

**JUSTIFICATION OF THE CONTRIBUTION  
OF THE PH.D. CANDIDATE UROŠ RADOMAN  
IN PUBLISHED SCIENTIFIC PAPERS  
RELATED TO DOCTORAL DISSERTATION**

To Whom It May Concern,

According to Article 34. of the Rulebook on doctoral studies of the University of Belgrade ("Glasnik Univerziteta u Beogradu", N° 191/2016, 212/2019, 215/2020, 217/2020, 228/21, 230/21, and 241/2022), we, the paper coauthors, declare that candidate Uroš Radoman made the greatest contribution of all coauthors to the scientific paper:

1. **(M21)** D. Rogora, S. Nazzari, U. Radoman, Z. Radaković "Experimental research on the characteristics of radiator batteries of oil immersed power transformers", IEEE Transactions on Power Delivery April 2020, 35(2): 725 – 734,

<https://doi.org/10.1109/TPWRD.2019.2925451>

The candidate participated in creating the experiment design, planning the schedule of the measurements, and performing the experiments. Then, the candidate performed the analysis of the experiment results and formulated a mathematical model for the calculation of the pressure drops in the radiator heads, which was the final goal of our research. The experiments described in our paper were performed on large-scale equipment in the factory test bay of the Tamini Transformatori S.r.l., Legnano, Italy. The paper coauthors from the factory previously gave a statement regarding the nature of their contribution to the research and paper. Also, in this statement, the order of authors in our paper is explained. The experiments, lasting three weeks, had a considerable budget, and they were entirely financed by the Italian partners. The research was carried out through the joint commercial international project of the School of Electrical Engineering of the University of Belgrade and Tamini Transformatori S.r.l.

The research is directly connected to the candidate's doctoral dissertation – it was planned in the submission phase of the dissertation, and it is topic of the Chapter 7.1. of the dissertation.

According to Article 34. of the Rulebook on doctoral studies of the University of Belgrade ("Glasnik Univerziteta u Beogradu", N° 191/2016, 212/2019, 215/2020, 217/2020, 228/21, 230/21, and 241/2022), we, the paper coauthors, declare that candidate Uroš Radoman made a major contribution to the scientific paper:

2. **(M21)** Z. Radaković, U. Radoman, P. Kostić "Decomposition of the Hot-Spot Factor", IEEE Transactions on Power Delivery February 2015, 30(1): 403 - 411,

<https://doi.org/10.1109/TPWRD.2014.2352039>.

Also, the remaining two paper coauthors declare that this paper will not be used as a qualification publication for their own Ph.D. thesis.

This paper was created at the beginning of the candidate's doctoral studies and his work related to the dissertation. The candidate was in the initial stages of his research, meaning he worked under more intensive mentoring when compared to the later stages of the studies. During the research presented in this paper, the candidate mastered the basics of the complex detailed stationary thermal-hydraulic network model. The candidate managed to connect the physical background of the model with the components of simplified empirical models that are usually used in engineering practice. The candidate performed a series of simulations and contributed to theoretical analysis, led by the mentor. The significant contribution of the paper is in the physical description and the decomposition of the "vaguely defined term" *hot-spot factor*. According to Google Scholar, the paper was well-received and cited 27 times. The candidate contributed to the paper with independent work on the analysis of the influence of individual physical phenomena on the hot-spot factor.

The research is directly connected to the candidate's doctoral dissertation – it was planned in the submission phase of the dissertation, and it is topic of the Chapter 6. of the dissertation.

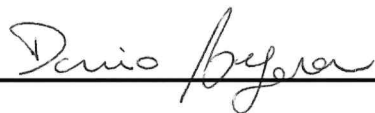
Candidate

Uroš Radoman

  
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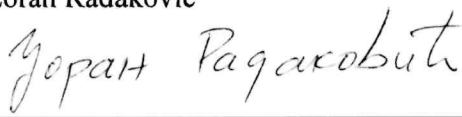
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Belgrade / Legnano, 18. 7. 2023.