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Dear colleagues!

I am well acquainted with the topic of scientific research of I.N. Safonova. Over the past 5 years, we have published 10 scientific papers in collaboration with other colleagues and we continue joint research. Currently, we are participants in the Chinese-Belarusian scientific project "Structure of finite and periodic groups and some related problems of graphs and lattices" for 2024–2026, which received a grant of financial support from the National Natural Science Foundation of China and the Belarusian Republican Foundation for Basic Research.

At the same time, having become acquainted with the author's brief content of the dissertation, presented in the abstract, I saw a wider range of I.N. Safonova's research related to the algebra of σ -local formations, naturally arising in the study of σ -properties of groups. The methods developed in the dissertation turned out to be quite effective and allowed us to solve a number of open questions in the theory of σ -properties of groups and their classes. Among them are such well-known problems as A.N. Skiba's problem (2014) on the classification of $P\sigma T$ -groups, A. Frigerio's problem (1974) on the description of groups with the transitive modularity condition for subgroups, problems 19.87 and 19.88 from the «Kourovskaya Notebook» (2018) on the description of G -covering systems of subgroups for classes of σ -solvable and σ -nilpotent groups, A.N. Skiba's problem (2015) on the σ -dispersivity of groups with σ -subnormal $(n + 1)$ -maximal subgroups, L.A. Shemetkov's problem (1995) on the description of the structure of dispersive groups by graph theory methods, the well-known problem of L.A. Shemetkov (1980) on the classification of critical formations.

The results of the dissertation have been well tested and published in such prestigious international journals as the Journal of Algebra, Journal of Group Theory, Proceedings of the Steklov Institute of Mathematics, Communications in Mathematics and Statistics, Journal of Algebra and Its Applications, Archiv der Mathematik, Communications in Algebra, Quaestiones Mathematicae, Recherche di Matematica, Advances in Group Theory and Applications, Bulletin of the Australian Mathematical Society, Mediterranean Journal of Mathematics, etc.

All this testifies to the high level of the research conducted.

In my opinion, this dissertation is fully consistent with the level of a Doctor of Physical-Mathematical Sciences (Habilitation), and its author, Inna Nikolaevna Safonova, deserves to be awarded the degree of a Doctor of Physical-Mathematical Sciences (Habilitation).

Sincerely yours,

Doctor of Physical-Mathematical Sciences, Professor Guo Wenbin

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