

STATEMENT

by Assoc. Prof. Borislav R. Draganov
Sofia University "St. Kliment Ohridski", Department of Mathematics and Informatics,
Bulgarian Academy of Sciences, Institute of Mathematics and Informatics

Regarding the competition for the open academic position of a Full Professor
in the higher education field: 4. Natural Science, Mathematics and Informatics; professional
field 4.5. Mathematics (Mathematical Analysis) in Plovdiv University "Paisii Hilendarski"

with the only candidate

Assoc. Prof. Boyan Georgiev Zlatanov, Ph.D.

The competition was announced in State Gazette Issue 31 of 12.04.2019.

The statement was prepared in accordance with the decision of the Scientific Jury of 18.07.2019. The Scientific Jury was appointed by the Rector of Plovdiv University "Paisii Hilendarski" by act P33-3779/12.07.2019.

1. CV details

Boyan Georgiev Zlatanov graduated the English language high school "Georgi Kirkov" in Plovdiv in 1991. In 1996 he graduated, with excellence, the Department of Mathematics and Informatics of Sofia University "St. Kliment Ohridski" with first major Mathematics: Mathematical Analysis, and second major Teaching in Mathematics and Informatics. Between 1997 and 2001 Boyan Georgiev Zlatanov was a Ph.D. student in the Department of Mathematics and Informatics of Plovdiv University, where he obtained his doctoral degree in the scientific major 01.01.04, Mathematical Analysis, in 2001.

The candidate worked as a professor and a researcher in the Department of Mathematics and Informatics of Plovdiv University. He consecutively occupied the positions of Assistant Professor, Senior Assistant Professor, and Chief Assistant Professor during 1999-2008, and since 23.04.2008 he has been an Associate Professor of Mathematical Analysis. Also, since 16.12.2015, he has been Deputy Dean in Plovdiv University in charge of Research and Projects in Mathematics, and of the Smolian Branch of the university.

2. A description of the documents presented in the competition

Assoc. Prof. Zlatanov submitted, for the present competition, one monograph, 31 papers, and two textbooks. Twelve papers were published in journals with IF, two in journals with SJR, but no IF, and seven in journals, which are refereed in MR, but have neither IF, nor SJR. The monograph satisfies the requirements of the law. There is evidence of 100 citations, 59 of which in WoS or Scopus. There is one more textbook in Functional Analysis, which is available only electronically. Thus the Applicant far surpasses the minimal state requirements as well as the additional Department requirements for research, publications and citations.

The Candidate also attached a Certificate of length of service in Plovdiv University, a Certificate for participation in research projects as well as all the documents required by law, including those by Article 77 (1) of the Regulations for the Promotion of the Academic Staff of Plovdiv University.

The diligence, with which Assoc. Prof. Zlatanov has prepared the documents of his application, is noteworthy.

3. An overview of the scientific and teaching contributions of the Applicant

The research of Assoc. Prof. Zlatanov falls into three main streams: (1) Geometry of the Banach spaces, (2) Fixed-point theorems, and (3) Application of CAS in teaching of mathematics.

Regarding (1) the Candidate calculated several constants associated with the geometry of the Kothe sequence spaces and classes of Musielak-Orlicz sequence spaces. Also, he considered generalized moduli of convexity and smoothness and obtained results connected to the property for a space to be stabilized asymptotic l_∞ for classes of Kothe sequences spaces. Some of these results were obtained in the cases of the l_p -spaces and the spaces of Orlicz, Nakano, Musielak-Orlicz, Lorentz, Orlicz-Lorentz and Cesaro.

Regarding (2) Assoc. Prof. Zlatanov investigated cyclic maps and best proximity points. A substantial contribution of the Applicant (jointly with his co-authors) is introducing an entirely new kind of cyclic maps, which they called "summing maps". They overcome some drawbacks of the classical cyclic maps. In a number of papers, some of which joint, Assoc. Prof. Zlatanov established results concerning the best proximity points. They include error estimates for the best proximity points obtained by sequences of successive iterations, a generalization of the notion of the best proximity points in modular function spaces, and establishing sufficient conditions for their existence and uniqueness.

In my opinion, the Applicant has made significant contributions in this subject, which is confirmed by the large impact in the works of other mathematicians.

Regarding (3) Assoc. Prof. Zlatanov, jointly, as far as I was able to deduce by the submitted documents, with S. Karaibayamov and B. Tsareva introduced innovative methods in teaching mathematics at both high school and university levels using CAS. To this end, they developed the dynamic geometric software *Sam*, using C# in the NET Framework 4 environment. The product was created as educational software for the needs of the Synthetic Geometry.

The teaching experience of Assoc. Prof. Zlatanov is mostly in the field of the mathematical analysis, including functional analysis. He has lectured for many years on this subject in Plovdiv University. He also lectured on fractals, CAS, and disciplines associated with mathematical economics.

Assoc. Prof. Zlatanov had two textbooks published. They are on calculus with CAS. This filled a gap in the Bulgarian university literature; moreover, in my opinion, the textbooks are very well written and contain a lot of illuminating examples and illustrations. Also, they include biographical notes about famous mathematicians, which makes them even more delightful and useful. Assoc. Prof. Zlatanov has also written a textbook on metric spaces. It is available only electronically.

The Applicant has made a significant contribution to teaching mathematics by developing the dynamic geometric software.

Assoc. Prof. Zlatanov has one Ph.D. student who successfully obtained his Ph.D. in the Department of Mathematics and Informatics in Plovdiv University. Thus the Candidate

satisfies the last requirement in Article 6 in the Additional Requirements of the Department of Mathematics and Informatics of Plovdiv University.

Assoc. Prof. Zlatanov took part in seven national research projects, as one of them is with the European Social Fund, Operational Programme "Development of Human Resources", two with the National Science Fund, and the rest with university research funds.

The Candidate was a member of five conference programme or organizing committees, one of which was international. He took part in 12 national and international conferences or seminars.

Since 2014 Assoc. Prof. Zlatanov has been a member of the Editorial Board of the MR reviewed international journal *Global Journal of Advanced Research on Classical and Modern Geometries*. He also served as a referee of many papers and an author for *Mathematical Reviews*.

I have not found instances of plagiarism in Assoc. Prof. Zlatanov's works.

To summarise, the submitted documents clearly show that the Applicant, Assoc. Prof. Zlatanov, is a fascinating and engrossing lecturer as well as a well established research mathematician.

4. Conclusion

In view of the above, I think that Assoc. Prof. Boyan Georgiev Zlatanov completely satisfies the requirements for the position of a Full Professor as described in the Law for the Development of the Academic Staff of the Republic of Bulgaria, the Regulations for its implementation as well as the Regulations for the Development of the Academic Staff of Plovdiv University "Paisii Hilendarski" and the Additional Requirements of the Department of Mathematics and Informatics of Plovdiv University.

I strongly recommend to the Scientific Jury to propose to the Council of the Department of Mathematics and Informatics of Plovdiv University "Paisii Hilendarski" to appoint Assoc. Prof. Boyan Georgiev Zlatanov as a Full Professor in the higher education field: 4. Natural Science, Mathematics and Informatics, professional field 4.5. Mathematics (Mathematical Analysis) in Plovdiv University "Paisii Hilendarski".

My assessment on the appointing the applicant Assoc. Prof. Boyan Georgiev Zlatanov as a Full Professor is positive.

09.09.2019

Prepared by:

/B. Draganov/