



Serhii Yermakov

Date of birth: 14/02/1981 | **Place of birth:** Kamianets-Podilskyi, Ukraine | **Nationality:** Ukrainian | **Gender:** Male | **Email address:** ermkov@gmail.com

● ABOUT MYSELF

Researcher and university lecturer with over 20 years of experience in bioenergy, agricultural engineering, and biomass processing. Head of an educational and research laboratory specializing in experimental studies, energy crops, and biofuel technologies. Author and co-author of Scopus and Web of Science indexed publications. Experienced in international research cooperation and applied engineering solutions.

Key competencies / Research interests

- Bioenergy and biomass processing
- Torrefaction and solid biofuels
- Agricultural machinery and bioenergy equipment
- Engineering education and teaching methodology
- Development of laboratory courses and practical training

● WORK EXPERIENCE

01/09/2004 - 03/10/2005 - KAMIANETS-PODILSKYI, UKRAINE

TEACHER OF SPECIALIZED SUBJECTS AT THE COLLEGE COLLEGE OF THE PODOLSK STATE AGRARIAN AND TECHNICAL ACADEMY

- taught specialized engineering and technical disciplines
- organized practical training and laboratory classes for college students
- adapted educational content to applied and vocational learning outcomes
- assessed student performance and learning outcomes
- participated in curriculum implementation for technical education programs

01/09/2005 - 30/06/2015 - KAMIANETS-PODILSKYI, UKRAINE

ASSISTANT LECTURER IN UNIVERSITY HIGHER EDUCATIONAL INSTITUTION «PODILLIA STATE UNIVERSITY»

- delivered lectures and practical classes in engineering disciplines
- developed and updated teaching materials, laboratory manuals, and course syllabi
- supervised bachelor's student projects
- integrated research results into teaching and laboratory practice
- participated in national and international scientific conferences
- contributed to applied research activities of the department

01/09/2018 - CURRENT - KAMIANETS-PODILSKYI, UKRAINE

HEAD OF THE EDUCATIONAL AND SCIENTIFIC LABORATORY HIGHER EDUCATIONAL INSTITUTION «PODILLIA STATE UNIVERSITY»

- conducted experimental research in biomass torrefaction and solid biofuel production
- planned experimental programs and research activities
- maintained and calibrated laboratory equipment
- prepared technical and research reporting documentation
- coordinated preparation of scientific publications indexed in Scopus and Web of Science
- authored scientific articles and chapters of monographs

- supervised laboratory experiments and student research projects

● EDUCATION & TRAINING

01/09/2004 - 30/06/2005 - [HTTPS://WWW.PDATU.EDU.UA/](https://www.pdatu.edu.ua/), UKRAINE

MASTER OF SCIENCE IN ENGINEERING EDUCATION- STATE AGRARIAN AND ENGINEERING UNIVERSITY AT PODILLIA

Website: <https://www.pdatu.edu.ua/>

01/09/2000 - 30/06/2004 - KAMIANETS-PODILSKYI, UKRAINE

ENGINEER-TEACHER- STATE AGRARIAN AND ENGINEERING ACADEMY AT PODILLIA

Website: <https://www.pdatu.edu.ua/>

01/09/1996 - 30/06/2000 - KAMIANETS-PODILSKYI, UKRAINE

MECHANICAL TECHNICIAN- TECHNICAL SCHOOL OF THE STATE AGRARIAN AND ENGINEERING ACADEMY AT PODILLIA

Website: <http://koledg-pdatu.km.ua/>

● LANGUAGE SKILLS

Mother tongue(s): **UKRAINIAN**

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
POLISH	B2	B1	B1	B2	B1
ENGLISH	B1	B1	A2	A2	A2

● PROJECTS

Technical and technological research of efficient use of plant biomass energy potential for solid fuel production Contract research project (R&D No. 33/2024, 17.12.2024)

Customer: Municipal Enterprise “Miskteplivodenergiya”

Type: applied research and scientific-technical services

The project focuses on technical and technological studies of efficient utilization of plant biomass for the production of solid fuels with improved quality indicators.

International research cooperation Ukrainian–Polish research initiative:

“Agrobiomass of Ukraine as the Energy Potential of Central and Eastern Europe”

● PUBLICATIONS

Agrobiomass of Ukraine — Energy Potential of Central and Eastern Europe (Engineering, Technology, Innovation, Economics).

Write here the description...

Hutsol, T., Glowacki, S., Mudryk, K., Yermakov, S. & Kucher, O. (2021). Agrobiomass of Ukraine — Energy Potential of Central and Eastern Europe (Engineering, Technology, Innovation, Economics). Warsaw: Libra-Print.

Forecasting quantitative risk indicators of investors in projects of biohydrogen production from agricultural raw materials.

Write here the description...

Tryhuba, A., Hutsol, T., Glowacki, S., Yermakov, S., & Sorokin, D. (2021). Forecasting quantitative risk indicators of investors in projects of biohydrogen production from agricultural raw materials. Processes, 9(2), 1–12.

Planning and risk analysis in projects of procurement of agricultural raw materials for the production of environmentally friendly fuel.

Write here the description...

Tryhuba, A., Komarnitskyi, S., Tryhuba, I., Hutsol, T., & Yermakov, S. (2022). Planning and risk analysis in projects of procurement of agricultural raw materials for the production of environmentally friendly fuel. Int. Journal of RED, 11(2).

