REVIEW
by Prof. Andrey Ivanov Zahariev, PhD –
Faculty of Mathematics and Informatics, Plovdiv University 'Paisii Hilendarski'
of the materials submitted for participation in the competition
for occupation of the academic position **'Professor'**
in Plovdiv University 'Paisii Hilendarski'
in Area of Higher Education: 4. "Natural sciences, Mathematics and Informatics"
Professional Field: 4.5 Mathematics (Mathematical Analysis)

In the competition for the academic position 'Professor', announced in State Gazette No 31/12.04.2019 and on the web site of Plovdiv University 'Paisii Hilendarski' for the needs of the Department of Mathematical Analysis within the Faculty of Mathematics and Informatics (FMI) **Assoc. Prof. Boyan Georgiev Zlatanov, PhD,** Department of Mathematical Analysis, Plovdiv University 'Paisii Hilendarski', **participates as a single candidate**.

The present review has been prepared according the decision of the Scientific Jury taken by Protocol No. 1 / 18.07.2019, appointed by order P33-3779 / 12.07.2019 of the Chancellor of the Plovdiv University 'Paisii Hilendarski' and is in compliance with the requirements of the Regulatory Framework: Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB), Regulations for the Implementation of the Law on the Development of the Academic Staff in the Republic of Bulgaria (RILDASRB) and Rules for the Development of the Academic Staff of the Plovdiv University 'Paisii Hilendarski' (RDASPU).

1. General Presentation of the Received Materials
Subject:
By order P33-3779 / 12.07.2019 of the Chancellor of the Plovdiv University 'Paisii Hilendarski' I am appointed as a member of the Scientific Jury of the competition for occupation of the academic position 'Professor' for the needs of the Department of Mathematical Analysis
 within the FMI, Plovdiv University 'Paisii Hilendarski' in Area of Higher Education: 4. "Natural sciences, Mathematics and Informatics", Professional Field: 4.5 Mathematics (Mathematical Analysis).

Documents for participation in the competition have been submitted by:
Assoc. Prof. Boyan Georgiev Zlatanov, PhD, Department of Mathematical Analysis, Plovdiv University 'Paisii Hilendarski' - **as a single candidate.** The documents were verified by a commission appointed by order P33-3480 / 05.07.2019 of the Chancellor of the University of Plovdiv "Paisii Hilendarski". According to the minutes of the meeting of the Commission on 17.07.2019, signed by all the members without comments, the commission allowed the participation of the only candidate Assoc. Prof. Dr. Boyan Georgiev Zlatanov.
The set of materials presented by Assoc. Prof. Boyan Georgiev Zlatanov, PhD in paper format include the following documents:
 1. Application to the Chancellor for admission to the competition; 2. European curriculum vitae:
2.1. in Bulgarian; 2.2. in English.
3. Higher education diploma:
3.1. Master's degree diploma - original with application - Series A-95 Sofia University, № 130597
3.2. FMI's official note to the Sofia University certifying that the diploma meets the requirements for a Master's degree

4. Doctorate degree - original - No. 27519, 08/27/2001, Higher Attestation Committee
5. Certificate of Scientific title "Associate Professor" - original - Certificate No. 24922, 23.04.2008, scientific title Associate Professor in Mathematical Analysis
6. screenshot from NACID for habilitated persons with scientometric indicators
7. work certificate - U-1829, 05.04.2019
8. documents for educational work:
8.1. reference classroom employment after acquiring the academic position of associate professor
8.2. a list of published textbooks or published electronic textbooks in the course developed by the applicant
9. research documents:
9.1 a note from the R&D division at the MA
10. list of scientific works:
10.1 list of all scientific works
10.2 List of Scientific Papers for the Acquisition of the PhD.
10.3 list of scientific papers for participation in the competition for associate professor
10.4 list of scientific papers for participation in the competition for professor
10.5 copies of scientific papers for participation in the professor competition
10.6 a list of citations for participation in the Professor Contest
10.7 List of scientific papers not used in previous procedures and not included in this procedure
10.8 copies of the entries for the Professor Contest (electronic only)
11. information on compliance with the minimum national requirements and the additional requirements of the FMI in Plovdiv University, in accordance with Article 76 (4) of RDASPU:
11.1 minimum national requirements for destination 4.5.
11.2 certificate for compliance with the additional requirements of the FMI at the PU, in accordance with Article 76 (4) of RDASPU
11.3 additional requirements of the FMI at the PU for the direction 4.5.
12. Declaration of originality and authenticity of the attached documents
13. annotations of the materials under art. 76. of RDASPU including self-assessment of contributions:
13.1 annotations of the materials in Bulgarian
13.2 annotation of the English language material
13.3 self-assessment of contributions in Bulgarian
13.4 self-assessment of contributions in English
set of documents in electronic form from item 1 to item 13 - 1 issue.

