

## OPINION

by Prof. Stanislav Nikolaev Harizanov IICT-BAS,  
on documents, submitted for participation in a competition for  
the academic position of Professor in professional area 4.6 “In-  
formatics and Computer Science”, scientific specialty “Infor-  
matics” with candidate Assoc. Prof. Nina Hristova Dobrinkova,  
PhD

By Order No.310 / 13.12.2024 of the Director of Institute of Information and Commu-  
nication Technologies at Bulgarian Academy of Sciences, Prof. Svetozar Margenov,  
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.12 / 27.11.2024) I have been appointed a member of the Scientific Jury  
under procedure for academic position of Professor in professional area 4.6 “Infor-  
matics and Computer Science”, scientific specialty “Informatics”, announced for the  
needs of the “Department of Modelling and Optimization” in State Gazette issue  
87 from 15.10.2024. As a member of the Scientific Jury on 18.12.2024 I received all  
the documents, attached to the application, addressed to the Director of IICT-BAS  
by the only candidate for the competition Assoc. Prof. Nina Hristova Dobrinkova.  
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

Nina Dobrinkova was born on 16.12.1982. She majored in Informatics and  
graduated with an M.Sc. from the South-West University “Neofit Rilski” in  
2006. She received a PhD in Informatics in 2012 from the Institute of Mathe-  
matics and Informatics at the Bulgarian Academy of Sciences (IMI-BAS). She  
has three specializations abroad: August-December 2008 at the European Cen-  
tral Bank, IT-project Department, Frankfurt, Germany; July-August 2012 and  
April-May 2013 at the Federal Forestry Agency’s Fire Research and Behavior  
Laboratory in Mizzou, Montana, USA. Since the beginning of 2009, Nina Do-  
brinkova has been working at IIT-BAS, following the 2011 restructurings of the

unit to IICT-BAS. Since 01.07.2016, she has been promoted to an Associate Professor and at the moment she possesses 16 years and 04 months of work experience, 8 years and 06 months of which – as an Associate Professor.

## 2. General description of the presented materials

The candidate has authored 66 scientific publications (according to Google Scholar), 34 of which are referenced in the database Scopus. A monograph and 17 scientific publications are included for consideration within the competition. For the group B indicators of the requirements, Assoc. Prof. Nina Dobrinkova has submitted a 216-page monograph published by Amicum, Bulgaria, as well as an Author's Contribution Separation Protocol, according to which she has 68% contribution. The total number of points in this group is 100 against the required 100. All the submitted for consideration scientific publications are from the period 2016 - 2021 (i.e., after she became an Assoc. Prof.); all of which are referenced in the databases Scopus and/or Web of Science. It is worth mentioning that all of the considered publications are related to contributed talks at renowned thematic international scientific forums, which is an indication not only for the relevance and excellence of the conducted research but also for the recognizability of Nina Dobrinkova within the scientific field. Thus, it is not surprising that there is an international collaboration in more than half of the papers. Assoc. Prof. Dobrinkova has also submitted a reference for a registered utility model from the patent office of the Republic of Bulgaria. The total number of points for the indicators of group D is 317 against the required 260, 292 of the points are based on the submitted articles and 25 – based on the registered utility model.

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

Thirteen publications of the candidate have been independently cited 29 times in total by scientific papers. 27 of them are referenced and indexed in world renowned scientific information databases (Scopus) and the other two – in the IEEE database. The total number of points for the indicators of group E is 168 with the respect to the minimal requirement of 140.

## 4. General characteristics of the applicant's activities



(a) Scientific and applied scientific activity

Nina has authored and co-authored 66 research publications and directed 1 national and 6 international (as a coordinator for the Bulgarian team) research projects. On top of that, she was a member of another 4 national research projects, 5 committees for the preparation of concepts and opinions related to the assessment of the risk of natural disasters such as fires, floods and landslides, and participated in the preparation of 3 expert reports in support of institutions and management bodies. She has been a scientific supervisor of one successfully defended PhD student. The total number of points is 410 against the required 150 for indicator F. Furthermore, Assoc. Prof. Dobrinkova is in the editorial board of 3 thematic proceedings and is a member of the organizing committee of the EnviroRisks conference held in Sofia at every 2 years.

(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.

- Development and implementation of a methodology for river channel data processing based on geodetic surveys and Shezi's formulae for river discharge.
- Development and validation of web-based modules or systems for decision support of field responders in case of a disaster situation.
- Development and validation of approaches and optimizations for simulating forest and field fires in Bulgaria, focusing on the need for a comprehensive map of possible burning patterns for non-urbanized areas.
- Development and approbation of a Dirichlet method for the evolution of the spread of a biological agent that has the potential to infect tissues very rapidly.
- System for analysis and control of mechanical properties of biological tissues.

5. Evaluation of the personal contribution of the applicant

I have no doubt about the personal contribution of the applicant in the pre-

sented publications. The work in larger international groups is typical for the research field due to the necessity of collecting big data sets of real data, infrastructural access and the usage of various computer architectures.

6. Critical remarks

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 prove the high professionalism of Assoc. Prof. Dr. Nina Dobrinkova, the importance of her scientific achievements and their scientific impact. My personal impressions confirm the above conclusions.

Given the above, I wish to **propose to the Scientific Jury to make a recommendation to the Scientific Council Assoc. Prof. Dr. Nina Hristova Dobrinkova to be elected for the academic position "full professor" in professional area 4.6 "Informatics and Computer Science", scientific specialty "Informatics"**.

February 13, 2025  
Sofia, Bulgaria

Member of the scier  
F

