

STATEMENT

Regarding the Competition for the Position of

"Professor"

in Professional Field 4.6 Informatics and Computer Sciences,

for the needs of the "Mathematical Linguistics" section at the Institute of Mathematics and

Informatics of the Bulgarian Academy of Sciences (IMI-BAS),

announced in Official Gazette No. 54 of June 12, 2026

This statement was prepared by Prof. D.Sc. Stoyan Milkov Mihov – IICT-BAS, 4.6 Informatics and computer sciences, in his capacity as a member of the scientific jury of the competition according to Order No. 78 / August 10, 2026 of the Director of IMI-BAS.

For participation in the announced competition, **one candidate** submitted documents: Associated Professor Alexander Iliev Iliev — Institute of Mathematics and Informatics of the Bulgarian Academy of Sciences.

I. General Description of Submitted Materials

1. Data on the Candidacy

For the purpose of participating in the competition, the candidate, Assoc. Prof. Alexander Iliev, has submitted a list comprising a total of 31 items: 2 monographs, 4 textbooks, 1 book chapter, 1 utility model, and 23 publications in scientific journals and conference proceedings. Also submitted are: an application for admission to the competition; a curriculum vitae; academic diplomas; a comprehensive list of publications; a comprehensive list of citations; a list of citations specifically for the competition (containing 38 citations); a summary of original scientific contributions; copies and abstracts of the scientific works submitted for the competition; reviews of the submitted monographs; official statements and certificates from employers; a declaration of originality; a report on the fulfillment of the minimum requirements for holding an academic position; as well as other materials supporting the candidate's achievements.

The documents are appropriately organized for the purposes of the competition.

2. Data on the Candidate

Assoc. Prof. Alexander Iliev obtained a Master's degree in Industrial Power Supply and Electrical Equipment from the University of Mining and Geology "St. Ivan Rilski" in Sofia in 1996; that same year, he also completed a second specialization in Multimedia Technologies at the Faculty of Humanities and Social Sciences of the Technical University of Sofia. In 1999, he earned a Master of Science degree in Music Engineering from the University of Miami (Coral Gables, USA), where

he subsequently obtained his Ph.D. in 2009 under the supervision of Prof. Michael Scordilis. He was appointed Chief Assistant Professor in 2014 and elected Associate Professor at IMI-BAS in 2017.

3. General Characteristics of the Candidate's Scientific Works and Achievements

In document No. 5, Prof. Iliev presented a general list containing 2 monographs, 4 textbooks, 1 book chapter, 1 useful model and 58 publications in scientific publications and scientific forums, of which 3 are in print. Of the 58 publications, 6 are independent and the remaining 52 are co-authored. The publications focus on the use of artificial intelligence (AI) techniques to solve a variety of applied tasks.

4. Characteristics and Evaluation of the Candidate's Teaching Activity

It is evident from the submitted records (Nos. 15.4, 15.5, and 15.7) that Assoc. Prof. Iliev currently holds the position of Professor and serves as the Academic Director of the Master's program in "Big Data and Artificial Intelligence" at the SRH University of Applied Sciences. There, he teaches courses on machine learning, Python programming for AI, AI use cases, and research methodology. Record No. 15.7 indicates that the candidate has supervised a large number of students completing their *пъшеи* theses at this university. Based on a substantive analysis of the candidate's achievements, I conclude that teaching constitutes the primary focus of Assoc. Prof. Iliev's professional activities. In this regard, Certificate No. 19, issued on November 1, 2019, by the university president, confirms that the candidate was granted the title of "Professor" for the duration of his primary employment contract with the university. Furthermore, record No. 15.4 (dated January 6, 2026) confirms that Assoc. Prof. Iliev holds a professorial appointment at the SRH University of Applied Sciences, implying that he is employed there under a primary employment contract. At the same time, official note No. 11 indicates that Assoc. Prof. Iliev is employed on a full-time basis at IMI-BAS (Institute of Mathematics and Informatics – Bulgarian Academy of Sciences). The submitted documentation raises the question of a **conflict** regarding Assoc. Prof. Iliev's primary employment appointments.

