

STANDPOINT

for participation in a competition for an academic position "Associate professor"
in scientific field 5 Technical sciences
professional field 5.1 Mechanical Engineering
scientific specialty Manufacturing technology
posted at DV issue 67/28.07.2020

with a single applicant: Assistant Professor Eng. Tanya Georgieva Avramova, PhD

Member of the scientific jury: Prof. Branko Dushkov Sotirov, PhD
According to Order 438/08.10.2020 of the Rector of TU – Varna

1. A general characteristic of the applicant's research and development activities

The published materials for participation in the competition presented by Assistant Professor Tanya Avramova, PhD are a **total of 30**, including **1 monograph**, **4 reports** at international scientific conferences abroad, **3 reports** at similar conferences in Bulgaria, **8 articles** in international scientific journals abroad, **6 articles** in international scientific journals and **3 articles** in scientific journals in Bulgaria, **3 teaching tutorials**, including 1 textbook and 2 manuals and **2 registered utility models**.

The presented publications can be referred to the following directions:

- ✓ Machining by surface plastic deformation (SPD);
- ✓ Design of tools for machining parts with complex configuration including for holes;
- ✓ Milling of complex surfaces;
- ✓ Design and theoretical research of products and processes, including through modeling in the environment of Solid Works.

In 10 publications and the monograph as well Assistant Prof. Tanya Avramova, PhD is an independent author, in 6 of the joint publications is the first author, in 11 - second author and in the other 2 publications is the third and fourth author.

Based on the submitted documents, I assess the research and development activities of the candidate as sufficiently significant. In the years 2007 - 2019 Assistant Professor Tanya Avramova, PhD has participated in 5 research and 2 educational projects, such as the research projects "**New methods for treatment of internal cylindrical surfaces**" (awarded a Diploma) and "**Development of methodology and laboratory real-time production process control unit**" has been a head.

The presented Certificates for registration of 2 utility models, which have been tested during the production of hydraulic cylinders in the production conditions of the company "Si Pro" - Varna, convincingly complement the excellent impressions of the scientific and applied activity of Assistant Professor Tanya Avramova, PhD.

As a result of the above, the applicant Tanya Avramova, PhD **has met all the minimum national requirements** according to PPRASRB and the requirements of TU-Varna for holding the academic position "Associate Professor", as the points collected by it in groups of indicators Г, Д, Е and Ж significantly exceed the required minimum values.

2. Assessment of the pedagogical preparation and activity of the applicant

I evaluate the pedagogical qualification of the applicant and her work as a lecturer at the level of the required scientific title "Associate Professor", as she lectures on the following subjects for the bachelor's and master's degrees:

- ✓ Manufacturing Technologies – part I;
- ✓ Production Technologies;
- ✓ Technological equipment. Designing;
- ✓ Information technology and systems;
- ✓ Finishing processes;
- ✓ Technological preparation of production;

- ✓ Assembly technology;
- ✓ Computer aided design of metal cutting tools;
- ✓ Manufacturing Technologies – lectures for foreign students under the Erasmus + program.

Under her leadership, have defended 44 graduates in the Bachelor's and Master's degrees and has been reviewed 47 diploma theses (11.6).

There are 4 mobilities under the Erasmus + program for the period 2017-2019. One is for teaching purposes (11.9.2) and three for training (11.9.3 to 11.9.5).

Numerous curricula have been developed (14 pieces) for specialty KTM, spec. MTT, spec. PI, spec. TTT and spec. MTT for Bachelor's degree, Master's degree and Professional Bachelor's degree. They are detailed in Annexes 11.2.1 to 11.2.3.

Documents are presented (11.4.1 to 11.4.8) confirming the main contribution of the applicant in providing practical activities for students in a practical environment outside TU-Varna.

With her assistance, a metal-cutting lathe ST 201-251 from the company INHOM 98 OOD was donated to the Department TMTM for student training and research (11.5.2).

3. Major scientific and applied science contributions

The submitted contributions of the applicant can be referred to the following groups:

3.1 Scientific contributions (Creation of new classifications, research methods, new constructions and technologies) – (B4), (B18).

3.2 Scientific applied contributions (Obtaining and proving new facts and creating classifications, constructions, technologies and schemes) – (B1), (B2), (B3), (B4), (B5), (B8), (B9), (B10), (B11), (B12), (B13), (B19).

3.3 Applied contributions (Classifications, constructions, technologies, obtaining new facts) – (B6), (B7), (B14), (B15), (B16), (B17), (B18), (B20), (B21), (B22), (B23), (B24).

3.4 Methodical contributions - I consider that the presented one textbook (B2) and two teaching tutorials (B1) and (B3) are essential for the quality of the teaching process.

The textbook and teaching tutorials are on the topic of the competition, are reviewed and have positive reviews.

The publications listed above (B6), (B8), (B10), (B21), (B24) developed by the applicant also refer to the methodological contributions.

3.5 Citations

29 citations of papers are shown, such as: in Scopus - 1 pc (B13), and the remaining 28 in peer-reviewed scientific journals.

4. Significance of contributions to science and practice

Significant scientific, scientific applied and applied contributions enrich the theory, teaching material and practice in the field of the announced competition.

The information given in points 1 and 3 speaks of the applicant's recognition and gives grounds to claim that the majority of the contributions are his personal work or have been received with her decisive participation.

Citations in point 3.5 talk about recognition of the applicant by the scientific community at home and abroad.

The quantitative indicators of the criteria for holding the academic position "Associate Professor" in TU – Varna are met.

5. Critical remarks and recommendations

It is noteworthy that in addition to teaching and research work, the applicant has performed various administrative and organizational activities in the Department of TMTM and the University, as responsible for teaching work, for the candidate-student campaign, for the specialty "Computerized Technologies in Mechanical Engineering" and for contracts for joint cooperation between the department and business representatives. She has been also awarded several diplomas.

Assistant Professor Tanya Avramova, PhD is a member of the organization "Mechanical Engineering and Technology" at the TO of NTS-Varna and the international association Professional Association in Modern Manufacturing Technologies, ModTech, Iasi, Romania (11.8.2 and 11.8.3).

In the works of the candidate I did not find omissions of a principled or debatable nature. She was given preliminary notes of a secondary nature, which should be accepted as recommendations for the future work of the applicant. I recommend focusing more on her scientific activities as she stays to lead a future team of PhD students.

CONCLUSION

I do not know the candidate personally, but based on my acquaintance with the presented scientific papers, their significance and the scientific, scientific-applied and applied contributions contained in them, I find it reasonable **to propose**

Assistant Profesor Tanya Avramova, PhD

to take the academic position of "Associate Professor"

in professional field 5.1 Mechanical Engineering,
scientific specialty Manufacturing technology

Date: 29.10.2020
Ruse

JURY MEMBER:

/Prof. Branko Dushkov Sotirov, PhD/