Development of automated data acquisition system for isoperibolic bomb calorimeter. 2025

Yermakov S., Korzhenivskyi O., Polozhii H., Pukas V., Vusatyi M. Development of automated data acquisition system for isoperibolic bomb calorimeter. Engineering For Rural Development, 2025 Pp.7224-730.

Biogas market research in EU countries 2025

Kucher O., Zelenskyi A., Hofmann M., Yermakov S., & Plotnichenko S. Biogas market research in EU countries. Environment. Technology. Resources. Vol. 1, 2025. pp. 313-317 .

Rationality of using pneumatic looseners of vibration action on plow bodies 2025

Yermakov S., Hutsol T., Hovorov O., Potapyskyi P., Oleksiyko S., Rationality of using pneumatic looseners of vibration action on plow bodies, Environment. Technology. Resources. Vol. 4, pp. 439–443.

Current status and prospects for biogas development in Ukraine. 2025

Write here the description...

Kucher O., Prokopchuk L., Pustova Z., Pustova N., Yermakov S. Current status and prospects for biogas development in Ukraine. Engineering For Rural Development, 2025 Pp.7224-730 .

Mathematical model equation of the energy willow cutting unloading process from the slot hopper automated planter

Yermakov, S., Hutsol, T., Mushenyk, I., Zamojskij, S., & Hovorov, O. (2024). Math. model eq. of the energy willow cut. unload. process. Vide. Tehnol. Resursi, 3, 335–341.

Justification of the parameters and development of the design of the mechanism of automated selection and supply of cuttings in energy culture plants.

Yermakov, S., Bialkovska, O., Duhanets, V., Potapyskyi, P., & Volynkin, M. (2024). Justif. of param. & mech. dev. for auto. sel. & sup. of cut. Vide. Tehnol. Resursi, 3, 342–347.

Management of the solar power development in households of Ukraine. 2024

Write here the description...

Kucher, O., Mykhailova, L., Pustova, Z., Yermakov, S., & Mazur, V. (2024). Management of the solar power development in households of Ukraine. Vide. Tehnologija. Resursi - Environment, Technology, Resources, 1, 222–226.

Influence of Miscanthus biomass torrefaction parameters on torrefied product quality characteristics. 2024

Ivanyshyn, V., Bialkovska, O., Yermakov, S., Sikora, O., & Oleksiyko, S. (2024). Influence of Miscanthus biomass torrefaction parameters on torrefied product quality characteristics. Engineering for Rural Development, 23, 79–84.

Methodological aspects of bioeconomy development strategy formation in Ukraine (Example of renewable energy sources)

Kucher, O., Yermakov, S., Andreitseva, I., Plotnichenko, S., & Kozak, O. (2024). Methodological aspects of bioeconomy development strategy formation in Ukraine (Example of renewable energy sources). *Engineering for Rural Development*, 23, 850–857.

Rationale for the combined cultivator design for cultivating soil littered with plant remains of rough-stemmed crops.

Yermakov, S., Korchak, M., Duhanets, V., Pukas, V., & Vusatyi, M. (2024). Rationale for the combined cultivator design for cultivating soil littered with plant remains of rough-stemmed crops. *Environment. Technology. Resources*, 1, 419–424. .

Design and efficiency of a string hulling machine for buckwheat. 2024

Samoichuk, K., Fuchadzh, N., Kovalyov, A., Hutsol, T., Horetska, I., Semenyshena, R., Yermakov, S., & Rozkosz, A. (2024). Design and efficiency of a string hulling machine for buckwheat. *Agricultural Engineering*, 28(1), 119–135. .

The distribution of cash expenses for the creation of bioenergy willow plantations in Ukraine 2023

Yermakov, S., Rud, A., & Vusatyi, M. (2023). The distribution of cash expenses for the creation of bioenergy willow plantations in Ukraine. *Vide. Tehnologija. Resursi - Environment, Technology, Resources*, 1, 74–80.

Study of the unloading and selection process of energy willow cuttings for the creation of a planting machine

Yermakov, S., Hutsol, T., Fedirko, P., Gerasymchuk, I. & Dubik, V., (2023). Study of the unloading and selection process of energy willow cuttings for the creation of a planting machine. *Environment, Technology, Resources*, 3, 271–275.

Bioenergetic evaluation of Miscanthus giant productivity in conditions of western forest-steppe of Ukraine for use as solid fuel

Yermakov, S., Nedilska, U., Rud, A., Kucher, O., & Dumanskyi, O. (2023). Bio. eval. of Misc. giant prod. in Ukr. *Eng. Rural Dev.*, 22, 1017–1025.

Architecture and construction students' perception of technical drawing and descriptive geometry discipline content.

Write here the description...

Yermakov, S., Tkach, L., Potapskyi, P., Oleksiyko, S., & Olenyuk, A. (2023). Architecture and construction students' perception of technical drawing and descriptive geometry discipline content. *Environment. Technology. Resources*, 2, 209–213.

Research on working bodies of hammer crushers employing the finite element method 2023

Yermakov, S., Devin, V., Gorbovy, O., Pidlisnyj, V., & Semenov, A. (2023). