studied by H. Kiskinov are Caputo fractional derivatives of distributed order with respect to a non-negative density function (see paper [10]), which are defined as follows:

(xi) $$CD_{a+}^{q(\alpha)} x(t) = \int_{n-1}^{n} q(\alpha)\, CD_{a+}^{\alpha} x(t)\, d\alpha,$$

where $CD_{a+}^{\alpha} x(t)$ is the Caputo fractional derivative (see equation (v)), the density function $q : R^+ \to R^+$, $n \in N$. Here, a linear system with fractional derivatives of distributed order and with distributed delays is studied:

(xii) $$CD_{0+}^{q(\alpha)} x_k(t) = \sum_{j=1,..,n} \int_{-\sigma}^{0} x_j(t+\theta)\, du_j^k(\theta) + f_k(t), \quad k = 1,...,n.$$

For the linear system (xii) with initial value condition

(xiii) $$x^k(t) = \phi^k(t), \ t \in [-\sigma, 0], \quad k = 1,...,n.$$

the corresponding fundamental theory is built, which includes the conditions for existence and uniqueness of the solution. For this purpose, an equivalent Volterra type integrated system is found in advance, which is essentially a serious local problem for this type of

equations (more precisely, in the presence of fractional derivatives of the mentioned type). I will note that the equivalence (found between the differential system and integral system) is not fully comparable with the classical equivalence in the case of linear systems of differential equations with whole derivatives. The zero solution of autonomous system has been studied for global asymptotic stability. An important result in the paper is reaching the previously expected conclusion: If the roots of the corresponding characteristic equation have negative real parts, then the zero solution of the considered system is globally asymptotically stable.

In [13], the linear system (viii) is studied, where the Riemann-Liouville derivative (in descriptive form, the studied object are fractional differential linear non-autonomous systems with distributed delays and rationally incommensurable differentiation series). Many experts in the theory of fractional differential equations believe that the practical interpretation of the initial conditions is open. Three types of initial conditions are considered:

$$D_{0-}^{\alpha-1}x_k(t)=\phi_k(t),\ \ t\in[-\sigma,0];$$
$$D_{0-}^{\alpha-1}x_k(0)=\phi_k(0),\ \ x_k(t)=\phi_k(t),\quad t\in[-\sigma,0);$$
$$x_k(t)=\phi_k(t),\quad t\in[-\sigma,0],\ \ k=1,...,n.$$

The possibility for practical interpretation of the initial conditions is analyzed, through which the appropriate choice of the model initial problem describing real objects is outlined.

The scientific publications [20] and [23] are devoted again to the fractional systems with distributed delays and the Caputo derivatives with rationally incommensurable lines of differentiation. The initial problem is considered

(xiv) $$D_{0+}^{\alpha_k}x_k(t)=\sum_{j=1,..,n}\int_{-h}^{0}x_j(t+\theta)\,d_\theta u_j^k(t,\theta)+f_k(t);$$

(xv) $$x_k(t)=\phi_k(t),\quad t\in[-h,0],\ \ k=1,...,n.$$

- The following issues are explored:
- Conditions for the existence of a fundamental matrix;
- Properties of the fundamental matrix;
- Integral representation of the solutions of (xiv), (xv);
- Estimates of the solution through the Gronwall inequality;
- Continuous dependence of the decision, etc.

In [14] and [17], the object of investigation are linear fractional systems with distributed delays and Caputo derivatives with rationally incommensurable differentiation series. The systems are a summary of (xiv) and have the form:

(xvi) $$D_{0+}^{\alpha_k}x_k(t)=\sum_{i=0,...,m}\left(\sum_{j=1,..,n}\int_{-h}^{0}x_j(t+\theta)\,d_\theta u_{kj}^i(t,\theta)\right)+f_k(t).$$

For the initial problem (xvi), (xv), the following results are obtained:

- Sufficient conditions have been found for the existence and uniqueness of a solution in case of interrupted initial functions (functions $\phi_k(t)$ of (xv) are continuous piecewise with a finite number first-order breakpoints in interval $[-h,0]$);
- Integrated presentation of the solution;
- Conditions are found to ensure the existence and uniqueness of solutions in the case of Lebesgue-compatible initial functions.

