

OPINION

by Asc. Prof. Stanislav Nikolaev Harizanov IICT-BAS,
on documents, submitted for participation in a competition
for the academic position of Professor in professional area 4.5
“Mathematics”, scientific specialty “Mathematical Modelling
and Application of Mathematics” (in ecology) with candidate
Krasimir Todorov Georgiev

By Order No.209 / 16.08.2019 of the Director of Institute of Information and Communication Technologies at Bulgarian Academy of Sciences, Prof. Galia Angelova, pursuant to Article 4, Paragraph 2 of the “Law on the Development of Academic Staff in the Republic of Bulgaria” and Decision of the Scientific Council of IICT-BAS (Protocol No.7 / 10.7.2019) I have been appointed a member of the Scientific Jury under procedure for academic position of Professor in professional area 4.5 “Mathematics”, scientific specialty “Mathematical Modelling and Application of Mathematics (in ecology)”, announced for the needs of the “Department of Scientific Computations” in State Gazette issue 42 from 21.06.2019. As a member of the Scientific Jury on 29.08.2019 I received all the documents, attached to the application to the Director of IICT-BAS of the only candidate for the competition Assoc. Prof. Krasimir Todorov Georgiev. Those documents are in accordance to the Law on the Development of Academic Staff in the Republic of Bulgaria, the rules for its implementation and the specific requirements introduced in the regulations of IICT-BAS.

1. Short biographical information

Krasimir Georgiev graduated from the Faculty of Mathematics and Mechanics at Sofia University “St. Kliment Ohridski” in 1978 with Master’s Degree in Mathematics with specialization in Mathematical Modelling. In 1984 he received a PhD in Mathematics from the Institute of Water Problems (IWP) at the Bulgarian Academy of Sciences.

During the period 1979 - 1987, Krasimir Georgiev worked at IWP-BAS and since 1987 he works at IICT-BAS, where he became an Associate Professor in 1996. He has been a part-time lecturer at TU-Sofia, FMI-SU, SWU, BSU and UniBIT.

2. General description of the presented materials

The candidate has presented 51 scientific publications from the period 1999 - 2019 (i.e., after he became an Assoc. Prof.), from which 27 articles are in scientific journals with Impact Factor and 20 articles are in series with Impact rank. It is impressive that 13 of the journal papers are within the highest quartile Q1, which is an indication for excellence of the published results.

3. Impact of the candidate's scientific publications in the literature

Twenty one from the presented publications have been cited in total by 47 scientific papers, referenced and indexed in world renowned scientific information databases (Scopus).

4. General characteristics of the applicant's activities

(a) Scientific and applied scientific activity

Krasimir has authored and co-authored more than eighty research publications and directed or co-directed numerous internal, national and international research projects. He has held a number of leadership positions at IICT-BAS and its predecessors, including two mandates deputy director, chairman of the General Assembly of Scientists, chairman of the Attestation Commission, and member of the General Assembly of Scientists of BAS. He has been a member of Expert Commission in Mathematics and Informatics of the Bulgarian National Science Fund..

(b) Contributions

The applicant's contributions in the presented materials are undoubted and have both scientific and applied scientific nature. They are divided in five groups.

- Mathematical and computer modeling of air pollution transport processes. Relationship between the air pollution and the climate changes. Simulations on various types of supercomputer architectures.
- Mathematical and computer modeling of processes and phenomena in mechanics, medicine, etc. with computer experiments on parallel computer architectures.

- Studies of Richardson extrapolation and Runge-Kuta methods in solving important for the computing practice problems.
- Research related to problems arising in seismic mechanics of structures.
- Theoretical and applied research in the field of design, analysis and use of artificial wetlands.

5. Evaluation of the personal contribution of the applicant

I have no doubt about the personal contribution of the applicant in the presented publications. He is a single author of 2 of them, has 2 co-authors in 8 of them, 3 co-authors in 14 of them, 4 co-authors in 11, and more than 4 co-authors in the remaining 16 publications.

6. Critical remarks

There are minor inaccuracies in points/classification of the scientific publications and points/number of the independent citations. However, their impact is insignificant as the applicant points in each of the categories drastically outnumber the IICT-BAS requirements.

I have no critical remarks, which could question the contributions of the applicant and which would affect my overall positive assessment.

7. Conclusion

The presented materials convincingly prove the high professionalism of Assoc. Prof. Dr. Krasimir Georgiev, the importance of his scientific achievements and their scientific impact. My personal impressions confirm the above conclusions.

Given the above, I wish to **strongly propose to the Scientific Jury to make a recommendation to the Scientific Council Assoc. Prof. Dr. Krasimir Todorov Georgiev to be elected for the academic position "full professor"** in professional area 4.5 "Mathematics", scientific specialty "Mathematical modelling and application of mathematics".

October 16, 2019
Sofia

Member of the scientific jury:

assoc. prof. Dr Stanislav Harizanov

