

## OPINION

**By:** Alexander Ganchev, Dr., associate professor, AUBG

**Regarding:** The application of the following candidates for the academic position of **FULL PROFESSOR OF MATHEMATICS** according to the Bulgarian legislation at the American University in Bulgaria in Area of Higher Education 4. Natural Sciences, Mathematics, and Informatics in Professional Field 4.5 Mathematics. The procedure has been announced in the State Gazette issue 69 dated September 8, 2015

**Candidate 1:** **Assoc. Prof. Tatyana Gateva-Ivanova**

I present the evaluation below in my capacity as a member of the Academic Jury appointed for the above mentioned procedure by a letter of the AUBG President dated November 6, 2015. This evaluation is based on the *Development of Academic Staff in the Republic of Bulgaria Act*, the Rules for its implementation, the internal AUBG rules, regulations, and policies, including the *Habilitation Procedure* and the advertisement on the AUBG website regarding the procedure.

### Evaluation of the Applicant

*The evaluation is carried out according to the **Primary Indicators** and **Additional Indicators** included in the document **Guidelines for the Academic Jury**.*

#### I. Basis for Evaluation

The portfolio put together by the candidate consists of a Cover letter, detailed CV, List of Publications submitted for the habilitation procedure, a compilation of the Abstracts of the papers in the List of Publications, a Summary of Contributions and Results (a 31 page document), a List of citations, a six page Description of her Teaching experience, List of Enrollment and courses taught at AUBG since 2011, two Peer Reviews of courses taught at AUBG, Student Evaluation for 6 semesters, Documents for promotion to Full Professor in 2011 including FET Memo and Letters from the Provost and President.

#### II. Eligibility

The candidate fulfills the eligibility conditions set forth in the Law and the University regulations. (See enclosed eligibility checklist.)

#### III. Areas of Research of the Candidate. Evaluation of the Contributions of the Candidate.

The research of Dr. Ivanova is concentrated in the area of algebra, more concretely combinatorial methods in noncommutative algebra, quantum and quadratic algebras, solutions of set-theoretic Yang-Baxter

equations, Artin-Schelter regular algebras. Her area of research corresponds to the specific requirements of the current procedure (see enclosed Additional Requirements List).

The scientific papers submitted by the candidate for evaluation in the habilitation procedure for full professor (which have not been used in her previous promotions) consist of 16 papers of which five articles published in *J. Algebra* (IF=0.698), two articles in *Algebr. Represent. Theor.* (IF=0.622), and one in: *Adv. In Math.* (IF=1.510), *Comm. Math. Phys.* (IF=1.971), *J. Symbolic Computation* (IF=0.739), *J. Math. Phys.* (IF=1.430), *Trans. AMS* (IF=0.468), *Serdica*, also two electronic preprints in the arXiv, and a paper in conference proceedings. (Dr. Ivanova also includes four earlier papers which “possibly have been involved” in her habilitation for senior researcher in 1993.) There are 302 citations (without autocitations) of the candidate papers. The six most cited papers have 59, 48, 32, 23, 21, and 20 citations. The different indices measuring the response to her papers are h-index=9, i10-index=9, i20-index=6. The candidate has numerous visits to leading research institutions, has delivered many seminars, given many talks at research conferences. She has collaborations with a number of leading mathematicians. The number of publications is close to the number in the guidelines, while the number of publications in journals with impact factor (in fact all of the journals mentioned above are among the leading research journals in the area) exceeds the number in the guidelines. What is very impressive is the number of citations which is the best measure for the scientific impact of one's work. This number is 20 times bigger than the one provided in the guidelines. This compensates the lack of DSc or a monograph. (In my opinion a monograph is an outdated requirement – today there is a flood of monographs with quality ranging from superb to total waste of paper.) In my view an important paper which develops the techniques on which much of the rest relies is T. Gateva-Ivanova, *J. Algebra* 185 (1996) 710-753.

#### **IV. Evaluation of the Candidate's teaching**

The candidate has a big experience in a student-centered approach of teaching at a liberal arts institution. Her teaching experience correspond to the requirements of the current procedure (see the attached Additional Requirements checklist). Her teaching can be characterized as effective.

#### **V. Major critical notes and recommendations**

I have no critical notes.

#### **VI. Conclusion:**

In conclusion the teaching experience and the scientific research of Tatyana Gateva-Ivanova are completely appropriate for the specific requirements of the American University in Bulgaria and I recommend FOR granting her the academic rank of Full Professor with conviction.



Signature and date:

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By signing here I also declare that writing this review does not represent conflict of interest.