The set of materials presented by Assoc. Prof. Boyan Georgiev Zlatanov, PhD in paper format **complies** with the minimum national requirements for occupying the academic position of "professor".

The candidate has presented in total 34 pcs. scientific works: 1pc. monographs, 2 pcs. textbooks and 31 pcs. scientific articles. 34 scientific works are accepted for peer review. The presented works have not been used to acquire the academic positions of "Assistant Professor" and "Associate Professor" and are reported in the final evaluation of 4 research projects. From the presented 31 scientific articles for the competition, 13 pcs. are self-written, 10 pcs. are with one co-author, 7 pcs. are with two co-authors and 1 pc. with three co-authors. From the presented publications 29 pcs. are in journals (with minimum additional requirements of 12 in journals) and 2 is in the conference proceedings. From the jounal publications, 24 articles have been published

in foreign scientific journals, 6 articles have been published in Bulgaria and 1 article in Proceedings of a Conference in Bulgaria.

2. Brief Biographical Data on the Applicant

Assoc. Prof. Boyan Georgiev Zlatanov graduated in the period 1991-1996 at Sofia University "St. Kliment Ohridski ", Faculty of Mathematics and Informatics as professional specialist Mathematics with specialization - Mathematical Analysis and with additional qualification Teacher of Mathematics and Informatics in 5 year course of study - equaled to the degree of "Master". In 2001, he defended a thesis in a scientific specialty Mathematical Analysis, on the basis of which he was awarded the educational and scientific degree PhD. From 1999 until now, the candidate has been a lecturer at the Plovdiv University 'Paisii Hilendarski', occupying successive academic positions as assistant, assistant professor and associate professor. He is deputy Dean of the FMI, Plovdiv University 'Paisii Hilendarski'.

3. General Characteristics of the Applicant's Activity

3.1. *Assessment of the Educational and Pedagogical Activity*

The main teaching activity of Assoc. Prof. Zlatanov is at the Plovdiv University 'Paisii Hilendarski', where he has many years of experience and extensive teaching experience. During his many years of teaching experience, Assoc. Prof. Zlatanov has taught various compulsory and elective disciplines in different specialties, giving lectures, conducting seminars. He was the scientific supervisor of graduates and PhD students. Assoc. Prof. Zlatanov participates in the preparation of curricula for bachelor's and master's programs. Furthermore he has developed curricula and lecture courses with relevant multimedia presentations for a wide range of subjects: Metric spaces; Real analysis; Fractal geometry; Mathematical Economics; Functional analysis; Synthetic geometry (in dynamic environment); Introduction to Money Mathematics; ACS metric spaces; Real analysis, differential calculation of a function of a variable in an ACS environment; Real-world analysis, integral function calculation of a variable in an ACS environment.

As former head of the Department of Mathematical Analysis for the period 2011 - 2019, I have direct impressions of the teaching activity of Assoc. Prof. Zlatanov and give high praise to his teaching and pedagogical activity.