5. A substantive analysis of the scientific and applied achievements of the candidate contained in the materials for participation in the competition

As I have already noted, Assoc. Prof. Iliev has submitted a total of 31 items for the competition: 2 monographs, 4 textbooks, 1 book chapter, 1 utility model, and 23 publications in scientific journals and conference proceedings. The two monographs and four textbooks are single-authored works published by Lambert Academic Publishing. The book chapter is also single-authored and appears in a publication by IntechOpen. Of the 23 submitted publications, one is in a

Q1 journal, one in a Q2 journal, one in a Q4 journal, 15 are in journals with an SJR ranking, and 5 are in journals indexed by Scopus or Web of Science. Two of the publications are single-authored, while the remaining 21 are co-authored.

In the work (monograph) [A], a comparative analysis is made between the architectures and capabilities of several large language models — ChatGPT, Gemini, Llama, Bing AI, Claude, Mistral, etc.

In the work (monograph) [B], an empirical comparison of the results of using several large language models (ChatGPT, Gemini, Llama, Bing AI, Claude, Mistral, etc.) is made in solving a specific task. The task consists of automatically generating Python and TensorFlow code to implement a Convolutional Neural Network (CNN) for handwritten digit recognition and train it on the MNIST corpus. It should be noted that this task is often used in initial training of programmers to develop AI applications.

Textbooks [C,D] are the first and second parts of a book on the application of some AI methods. The first part [C] covers smart device applications and the implementation of convolutional and recurrent neural networks with TensorFlow. The second part [D] looks at the FIWARE platform for exchanging contextual information in "smart" applications, as well as the use of AI methods in some fields and industries.

The [E,F] tutorials are the first and second parts of a training book in using Python to implement machine learning methods. The first part [E] shows the implementation of classical methods such as regression, PCA, kNN, clustering, SVM, etc. using the sklearn and numpy libraries. In the second part [F], an implementations of neural networks with the TensorFlow library are presented. Constructions of CNN, RNN (LSTM), GAN are considered for the implementation of specific applications.

The chapter from book [G] is dedicated to emotion recognition via speech analysis and is published in the volume “Emotion Recognition - Recent Advances, New Perspectives and Applications”. The work is a survey, presenting an overview of various approaches to this task.

Publications [1,2,3] present some approaches for emotion recognition in speech based on the glottis signal symmetry measurement method. The method on which these publications are based was developed within the Ph.D. dissertation of Assoc. Iliev's dissertation.

Articles [5,6] present an overview of an application that combines speech emotion recognition with methods for processing and assessing the similarity between images within a human-computer interface for “smart” devices.

The vast majority of publications [4,7,8,9,10,11,12,13,15,18,20,21,22,23] are co-authored with students of the candidate and essentially represent the results of student courseworks or master theses. They describe the implementation of a well-known methods from the field of AI and data processing to solve a specific applied tasks. The works describe the construction of standard

models, utilizing the popular libraries sklearn and TensorFlow. The models are trained on relatively limited-sized data corpora, and the effectiveness of their application is evaluated empirically. The tasks are from diverse areas — recognizing emotions in speech, criminology, cryptocurrencies, image processing, autonomous cars, predicting real estate prices, predicting the risk of diabetes and heart attack, recognizing fakes (deep fakes), etc. The methods are classic — logistic regression, PCA, kNN, clustering, SVD, SVM, MLP, CNN, RNN (LSTM), GAN, and others. No new methods and algorithms are proposed in the works. Furthermore, they lack empirical comparisons with the best (state-of-the-art) models for the corresponding tasks made on commonly accepted evaluation corpora. For some of the tasks, I know models that give significantly better results.