Neutral fractional differential equations: In [6], the authors study a relatively complex mathematical object such as neutral linear fractional differential systems with distributed delays in the case of Riemann-Liouville and Caputo fractional derivatives with rationally incommensurable differentiation series that we can distinguish follows:

(xvii) $$D_{0+}^{\alpha_k}\left(x_k(t)-\sum_{j=1,..,n}\int_{-\tau}^{0}x_j(t+\theta)\,d_\theta v_k^j(t,\theta)\right)=\sum_{j=1,..,n}\int_{-\sigma}^{0}x_j(t+\theta)\,d_\theta u_k^j(t,\theta)+f_k(t),\ k=1,...,n.$$

Here, the derivative $D_{0+}^{\alpha_k}$ is in the sense of Riemann-Liouville or Caputo. The meaning of the other parameters of the above system was clarified before. The initial value condition has the form

(xviii) $$D_{0+}^{\alpha_k-1}x_k(t)=\phi_k(t),\quad t\in[-h,0],\quad h=\max\{\tau,\sigma\},\quad k=1,...,n.$$

As in the previous works of the candidate, so here, the initial problem (xvii), (xviii) is reduced to an equivalent integrated system, which is convenient for using the shrinking operator method. In this way, the existence and uniqueness of the solution of the considered problem is solved. For the corresponding (xvii) autonomous system, the conditions for global asymptotic stability of the zero solution are reaffirmed. As with classical differential linear systems, the main assumption is related to the presence of negative real parts of the roots of the corresponding characteristic equation. Here the main difficulty is in determining the specific form of the characteristic equation.

In [9], the investigation of the problem (xvii), (xviii) from the previous work continues. Here, the authors improve and expand on their previous results. The general form of a quasi-equivalent integral equation is reached together with an appropriate initial condition. Through the integral equation, sufficient conditions are found for the existence and uniqueness of the solution of (xvii), (xviii). One of the important achieved goals is to find comfortable conditions (in the form of inequalities) through which the asymptotic stability of the zero solution of the zero solution of the respective (xvii) autonomous system is guaranteed.

(xix) $$D_{0+}^{\alpha_k}\left(x_k(t)-\sum_{j=1,..,n}\int_{-\tau}^{0}x_j(t+\theta)\,dv_k^j(t)\right)=\sum_{j=1,..,n}\int_{-\sigma}^{0}x_j(t+\theta)\,du_k^j(t),\ k=1,...,n.$$

System (xix) is an object of study in paper [11]. An important tool in these research is a type of a matrix measure in $C^{n\times n}$. Let $\|.\|$ be an arbitrary vector norm in C^n. The induced matrix norm has the form $\|A\|=\max\{\|Az\|;\ z\in C^n,\|z\|=1\}$, where matrix $A\in C^{n\times n}$. The corresponding (to the vector norm) matrix measure is obtained as follows:

$$\mu(A)=\lim_{\lambda\to 0}\frac{\|I+\lambda A\|-1}{\lambda}.$$

Using auxiliary results related to $\mu(.)$, the results of global asymptotic stability (GAS) of the zero solution of the system (xix) are obtained. The main result is the obtained specific conditions under which the study of GAS of the considered neutral system can be replaced by the study of the same problem for the respective linear fractional system with delays:

$$D_{0+}^{\alpha_k}x_k(t)=\sum_{j=1,..,n}\int_{-\sigma}^{0}x_j(t+\theta)\,du_k^j(t),\ k=1,...,n.$$

A summary of system (xvii) of the type is studied in [24]:

(xx)
$$D_{0+}^{\alpha_k}\left(x_k(t)-\sum_{l=1,...,r}\left(\sum_{j=1,..,n}\int_{-\tau_l}^{0}x_j(t+\theta)\,d_\theta v_{kj}^l(t,\theta)\right)\right)$$
$$=\sum_{i=0,...,m}\left(\sum_{j=1,..,n}\int_{-\sigma_i}^{0}x_j(t+\theta)\,d_\theta u_{kj}^i(t,\theta)\right)+f_k(t),\ k=1,...,n,$$

where the Caputo fractional derivatives $\tau_l\in(0,\tau]$, $\sigma_l\in(0,\sigma]$, $h=\max\{\tau,\sigma\}$ (the other parameters are specified above). The initial conditions are of the standard type

(xxi) $$x_k(t)=\phi_k(t),\quad t\in[-h,0],\quad k=1,...,n.$$

Sufficient conditions have been obtained for the existence and uniqueness of the solution of the problem (xx), (xxi) assuming that the initial functions are interrupted by first-order interruptions.

In [19], the existence and uniqueness of the solution of a nonlinear fractional system with Caputo derivatives:

(xxii) $$D_{0+}^{\alpha_k}\left(x^k(t)-\sum_{l=1,...,r}\left(\sum_{j=1,..,n}a_{kj}^l x_j(t-\tau_l(t))\right)\right)=f_k(t,x_1(t+\theta),...,x_n(t+\theta)),\ k=1,...,n,$$

which has several features:

- Under the sign of the derivative, we have a linear combination of a delayed unknown function;
- Fractional derivatives are of different orders;
- Delays under the sign of the derivative are variable;
- In the nonlinear part the required function has a constantly delayed argument.