3.2. Assessment of the Scientific Activity of the Applicant

3.2.1. General description of the presented scientific works.

Assoc. Prof. Zlatanov is the author of 53 scientific works. From the presented 31 psc. scientific works for the competition, 18 pcs. are with co-authors, with which the applicant has demonstrated convincingly his ability to work with a number of colleagues, which is a definite positive quality of his. In view of the fact that no formal division of results has been noted, I agree for the joint publications that the contribution is equivalent. For me there is no doubt that the candidate has made a great personal contributions in all publications. From the presented **31** psc. scientific works **29** are in journals (with minimum additional requirements of 12 in journals) and one is in a collection of papers at a conference in Bulgaria. From the 30psc. papers published in journals, 12 psc. have been published in Impact factor journals (with a minimum additional requirement of 8 psc.in Impact factor journals). Their total impact factor being **10,232**.

The above scientometric indicators show that the candidate Assoc. Prof. Zlatanov substantially exceeds the minimum national requirements on the normative base - LDASRB, RILDASRB for occupying an academic position of "professor", but also those of RDASPU as well as the

Additional Faculty requirements at the PA Paisii Hilendarski for the academic position "Professor".

3.2.2. Assessment of scientific and scientific applicable activities.

The contributions of the candidate for professor can be summarized generally in the following three directions:

(**A**) Some geometric properties of Banach spaces with an unconditional basis;

(**B**) Fixed points and best approximation points theory for cyclic maps

(**C**) Usage of dynamic geometry software in education (in particular DGS and Maple).

(**A**) **Some geometric properties of Banach spaces with an unconditional basis;**

The main research interess of the candidate for professor is concentrated in the investigations of the Banach spaces geometry, more concrete in the geometry of classes Koethe sequence spaces (KSS) and classes of Musielak-Oricz sequence spaces (MOSS). The results of these invesigations are published in the papes $[1] – [7]$. Generally speacking, the candidate has calculated (or two side estimated) the value of several constants which play important role for establishing the geometric properties of the considered Banach spaces. Studied are the Kottman and the packing constants $[7]$, the Reisz angle $[6]$, $[7]$, the weakly convergent sequence coefficient (WCS)$[1]$, the normal structure $[5]$ and the Schur property $[4]$. In the paper $[5]$ are investigated some properties of generalized moduli of convexity and smoothness and in the works $[2]$, $[3]$ and $[4]$ are obtained results connected to the property for a space to be stabilized asymptotic ℓ_∞ for classes of KSS.

There are established concrete results for the above mentioned one's, as well as for the cases of ℓ_p, Orlicz, Nakano, Muscielak-Orlciz, Lorentz, Orlicz-Lorenz and Cesaro spaces.

Below are commented more precisely the results obtained from the candidate for professor and are noted these, which are more important according the reviewers point of view.

In the work $[6]$ is obtained an expression for computing the Riesz angle in weighted Orlicz sequence spaces (OSS), equipped with either Luxemburg's or Amemiya's norm, generated by an Orlicz function M with Δ_2-condition and weighted sequence $w = \{w_n\}_{n=1}^\infty$ belonging to the class Λ. In addition is established a formula for calculating of the Reisz angle in weighted Orlicz sequence spaces $\ell_M(w)$ and equipped with Luxemburg's norm. Note that in the case of Amemiya's norm are proved only estimates from below and above for the value of the Reisz angle.

In $[7]$ is presented a different formula for calculating of the packing constant and the Kottman constant in weighted Orlicz sequence spaces with a weight sequence $w = \{w_n\}_{n=1}^\infty$ belonging to the class Λ, equipped with Luxemburg's or p-Amemiya's norm. It must be noted that this formula is different from the known one for calculating Kottman's constant and a bit easier to handle. Taking into account that the Reisz angle is much more difficult to calculate in comparison with other classical constants it is proved one useful result that for a wide class of KOSS, the Kottman constant and the Reisz angle are equal. The classes of these spaces include either those that are order continuous with the Fatou property or those whose unit vector basis is unconditional and boundedly complete. Knowing the packing constant and the Kottman constant for ℓ_p, Orlicz, weighted Orlicz, Nakano, Muscielak-Orlciz, Lorentz, Orlicz-Lorenz and Cesaro sequence spaces and using the main result in $[7]$, it is established the exact value of the Reisz angle for the above mentioned sequence spaces.

