

REVIEW

by Acad. Ivan P. Popchev – BAS
of dissertation for acquiring the educational and scientific degree
“Doctor”

In professional direction 4.6. “Informatics and Computer Sciences”
Doctoral Program “Informatics”

Titled: “**Intelligent Methods for Processes Analysis in Justice Administration**”
by Hristo Konstantinov Blidov

By order № 246/14.09.2022 of Prof. G. Angelova, DSc – the Director of IICT – BAS in accordance with Art. 4, para 2 of the Act on Development on the Academic Staff in the Republic of Bulgaria and by decision of the Scientific Council of IICT (Protocol №9/14.09.2022) in connection with the procedure for acquiring the educational and scientific degree “Doctor” in professional direction 4.6. “Informatics and Computer Sciences”, Doctoral Program “Informatics”, by Hristo Konstantinov Blidov with a PhD thesis on Intelligent Methods for Processes Analysis in Justice Administration”, I am appointed a member of the Scientific jury.

For the evaluation of the dissertation paper, the conditions of the Act on Development of Academic Staff in the Republic of Bulgaria (ADASRB), the Regulation on the Implementation of the Development of Academic Staff in Republic Act (RIDASRBA) (Decree № 202 of 10.09.2010, amend and suppl. SG 15/19 February 2019) and the Regulations on the specific conditions in the IICT for implementation of the law are defined and will therefore be accurately transmitted:

1. Pursuant to Art. 6 (3) of the ADASRB “The dissertation paper must contain scientific and applied science results being and original contribution to science. The dissertation paper must show that the applicant got deep theoretical knowledge in the respective speciality and the capacity for independent scientific research”.
2. According to Art. 27 (2) of the RIDASRBA “The dissertation paper must be presented in a form and volume corresponding to the specific requirements of the primary unit. The dissertation paper must contain: a title page, contents, introduction, presentation, conclusion – summary of the obtained results with declaration for originality, bibliography.

According to the RIDASRBA and the Rules of Specific Conditions in IICT, minimum required points by groups of indicators for the educational and scientific degree “Doctor” of 4.6. “Informatics and Computer Sciences” are:

Group of indicators	Contents	Number of points
A	Indicator 1	50
D	Sum of indicators from 5 to 10	30

The **scientific supervisor** of the thesis is corr.-member Lyubka Atanasova Doukovska.

The **aim of the dissertation** is formulated on page 5 is „to analyse the processes in justice administration with the means of modern paradigms from the field of intelligent systems. To achieve this goal, the following tasks have been formulated:

1. to select appropriate intelligent techniques for the processes analysis in justice administration;
2. to apply the apparatus of the Generalized Nets (GN) for the processes analysis in justice administration;
3. to apply the apparatus of Intuitionistic fuzzy sets (IFS) for the pairwise comparisons and evaluations of the behaviour of the objects involved in the processes analysis in justice administration;
4. to develop a model of the first phase of the first court instance of the judicial process;
5. to develop a model of the second phase of the first court instance of the judicial process;
6. to develop a model of court proceedings before an appeal court;
7. to develop a model of cassation proceedings before the Supreme Court of Cassation;
8. to develop a model of the judicial proceedings for annulment of effective court decisions before the Supreme Court of Cassation.“

The dissertation has 151 pages, 130 quoted sources and includes:

- * Introduction (4-6);
- * Introduction and description of the legal process (chapter 1, 7-25);
- * Intelligent methods for an analysis of complex process (chapter 2, 26-54);
- * Results of the application of intelligent methods for processes analysis in justice administration (chapter 3, 55-130);
- * Conclusion (131);
- * A Summary of obtained results (132);
- * Direction for future research (133);
- * Publications on the subject of the dissertation (134);
- * Declaration of the originality of the results (135);
- * Bibliography (136-151).

On page 134 are "Publications on the subject of the dissertation" – 6.

An analysis of these publications shows the following:

- * 1 publication is a chapter of book with SJR 0.151 (№1);
- * 1 publication is in a proceedings IS'20, IEEE Xplore (№2);
- * 2 publications are in IS'22, IEEE Xplore (№№ 3 и 5 – in print);
- * 2 publications are in Chapter of books(№№ 4 и 6 – in print);
- * All publications are co-authored.

No citations are provided.

On page 132 it is noted that the dissertation work was developed with the support of project № КП-06-Н22/1 “Theoretical research and applications of the Inter-Criteria Analysis” part of №Д01-65/ 19.05.202 National Research Program “Smart crop production”.