Paper [14] is published in a Q1-quartile journal. It addresses the issue of detecting and mitigating bias in large language models during code generation. The study examines biases related to the naming of functions and variables, comments, and the unequal treatment of branches within conditional statements. The work applies three established bias-mitigation methods—CCA, CPE, and RLHF—to the context of code generation. Empirical analysis is conducted on the outputs generated using the Llama-3.2-3B-Instruct model.

Work [16] contains a general description of an architecture for big data processing based on FIWARE components, without providing specific implementation details. The architecture presented therein overlaps with utility model [H] and originates from the same group of authors. Utility model [H], titled “Computer-implemented system for big data processing,” is registered with the Bulgarian Patent Office and has six co-authors.

The paper [17] addresses the task of detecting deepfakes in arts across various modalities—images, video, text, speech, and music. Hybrid GAN models and their performance in detecting such fakes are presented and discussed at a high level. However, the work lacks detailed descriptions of the architectures, which makes replicating them extremely difficult.

Work [19] is published in a Q2-quartile MDPI journal. It addresses the issue of the interpretability of neural networks used for classifying deepfake images of celebrities. In the first part, convolutional models—specifically VGG-16, ResNet-50, and Inception V3—are trained to detect these deepfake images. In the second part, the well-known CNN Network Dissection algorithm is applied, examining the activations of individual network layers while masking specific elements of the image.

Works [14] and [19] are also co-authored with students of Prof. Iliev.

6. Critical Notes and Recommendations

Book [A] is useful primarily for users of large language models who wish to gain an understanding of the capabilities, characteristics, and costs associated with using these models. I do not find any original scientific contribution in the book.

The book [B] is useful for programmers who want to become familiar with and gain hands-on experience with the capabilities of various generative language models for generating program code. I do not find any significant scientific contribution in this work either.

The textbooks [C,D,E,F] are completely applied-oriented and are intended for the training of software engineers. They illustrate techniques for implementing AI methods with Python and the sklearn and TensorFlow libraries, but do not present the mathematical foundations and specialized algorithms that underlie the libraries used. In my opinion, these books are more suitable as teaching aids for hands-on classes and exercises on Python implementation of AI applications.

As I have already noted, the 23 publications presented are of an applied nature—they contain descriptions and applications of established AI methods for solving specific problems. In the submitted publications, I identify certain scientific-applied contributions, but no significant scientific contributions.

7. Observed Irregularities

The monographs [A,B] and textbooks [C,D,E,F] were published by Lambert Academic Publishing, which is widely regarded within the academic community as a pseudo-academic publisher. It operates on an automated print-on-demand basis, publishing unedited theses, dissertations, monographs, or raw manuscripts without external evaluation, peer review, scientific editing, or quality control. Consequently, books published by Lambert Academic Publishing possess virtually no academic value. (Reference: <https://en.wikipedia.org/wiki/OmniScriptum>)

In the documents submitted for the competition, no Curriculum (Modulhandbuch) from the "SRH University of Applied Sciences" was attached, in which the works [C,D,E,F] were indicated as the main textbooks for the respective courses. Additionally, no reviews or opinions are attached to these works.

The candidate submitted documents No. 15.2.1 and No. 15.2.2, signed by the Academic Director, Prof. Michael Hartmann, certifying that the works [C,D,E,F] are currently used as primary textbooks in courses taught at the SRH University of Applied Sciences. A visual examination of the two submitted certification letters reveals that the signatures of the Academic Director are pixel-for-pixel identical in both PDF documents. The complete overlay identity strongly suggests that a single digitized signature graphic was copied and electronically applied onto both documents rather than being individually executed. (Reference: Appendix 1)

The publication date of the works [E,F] is July 21, 2026 (Reference: <https://www.morebooks.shop/shop-ui/shop/product/9786630107265> , <https://www.morebooks.shop/shop-ui/shop/product/9786630210927>). Letter No. 15.2.2, which attests that these works are currently in use, is dated July 14, 2026 — one week prior to their publication. This raises the question of in what capacity these texts were being used before their date of publication.