It is well known that the weakly convergent sequence coefficient $WCS(X)$ of a Banach space X is closely related with the normal structure of X and the fixed point property and therefore it's

important to be known. In [1] is proved that a weighted OSS $\ell_M(w)$, equipped with either Luxemburg's or Amemiya's norm has a weak uniform normal structure if and only if $\ell_M(w) \cong h_M(w)$ for a wide class of weight sequences $w = \{w_n\}_{n=1}^{\infty}$ (if $w = \{w_n\}_{n=1}^{\infty}$ belonging to the classes either Λ or Λ_{∞}. In an auxiliary results are characterized the weakly null sequences for the investigated classes of OSS. An interesting example is constructed, where the Orlicz function M does not have the Δ_2-condition but by choosing a suitable weight sequence $\lim_{n \to \infty} w_n = \infty$ we get that $\ell_M(w)$ has a weak uniform normal structure.

In [5] are obtained necessary conditions for a *KSS*, with a boundedly complete and shrinking basis to have a normal structure. For the introduced generalized modulus of smoothness $\rho_X^{(\lambda)}$ and the defined by other authors generalized modulus of convexity $\delta_X^{(\lambda)}$ is established that these generalized moduli are connected in a similar fashion as like as the classical ones, which is a generalization of the Lindenstrauss result. In addition are obtained estimates of these moduli for an arbitrary Banach space and for the particular case of $X = \ell_p$. Some inequalities between the *WCS* coefficient of a KSS X and $\delta_X^{(\lambda)}$ are proved. Sufficient conditions, connected with the mudulus of convexity, that ensure that the spaces have a normal structure are established.

In [2] are studied the MOSS ℓ_{Φ} with a dual ℓ_{Φ}^*, which is stabilized asymptotic ℓ_{∞} with respect to the unit vector basis. It is established a complete characterization of the bounded relatively weakly compact subsets $K \subset \ell_{\Phi}$. Moreover is proved that ℓ_{Φ} is saturated with asymptotically isometric copies of ℓ_1 and thus ℓ_{Φ} fails the fixed point property for closed, bounded convex sets and non-expansive (or contractive) maps on them. The obtained results are illustrated with apropriate examples.

Using the technique of stabilized asymptotic ℓ_{∞} spaces in [3] is proved that if the generating Orlicz function M does not have the Δ_2-property at zero, then the existence of an equivalent analytic norm in the Orlicz-Lorentz sequence space (OLSS) $d_0(w, M)$ is equivalent to $d_0(w, M)$ to be isomorphically polyhedral. Since the work [4] is well commented from the candidate in his annotations I will omit some unnecessary explanations.

My conclusion concerning the results in obtained in the field of the geometric properties of the Banach spaces (point (A)) from the candidate for professor is that these results are new, very meaningful, and applicable in different scientific fields.

(B) Fixed points theory and best approximation points for cyclic maps.

It is well known that the fixed point theory is an important tool for solving equations $Tx = x$ for mappings, defined on subsets of metric spaces or normed spaces. One direction of a generalization of the Banach contraction principle is the notation of cyclic maps. Because a non-self mapping does not necessarily have a fixed point, one often attempts to find an element x, which is in some sense closest to Tx, i.e. the best proximity point. Then is defined a new type of points (the best proximity point) of a map in a set, which generalizes the notion of fixed points.

In this direction it is important to mention that in contrast with all the results about fixed points for self maps and cyclic maps, where "a priori error estimates`` and "a posteriori error estimates`` are obtained, there are no such results about best proximity points. It must be noted that the first result in this direction was obtained in [14], where the modulus of convexity is essentially

used. Thus we can point out the fact that for obtaining some of the results in the field of the fixed point theory, are needed applications of known results from the geometry of the Banach spaces or even proving new ones. Such type results are needed for all results about best proximity points, for example often is needed uniform convexity of the underlying Banach space [9], [11], [13], [22]. A result about the existence and uniqueness of best proximity points in reflexive Banach spaces, without the need for the underlaying space to be uniformly convex is obtained in [19] by using classical techniques of reflexive spaces.