The initial value conditions:

(xxiii)
$$x_k(a+\theta)=\phi_k(\theta),\quad -h\le\theta\le 0;$$
$$x_k(a-\tau_l(t))=\phi_k(t-\tau_l(t)),\quad t-\tau_l(t)\le a,\quad k=1,...,n,\ l=1,...,r$$

reflect the complex nature and definition areas of delays. In addition, the initial functions may be interrupted. The main goal is to find conditions for the existence and uniqueness of the solutions of (xxii), (xxiii). Studies on the global asymptotic stability of the zero solution of (xxii) have been performed, provided that this quality is possessed by the zero solution of the reduced (without external interference) system.

Mathematical modeling in population dynamics: In [1], the author's research (with a team) on a model describing the dynamics of bacterial biomass (rather its concentration) in

a nutrient medium continues. In essence, the model offered here is an improvement and summary of the classic model of Monod. From a biological point of view, it is important that the mathematical model adequately takes into account the influence of bacterial mortality on population dynamics throughout the period of their existence. In the study, this circumstance was taken into account by a distributed delay in the concentration of the population $x: R \to R^+$, which can be seen fixed on the right side of the second equation of the model system:

(xxiv) $$s'(t) = -\frac{1}{\alpha}\mu(s(t))x(t); \qquad x'(t) = \mu(s(t))x(t) - \int_{-\tau}^{0} x(t+\theta)d\nu(\theta),$$

where $s: R \to R^+$ is the concentration of the substrate, $\mu: R^+ \to R$ the growth rate of the specific population, $0 < \alpha = const < 1$, $\tau = const > 0$ and $\nu: [-\tau, 0] \to R^+$ is a species-specific monotonically growing function. The initial value conditions have the type:

(xxv) $$x(t) = \varphi(t), \quad s(t) = \psi(t), \quad t \in [-\tau, 0],$$

where the preset initial functions $\varphi, \psi: [-\tau, 0] \to R^+$ meet natural constraints. It has been established that the model system has only a global absolutely continuous solution under appropriate non-negative initial conditions.

Article [2] again offers a summary of Monod's classical model for population development in a nutrient medium. The effects of delayed and instant bacterial mortality are emphasized again. The model introduced in the paper is a combination of other previous models (including those of the author):

(xxvi) $$s'(t) = -\alpha\mu(s(t))x(t); \quad x'(t) = \mu(s(t))x(t) - l_1 x(t) - l_2 x(t-\tau),$$

where the positive constants and are specific rates of decay of the population of microorganisms. The existence of a single globally absolutely continuous solution to the Cauchy problem (xxvi), (xxv) has been proved. The qualities of the model system have been studied. For example, sufficient conditions are given to indicate that in the interval in which the population is strictly positive, the substrate is also positive. Under the same conditions from a certain place onwards the concentration of the substrate is a decreasing function, etc.

Cumulative distribution functions (CFRs) are well known and successfully used in "reliability" analysis by researchers. In [15], Weibull's CFR is considered:

$$F(t) = F(t; k, \lambda) = 1 - \exp\left(-(t/\lambda)^k\right),$$

Where the positive constants k and λ are specified depending on the initial data of the modeled process. In the paper, the constants are determined using the least squares method. Since the class of model approximation functions $F(t; k, \lambda)$ is relatively complicated, calculations (however small the data) cannot be performed "by hand" and computer data processing is mandatory. Several transformations of the CFR are known through which new CFRs are obtained. Here, the authors use (I did not understand why) the transformations:

$$G(t)=\frac{F_1(t)+F_2(t)}{1+F_1(t)F_2(t)}; \qquad G(t)=\frac{F_1(t)+F_2(t)}{1+\sqrt{F_1(t)F_2(t)}},$$

which are based on two known CFR (s) (F_1 and F_2). In the paper, F_1 and F_2 are realizations of the Weibull function. Numerical examples are presented, illustrating and visualizing the results obtained using Mathematica software environment. I am not convinced that this article should be included in the materials of the discussed competition, especially considering that the other publications seriously (in times) exceed the minimum requirements.

Conclusion of section 4.2: In essence, generally speaking, the results discussed above are the formulation and proof of new scientific facts and creation and improvement of new mathematical methods. The scientific work of Hristo Kiskinov (although partially reduced for participation in the discussed competition) is diverse and largely original in terms of specific topics studied. The results are mostly theoretical in its nature, but they are provoked by the study of real problems, or at least other authors can use what has been achieved to solve problems in practice. In some of the presented articles, mathematical models are considered, through which the theory is additionally visualized, the achieved results are analyzed and different approaches are compared. The presented works significantly exceed the requirements (as well as my expectations) for the quantity and quality of a "collection" of scientific papers for the academic position of "professor" in a prestigious university, such as Plovdiv University.