The scientific indicators compared with the minimum requirements for the educational and scientific degree “Doctor” according to the Regulations on the specific conditions for acquiring scientific degrees and for holding academic positions in IICT – BAS are as follows: Group D 48 points with minimum requirements 30.

The conditions of the RIFASRBA and the Specific Conditions Regulations of IICT – BAS are fulfilled.

Pursuant Art. 6 (3) of the ADASRBA, **“The dissertation paper must contain scientific and applied science results being an original contribution to science”**. In the dissertation paper (p. 133) are formulated eight scientific applied science results, for which it is not determined whether they constitute an original contribution to science.

In short, the **results** in the dissertation paper can be systematized as follows:

1. A GN-model of the General Claim Process - first phase of the first court instance (Fig. 3.2., p. 67) contains 6 transitions, 22 places and 4 types of tokens: “*Court of first instance*”, “*Claimant*”, “*Defendant*” and “*Documents*” [№2*];
2. A GN-model of the General Claim Process - second phase of the first court instance (see 3.4., p. 86) contains 12 transitions, 32 places and 3 types of tokens: “*Claimant*”, “*Defendant*” and “*Documents of the claimant*”[№3*];
3. A GN-model of the General Claim Process - Proceedings before an Appeal court (see 3.6., p. 101) contains 6 transitions, 23 places and 5 types of tokens: “*Court of first instance*”, “*Court of first instance, performing a function other than that of token “E”*”, “*Appeal court*”, “*Appellant*”, “*Defendant to the appeal*” [№4*];
4. A GN-model of the General Claim Process – Cassation proceedings before the Supreme Court of Cassation (see Fig. 3.8., p. 113) contains 5 transitions, 20 places and 4 types of tokens: “*Appeal court*”, “*Appellant*”, “*Defendant of the cassation appeal*”, “*Supreme Court of Cassation*”[№5*];
5. A GN-model of the General Claim Process – Annulment proceedings before the Supreme Court of Cassation (see Fig. 3.10., p. 126) contains 6 transitions, 23 places and 5 types of tokens: „*Archive*“, “*Court of first instance*”, “*Claimant*”, “*Defendant*”, “*Supreme Court of Cassation*” [№6*].

Critical remarks:

1. There are inaccuracies and incompleteness in the bibliography. For example, no recorded pages are №№1,2,18,21,25,26,28,30,31,33,38,54,82,83,84,89,90,102,103 и 104.
2. The bibliography does not include publications on the subject of the dissertation
3. A bibliography is not included in the abstracts, but 30 literary sources are cited in the texts, which are the remaining texts from the dissertation and have not been corrected.
4. 43 sources that are included in the bibliography are not cited in the dissertation.
5. In the report on the fulfilment of the minimum requirements for ICT for G7, 32 points are recorded, and for those registered in NACIDG7 it is 48 points.

Questions on the dissertation paper:

1. On page 5, when formulating the goal, it is written: "with the means of modern paradigms from the field of intelligent systems...", but nowhere is "modern paradigms" defined in the dissertation work, including in the conclusion and in the summary of received results. The question is how do you define "modern paradigms"?

2. How were the tasks defined in the introduction (page 5) with the application of the apparatus of Generalized Networks (OM) and Intuition Fuzzy Sets (IMF) for specific processes in the administration of justice? What were the criteria?

3. The first task (p. 5) is to select appropriate intelligent techniques. The questions are twofold: "suitable" for what and who are these "smart techniques"? It should also be noted here that the title of the dissertation is not "techniques" but "methods".

4. What are these "techniques", respectively "methods", which, when compared and evaluated, give preference to OM and IRM? Can you give specific examples?

5. Once OM and IRM are chosen, can one define what is "intelligent" about them to match the thesis title?

6. In "directions for future research" (p. 133) it is suggested "if the developed generalized network models...were implemented programmatically and implemented...they could be used..." and mark activities with emphasis, for example, on the so-called "Random Court Case Allocation System". These "Directions " do not determine the future research of the PhD student, only incidental events. The question is beyond chance, are not new directions for research in the administration of justice being discovered?

The **abstracts** are in Bulgarian and English, 48 pages and 44 pages, respectively, and present the dissertation work.

Conclusion

The dissertation paper meets the conditions of the ASRBA, the RIDASRBA and the specific requirements in the IICT.

I give a positive conclusion for acquisition of the educational and scientific degree "Doctor" of t Hristo Konstantinov Blidov.

I propose to the Scientific Jury to vote unanimously for Hristo Konstantinov Blivo the educational and scientific degree "Doctor" on 4.6. "Informatics and Computer Sciences", Doctoral Program "Informatics"

19.10.2022 г.

НА ОСНОВАНИЕ

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