

# OPINION

by Prof. Maurice Grinberg, PhD, Cognitive Science Research Center, NBU

on the competition for the academic position of Professor in the professional field 4.5 Mathematics (mathematical statistics and psychometrics), Master's Faculty, Department of Informatics, NBU, announced in Official Gazette 28/02.04.2024 with the only candidate Assoc. Prof. Dr. Dimitar Atanasov

## **I. Assessment of compliance with the minimal national requirements and the requirements of New Bulgarian University**

Associate Professor Dimitar Atanasov's scientific interests are focused in four main areas. The first one is "Psychometric Methods for Assessing Abilities" using the D-scoring approach (proposed by D. Dimitrov). Four articles in foreign journals are published in this area. The second area is "Statistical Evaluation of Branching Stochastic Processes," in which he has four articles—two in Bulgarian and two in foreign journals. In the third one, "Applications of Statistical Methods," two articles are published.

The fourth area involves the creation of software in the above three topics, with the candidate presenting a list of six software packages. The developed software packages implemented in Matlab, R, and other programming languages materialize the contributions from the research activities, making the obtained results accessible and widely applicable.

The contributions of the candidate correspond to those declared by him, and the obtained results, as well as the developed software, are significant achievements in this field, showing high practical utility of the conducted research. This is related to the areas in which these studies were conducted, namely the assessment of abilities based on tests and the modeling of COVID-19 infected individuals with incomplete data, where the proposed approach allows the parameters of the model to be estimated based only on accessible data.

Important are also the projects related to the assessment of child development and the effectiveness of education.

The materials presented in the competition show that Assoc. Prof. Dimitar Atanasov is an active researcher who has achieved important results brought to practical realization through the development of accessible and usable software tested in numerous projects in important areas such as education and assessment.

## **II. Teaching and Pedagogical Activity**

Associate Professor Dimitar Atanasov has extensive and diverse experience in teaching. He has taught and is currently teaching courses at the bachelor's and master's levels, covering a wide range of topics in the fields of statistics, psychometrics, and the application of statistics in the behavioral sciences, among others. He has supervised several successfully defended bachelor's and master's theses and is currently supervising a doctoral dissertation on a relevant topic.

## **IV. Administrative and Social Activity**

Associate Professor Dimitar Atanasov actively participates in the administrative and social activities of the New Bulgarian University. He is a member of the program council of the Department of Informatics, the faculty council of the Master Faculty, and the academic council. He is the head of the Department of Informatics since 2016.

#### **V. Personal Impressions of the Candidate (if any)**

My personal impressions of Associate Professor Dimitar Atanasov are related to our joint work at the Assessment Center at NBU and are very positive. He has contributed to innovative statistical analyses in processing student feedback on teachers and analyzing the results of the General Education Test. In all activities at the center, he has demonstrated himself as a professional with a high level of competence, dedication to his work, and unwavering responsiveness.

#### **VI. Opinions, Recommendations, and Notes on the Activities and Achievements of the Candidate**

I consider Associate Professor Dimitar Atanasov to be an established scientist with diverse contributions in his field. The number and quality of his publications and numerous applied projects demonstrate scientific maturity and full realization. The practical applicability of his research in important areas of life is impressive.

I would not presume to make recommendations to an established researcher like Dimitar Atanasov, but I think it would be interesting for him to consider whether he could summarize his extensive experience towards developing new theoretical approaches and methodologies and their corresponding applications.

#### **VII. Conclusion**

Based on the presented scientific publications, their significance, and the scientific and applied contributions contained in them, as well as the other presented materials, I confidently propose that Assoc. Prof. Dimitar Atanasov be allowed to participate in the competition for the academic position of "Professor" in the field of higher education: 4. Natural Sciences, Mathematics, and Informatics; professional direction: 4.5. Mathematics at NBU.

26.07.2024

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