These irregularities were noted and recorded in the minutes of the first meeting of the scientific jury. In order to clarify the matter, on August 18, 2026, I sent an email (Reference: Appendix 2) to Prof. Michael Hartmann, asking him to:

1. confirm whether certificates No. 15.2.1 and No. 15.2.2 were issued by his office;
2. clarify in what capacity the texts [E,F] were used prior to their publication;
3. provide the official syllabus for the courses in which these textbooks are listed as primary teaching materials;
4. briefly describe the approval process for the textbooks and clarify whether they have undergone peer review.

To date, I have **not received** a response to my email.

8. Conclusion Regarding the Candidacy

Having reviewed the materials and scholarly works submitted for the competition, and based on an analysis of their significance, the scientific and applied scientific contributions contained therein, as well as the supporting evidence provided, I have concluded that the scientific achievements do not meet the requirements of the “Act for the Development of the Academic Staff in the Republic of Bulgaria” (ZRASRB), the Regulations for its implementation, and the relevant Regulations of IMI-BAS for the candidate’s appointment to the academic position of "Professor" within the scientific field and professional area of the competition. Specifically:

1. The candidate has not provided reliable evidence that the works [C,D,E,F] are "published university textbooks", therefore the candidate does not satisfy the minimum requirements in Group E for the professional field — of the required 150 points, the candidate covers only 120 points.
2. The contributions in the works submitted for the competition are entirely of an applied nature—involving the application of established methods from AI and data processing to solve various practical problems. No significant scientific contributions to computer science are found in the submitted works.

I give my **negative** assessment of the candidacy.

II. GENERAL CONCLUSION

Based on the above, I recommend that the **scientific jury not propose** to the competent authority at IMI-BAS that Assoc. Prof. Dr. Alexander Iliev Iliev be elected for the academic position of "Professor" in the professional field 4.6 Informatics and Computer Sciences.