There are a lot of generalizations about fixed points, where the underlying complete metric space is replaced by some other type of spaces as modular function spaces. As far as the geometry and especially a property similar to the uniform convexity of a Banach space is used, are obtained some new results for the geometry of modular function spaces [9], [11], [12], [13], [18], [19], [22]. From this point of view the obtained result concerning geometry of modular function spaces can bevconsidered simultaneously as results from fixed point theory.

The works in the second field in the investigations can be classified as follow:
- Theory of fixed points: [10] , [16], [17], together with its subfields: cyclic maps [8], [20], [21].
- Best proximity points [9], [11], [12], [13], [14], [18], [19], [22].

In [9] is introduced an entirely new kind of cyclic maps, which is called "summing`` maps, see also [11], [19]. The classical generalization of contractive maps to cyclic contractive maps covers only the case, when the distances between the consecutive sets are equal. The "summing`` maps overcome this drawback and can be applied to investigate cyclic maps between sets, when the distances between the consecutive sets are not equal. In [14], [22] are obtained error estimates of the best proximity points. The papers [12], [18] are devoted to a generalization of the notion of best proximity points in the context of modular function spaces and then are established sufficient conditions for the existence and uniqueness of best proximity points. Following the technique of fixed points in modular function spaces are proved similar results in b-metric spaces [16], [17], which results generalize and enrich the known results about fixed points in b-metric spaces. It must be noted that in [16], [17] are presented examples, which show that the obtained error estimates are better than the classical ones in the case of standard metric spaces for wide classes of maps. In [9] is generalized the idea of cyclic maps by defining the notion of p-summing maps. This new type of a contractive condition, ensures the existence and uniqueness of fixed points and best proximity points for cyclic summing maps in uniformly convex Banach spaces, in the very important general case when the distances between the consecutive sets may be different. The idea to consider a summing type of conditions is further developed for reflexive spaces in [19] , which allow to obtain sufficient conditions for the existence and uniqueness of best proximity points. More concrete for the p-summing contractions maps in the context of iterated p-summing contractions are found sufficient conditions in [19] for this new type of maps that ensure the existence and uniqueness of best proximity points in uniformly convex Banach spaces. In addition are obtained sufficient conditions for the existence and uniqueness of best proximity points in reflexive Banach spaces for iterated p-summing contractions too. In [11] is introduced the notion of p-summing cyclic orbital Meir-Keeler contraction. By proposing two p-summing conditions are obtained sufficient conditions for the existence and uniqueness of best proximity points. Using the technique of L-functions, in [15] sufficient conditions are established for existance and uniqueness of best proximity points and fixed points for p-summing cyclic, orbital Meir-Keeler maps. Sufficient condition for the existence and uniqueness of best proximity points for a cyclic

Reich contraction map and a priori and a posteriori error estimates of the best proximity point, are obtained with the process of successive iterations associated to a cyclic Reich contraction map in [22].

An idea for the generalization of fixed points is by changing the underlying space. In this direction in [12] sufficient conditions for the existence and uniqueness of best proximity points for cyclic maps in modular function spaces are obtained, by replacing the uniform convexity with the property UC1, an easier to check condition. In [18] are generalized the notion of best proximity points and the notion of fixed points for cyclic contraction maps in modular function spaces about Kannan maps. Sufficient conditions for the existence and uniqueness of best proximity points and fixed points for cyclic Kannan maps in modular function spaces are obtained in [18] too. Developing the idea to generalize best proximity results by changing the underlying space, in [20] are considered maps defined in a partially ordered complete metric space by defining the property UC. Sufficient conditions for the existence and uniqueness of fixed points and the best proximity points for these maps in complete partial metric spaces are obtained in [20] also. In [21] a p-Cyclic Orbital Geraghty type of contraction in uniformly convex Banach spaces is introduced and are proved sufficient conditions for the existence and uniqueness of best proximity points for such maps. This best proximity point is the unique periodic point of the considered maps. The paper [13] is devoted to a generalization of the Ekeland's Variational Principle for cyclic maps. It is presented an application of this version of the generalized variational principle for proving the existence and uniqueness of best proximity points for different classes of cyclic maps, namely cyclic contractions maps of Reich, Kannan, Ciric, Hardy and Rogers, Chatterjee, Zamfirescu and iterated contractions too.

