



Siarhei A. PAULIUKAVETS

Head of the «Electric drive and automation of industrial installations and technological complexes» department

PhD, Associate Professor

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Minsk, Belarus

Summary

The area of scientific interests is related to the development of methods and algorithms for controlling mobile robots.

As part of the ongoing research, more than 70 printed works have been published, incl. 15 scientific articles in peer-reviewed leading domestic and foreign scientific publications.

h-index – 6.

Skills

I am fluent in the following programs: Word, Excel, PowerPoint, OriginLab, CorelDraw, Photoshop, AutoCad, DipTrace, SolidWork, MATLAB Simulink, MathCAD, SimInTech, ANSYS Maxwell, ANSYS Motor-CAD, Altium Designer

Experience

Internal auditor of the quality management system.

Winner of the scholarship of the President of the Republic of Belarus for talented young scientists.

Experience in managing teams, student groups, research and student research work.

I have experience in scientific supervision of master's students (more than 30 people have successfully defended their master's theses).

Experience in organizing and holding conferences in the Republic of Belarus.

I am the supervisor of graduate students Yang Shixin and Wu Xinxin.

Education

DSc in Engineering

Belarusian National Technical University

Speciality: 05.13.01 «System analysis, management and information processing»

2023 – 2026

Ph.D in Engineering

Belarusian State University of Informatics and Radioelectronics

2008 – 2011

MSc in Tech

Belarusian State University of Informatics and Radioelectronics

2007 – 2008

BSc in Law

Academy of Management under the President of the Republic of Belarus

2012 – 2015

BSc in Technology

Belarusian State University of Informatics and Radioelectronics

2004 – 2007

Projects

Experience in managing two scientific projects of the Belarusian Republican Foundation for Basic Research.

Experience in managing two research projects conducted at the department.

Head of the department's scientific project topic: «Improving the control system and design of the traction electric drive of vehicles».

Experience in managing research work under the Ministry of Education of the Republic of Belarus.

I take part in the implementation of the State scientific research program «Digital and space technologies, security of society and state» for 2021-2025, subprogram 3. «Digital technologies for design, planning and management of high-tech, robotic production and electric transport».

Scientific supervisor of a master's student who received a grant from the Ministry of Education of the Republic of Belarus on the topic: «Motion control system for a mobile robotic wheelchair for persons with disabilities».

He took part in joint scientific research with enterprises: BKM HOLDING (development of an electric drive for an electric bus), BELAZ (development of an electric drive control system for a mining dump truck with a lifting capacity of 90 tons and the development of an autonomous control system for a robotic mining dump truck using 5G networks), the Joint Institute of Mechanical Engineering of the National Academy of Sciences of Belarus (Currently, the first Belarusian electric car is being developed based on the Geely Coolray chassis).

Publications

1. Radkevich A.A., Xinxin W., Velchenko A.A., Pauliukavets S.A. Mathematical Model of Movement of a Mobile Robot with Omnidirectional Wheels. Doklady BGUIR. 2024;22(1):82-90. (In Russ.) <https://doi.org/10.35596/1729-7648-2024-22-1-82-90>
2. Pauliukavets S.A., Velchenko A.A., Radkevich A.A., Tschaplygin D.Yu. Modeling of Control System for Tracked Mobile Robot Taking Into Account Kinematic and Dynamic Parameters. Science & Technique. 2024;23(1):5-14. (In Russ.) <https://doi.org/10.21122/2227-1031-2024-23-1-5-14>
3. Radkevich A.A., Yang S., Zaretski U.A., Velchenko A.A., Pauliukavets S.A. Analysis of castor wheels rotation of mobile differential drive robot. «System analysis and applied information science». 2023;(4):30-36. (In Russ.) <https://doi.org/10.21122/2309-4923-2023-4-30-36>
4. Pauliukavets S.A., Velchenko A.A., Radkevich A.A. Mathematical model of the control system of mobile caterpillar robot taking into account kinematic and dynamic parameters. «System analysis and applied information science». 2023;(3):33-38. (In Russ.) <https://doi.org/10.21122/2309-4923-2023-3-33-38>
5. On the issue of controlling a mobile robot with omnidirectional wheels / S. A. Pauliukavets [et al.] // BIG DATA and Advanced Analytics: collection of scientific articles of the IX International Scientific and Practical Conference, Minsk, 17–18 May 2023: at 2 p.m. Part 2 / Belarusian State University of Informatics and Radioelectronics; Editorial Board: V. A. Bogush [and others]. – Minsk, 2023. – P. 94-102.
6. Algorithms for controlling four-wheeled mobile robots / S. A. Pauliukavets [et al.] // BIG DATA and Advanced Analytics: collection of scientific articles of the IX International Scientific and Practical Conference, Minsk, May 17–18, 2023. : at 2 hours. Part 2 / Belarusian State University of Informatics and Radio Electronics; Editorial Board: V. A. Bogush [and others]. – Minsk, 2023. – P. 121-131.

Other

1. Head of the “Electric Drive” direction within the framework of the federal project “Advanced Engineering School” of the Union State, operating between Pskov State University and the Belarusian National Technical University and organized by the Ministry of Science and Higher Education of the Russian Federation.
2. Consultant from BNTU on the preparation of interdisciplinary engineer-2035 of the Development Program “Priority-2030”, the goal of which is to form a single scientific and educational space jointly between the Russian Federation and the Republic of Belarus.
3. Scientific consultant on issues of “Electric drive and electric drive control systems” at Niva-Motor LLC.
4. Scientific consultant on the issues of “Managing AGV and AMR systems” at LACIT LLC - Laboratory of Digital Technologies (a subsidiary of the international holding ICOL Group).
5. Reviewer of research projects of the Belarusian Republican Foundation for Basic Research, State scientific research programs and State scientific and technical programs.
6. Member of the industry section of the expert council “Electrical Engineering” of the Ministry of Industry of the Republic of Belarus.
7. Organizer of the joint educational program “Automated electric drives” for training specialists at the first stage of higher education between the Bukhara Engineering and Technology Institute (Republic of Uzbekistan) and the Belarusian National Technical University (Republic of Belarus).

Signature



S.A. Pauliukavets