Finally, I will mention some facts that made a good impression on me:
- Good (the more accurate term is excellent) information of the author about the current state of scientific knowledge on the issues discussed;
- Complete and accurate evidence of the allegations. The interested reader after getting acquainted with the works of the candidate remains without a doubt in the achieved results;
- Excellent mastery of the mathematical methods used (undoubtedly this is due to the deep knowledge of the auxiliary apparatus);
- Clear reporting the author's achievements and correct recording of the results by other researchers who have been used in his scientific work;
- Providing (usually in the introduction to the papers) a complete set of facts that will be used in the main part of the research. This makes the works convenient for unprepared readers (including me);
- Well-arranged research, following generally accepted standards.

5. EVALUATION OF THE CANDIDATE'S PERSONAL CONTRIBUTION

The scientific papers with which the candidate participates in the competition are co-authored with other specialists. I am not a supporter of "mandatory self-publishing". I believe that collective scientific work is subject to more serious "scientific control" - by several co-authors. In addition, in this type of work, the narrower specialized abilities of the authors can be used, which in my opinion leads to an increase in the quality of the publication. I am not informed about the existence of a written document (declaration) for internal distribution of the authors' participation in the preparation and publication of the

research attached to the competition under discussion. Therefore, I believe that the participation of Assoc. Prof. Dr. Hristo Kiskinov is equivalent to the other co-authors. I do not think that the "arrangement" of the authors in a collective publication has anything to do with the degree (or importance) of their participation in the elaboration of the scientific work. Therefore, in my opinion, I did not pay attention to this circumstance in the review.

7. CRITICAL REMARKS AND RECOMMENDATIONS

I have no critical remarks. As I said above (which can also be said to be easily noticeable), the scientific articles on the competition have been published in renowned scientific journals and have therefore received preliminary, internal, specialized, positive reviews.

All documents related to the competition are prepared precisely and conveniently for the reviewer.

It seems to me that the scientific results obtained by the candidate (I refer only to those with which he participates in the discussed competition) should be systematized over time in several monographs. I would like to draw the author's attention to the following titles of future monographs:

- Impulse differential equations in Banach spaces;
- Fractional differential equations with shifted argument.

Undoubtedly, the monographs will arouse serious interest among the scientific community not only in our country.

8. PERSONAL IMPRESSIONS

I have known colleague Hristo Kiskinov for more than ten years (before that he was a teenager). Our closer acquaintance started before the beginning of his procedure for holding the academic position of “associate professor”. I will emphasize once again that he is an established researcher-mathematician and professor of mathematics at the University with extensive experience. Undoubtedly, he has a deep knowledge of the theory in which his research is based. I am sure that he had the opportunity and the necessary results to publish a significantly larger number of scientific articles. In my opinion, he refrained because of his professional conviction and desire for the results found to be “as accurate and strong as possible.” This inherent self-criticism will undoubtedly lead to new serious scientific achievements in the future.

I appreciate highly his personal human qualities, of which I will point out:

- Sense of humor;
- Dignity;
- Sense of justice;
- Willingness to cooperate and provide assistance.

I assume that the colleagues from the Department of Mathematical Analysis of the FMI of Plovdiv University are familiar with these and other qualities, which is why he was elected head of the department.

CONCLUSION

The teaching and research activities of the candidate fully comply with his claims to hold the academic position of "professor" at the University of Plovdiv. The textbook is dedicated to the modern educational issues in mathematics and computer science, and is suitable for

FMI students and useful for teaching at the university. Assoc. Prof. Dr. Hristo Kiskinov has presented a sufficient number of scientific papers published after the defense of his doctoral dissertation in 2012 and after holding the academic position of "Associate Professor" in 2014.
The publications submitted for participation in the competition were published in 2015 at the earliest, I undoubtedly come to the conclusion that the peer-reviewed materials have not been used so far for the academic growth of the candidate. The scientific articles have original contributions, almost all have been published in journals that are reflected in the Web of Science and Scopus databases, and approximately half also have IF. The results of Assoc. Prof. Hristo Kiskinov have received national and international recognition, and they have been cited many times by other authors.
The achieved results in the teaching, and research activities significantly exceed the minimum national requirements, and the specific additional minimum requirements of FMI of PU, adopted in the connection with ZRASRB, the Regulations for implementation of ZRASRB, and the Regulations for the development of the academic staff of Plovdiv University“.

After getting acquainted with the materials, and scientific papers presented in the competition, analysis of their significance, I find it reasonable to declare my positive assessment and recommend to the Scientific Jury to prepare a report-proposal to the Faculty of Mathematics and Informatics of Plovdiv University "Paisii Hilendarski" for selection of Assoc. Prof. Dr. Hristo Stefanov Kiskinov for holding the academic position "Professor" in the Department of Mathematical Analysis of the same faculty in the Professional field: 4.5. Mathematics (Mathematical analysis).

15/ 04/ 2022

Reviewer:……..

(Prof. Angel Dishliev)