Besides the investigations on cyclic maps, I note some results on the fixed point theory for self maps. In [10] are generalized the results of Sehgal and Guseman for mappings on a complete metric space with a contractive iterate condition at each point. Sufficient conditions are obtained in [8] for the existence and uniqueness of fixed points for cyclic maps of Kannan and Zamfirescu types as well as a priori and a posteriori error estimates.

Another direction for generalizing of fixed point results is by changing the underlying space with b-metric spaces. Using that the b-metric spaces have a lot in common with the modular functions spaces, in [16] are obtained sufficient conditions for the existence and uniqueness of fixed points of Chatterjea's maps in b-metric space as well as a priori error estimate for the sequence of successive iterations too. In [17] are established sufficient conditions for the existence and uniqueness of fixed points for a class of Reich maps in b-metric space. These conditions do not involve the b-metric constant, but we require that the set of the orbits of the successive iterations is bounded, a condition widely used in fixed point theory in modular function spaces. An a priori error estimate for the sequence of successive iterations are established too. It must be noted that the results from [16] turn out to be corollaries of the main results in [17] and the error estimate obtained in [17] is better than that the well-known one for a wide class of Reich maps in metric spaces.

My conclusion concerning the results in obtained in the point (B) from the candidate for professor is the same as for the results in point (A): the obtained results are new, very meaningful and applicable in different scientific fields.

The work [23] has applicable character. It is considered the coefficient (the correction coefficient), which round out the Coulomb's Law in the case of electrostatic interaction between two charged conducting spheres with equal radii and charges and are proved that the correction

coefficient is smaller than one, when the ratio of the radii to the distance between their centers is smaller than $0,4$. The obtained formula for calculating the correction coefficient, allows to make these calcilations with an arbitrary precision and to get error estimates of the force.

(C) Usage of dynamic geometry software in education (in particular DGS and Maple).
The third area of candidate research interests and investigations is related to the introduction of innovative methods in mathematics training, using computer algebraic systems (CAS) and in particular DGS and Maple. The results are in three directions: optimization of the teaching process, vertical integration of the secondary school and university training and developing creative thinking in geometry classes (by using dynamic geometric software). To achieve this purpose is developed a specialized Dynamic Geometry Software Sam which is written in C\# in the NET Framework 4 environment. It is created as educational software for the needs of the subject Synthetic Geometry. It consists of two modules: mutual intersecting of polyhedra in axonometry and a dynamic module. By my assessment the results in this direction (for point C/) are very good described in the annotation of candidate for professor of the papers [24] – [31], and also in the presented for the concurse self-contained Monography [32].
Based of this materials my conclusion is that this results are useful and practically applicable in the education in mathematics and informatics.

The presented textbooks in Mathematikal analysis are well written and used from the students in the Faculty of Mathematics and informatics, University of Plovdiv "Paisii Hilendarski". It must be noted the very felicitous implementation the possibility of the usage of algebraic computer systems and dynamic geometry software in teaching of Mathematical analysis. The main idea of this implementation is to ease the calculations and to present procedures which can solve whole classes of similar problems.This approach points the student's attention towards the application of the main theorems of mathematical analysis instead of making a great number of similar calculations. Another goal, achieved by this new approach, is that students gain some proficiency in programming.