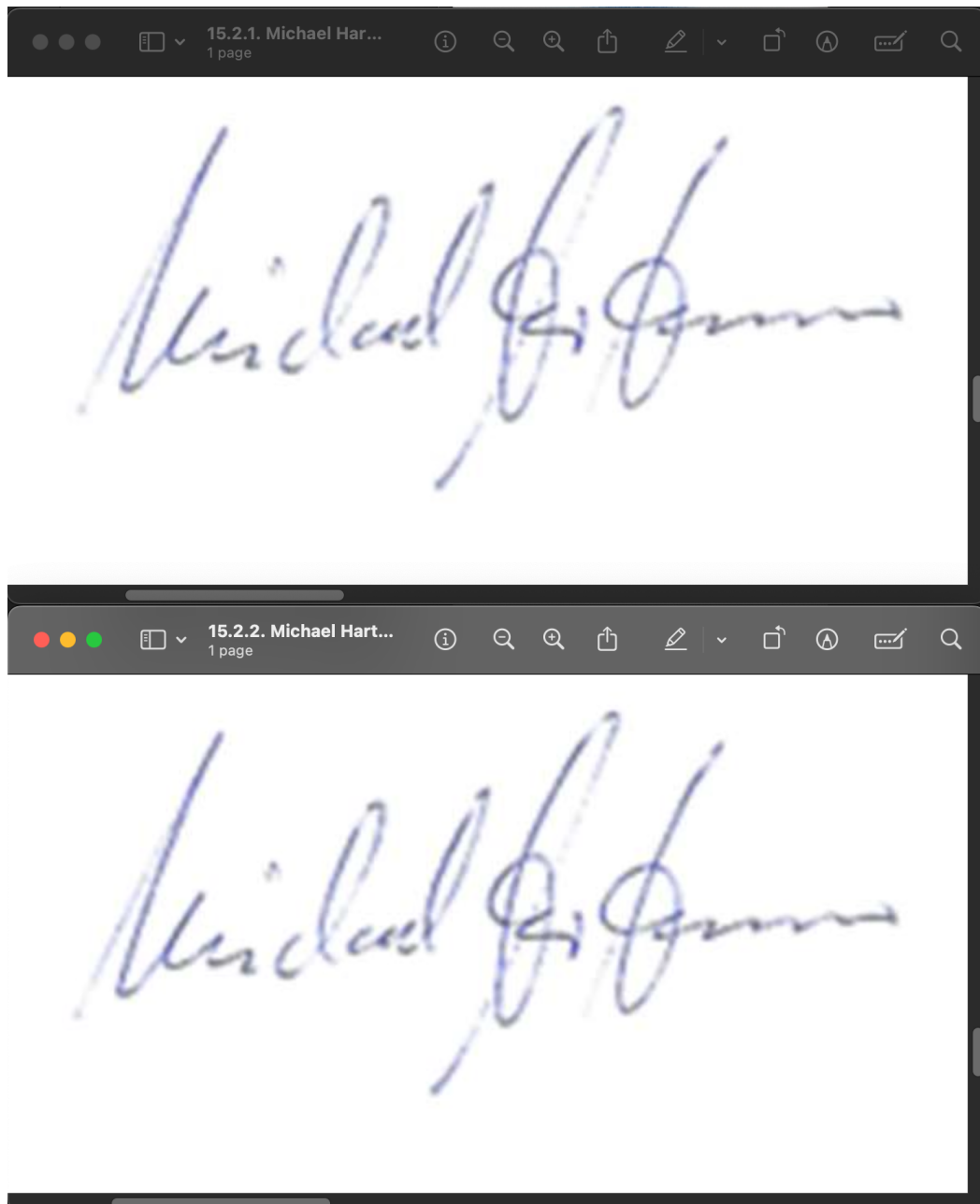
October 15, 2026

Statement prepared by:

(Prof. Stoyan Mihov, D.Sc.)

APPLICATION 1

Enlarged image of the signatures in documents No. 15.2.1 and No. 15.2.2



APPLICATION 2

Email to Academic Director Prof. Michael Hartmann

From: Stoyan Mihov stoyan@lml.bas.bg
Subject: Inquiry regarding certification letters for Prof. Dr. Alexander I. Iliev
Date: 18 August 2026 at 10:56
To: michael.hartmann@srh.de

Dear Prof. Dr. Hartmann,

I am writing to you in my capacity as a designated member and reviewer on the Professorship Review Committee at the Department of Mathematics and Informatics, Bulgarian Academy of Sciences. I am currently preparing my evaluation report regarding the application of Prof. Dr. Alexander I. Iliev.

In support of his application, Dr. Iliev provided two certification letters bearing your signature and dated July 14, 2026, which state that four of his textbooks are currently used as principal study materials for courses within the Master's program in Big Data and Artificial Intelligence at SRH University of Applied Sciences.

To ensure accuracy and completeness in the formal evaluation report, I would be grateful if you could assist me with a few clarifications:

1. Verification of Letters: Could you please confirm that these two certification letters were issued by your office?
2. Timeline Clarification: I observed that while the letters are dated July 14, 2026, the publisher lists the official publishing date for two of the books as July 21, 2026. Could you clarify in what capacity these texts were implemented prior to their release?
3. Syllabus & Course Integration: Could you provide the official course syllabus or module description (Modulhandbuch) where these texts are formally listed as primary required reading?
4. Faculty Approval & Review: The letters note that the books were approved by the faculty. Could you briefly describe the institutional process behind this approval or mention whether formal peer reviews were conducted prior to their adoption and, if formal peer reviews for these books exist, kindly provide copies of them?

Your response will assist me in accurately addressing these aspects in my reviewer's report. Thank you very much for your time and assistance.

Sincerely,

Prof. D.Sc. Stoyan Mihov

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