My overall conclusion about the results obtained by the candidate for professor is that these results are new, very meaningful and applicable in various scientific fields.
I will note that I did not find "plagiarism" in the publications of the candidate Assoc. Prof. Boyan Zlatanov, PhD in the sense of RAPRSRB.

4. Scientific contributions and citations
The candidate has also submitted a list of 100 pcs. citations of his works of which 59 pcs. are in journals indexed in SCOPUS and / or WoS (with a minimum requirement of 20 citations). From these journals, 24 are journals with an impact factor, with a total impact factor of **31.626**, and 41 citations in journals with SJR index, with a total SJR index **of 21.262**.
I will emphasize that the citations in magazines with an impact factor of the works submitted for the competition only are **22** pcs. with a total impact factor of **29,788**, as only these citations exceed the minimum requirements of 20 citations.
The cited scientometric data for the citations clearly show the high level and relevance of the results obtained by Assoc. Prof. Boyan Zlatanov, as well as their scientifically applied character.

It will be noted that these data are without indirect and / or direct self-citations, as well as the fact that the overwhelming number of citations are from foreign authors.

5. Critical Notes and Recommendations

I have no significant criticisms. However, I would note that the names of the cited authors are transliterated in Bulgarian, which is inconvenient for the readers, for example the name of S. Reich transliterated as "Rish". In my opinion, it would **be** better for them to be written in Latin so that it does not get the Vashington-Washington effect.

6. Personal Impressions

I am knowing personally for a long time the candidate Assoc. Prof. Boyan Georgiev Zlatanov, PhD. He is a conscientious, hardworking and responsible colleague, respected in his collegiate community. He manifests himself as a tolerant and erudite teacher. As a scientist he is dedicated, always critical of his work and precise in his research. Responsive in nature, he generously shares his ideas with his colleagues as well as students and doctoral students.

CONCLUSION

The documents and materials presented by Assoc. Prof. Boyan Georgiev Zlatanov, PhD, meet all the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB), the Regulations for the Implementation of the LDASRB and the corresponding Rules for the Development of the Academic Staff of the University of Plovdiv " Paisii Hilendarski "(RDASPU).

The candidate submitted **more than enough** scientific papers published after the materials used in the defense of the PhD Thesis and were not used to acquire the academic positions of 'Assistant Professor' and 'Associate Professor'. There are original scientific and applied contributions in the applicant's works that have received international recognition as representative part, 12 pcs. (with a requirement of 8) scientific papers were published in Impact Facts Journals. Its theoretical developments have practical applicability, and some of them are directly oriented to the educational work. The scientific and teaching qualification of Assoc. Prof. Boyan Georgiev Zlatanov, PhD is undoubted.

I will note that I did not find "plagiarism" in the publications of the candidate Assoc. Prof. Boyan Zlatanov, PhD in the sense of RAPRSRB.

The set of materials presented by Assoc. Prof. Boyan Georgiev Zlatanov, PhD in paper format complies with the minimum national requirements for occupying the academic position of "professor" in Professional Field: 4.5 Mathematics (Mathematical Analysis).

The results achieved by Assoc. Prof. Boyan Georgiev Zlatanov, PhD in the teaching and research activities fully correspond to the specific requirements of the Faculty's Additional Faculty Requirements at the Paisii Hilendarski University of Plovdiv for occupying the academic position "Professor", adopted in connection with the Rules of Procedure for the implementation of the LDASRB.

After getting acquainted with the materials and scientific works presented in the competition, analysis of their importance and their scientific, applied and applied contributions, I find it justifiable to give **my positive** assessment and **to recommend** to the Scientific Jury to prepare a report-proposal to the Faculty Scientific Council of the Faculty of Mathematics and Informatics for the election of Assoc. Prof. Boyan Georgiev Zlatanov, PhD for the academic position '**Professor'** in Plovdiv University 'Paisii Hilendarski' in Professional Field: 4.5 Mathematics (Mathematical Analysis)

03.09.2019 г.   Reviewer:: ....

Plovdiv   (Prof. Andrey Zahariev, PhD)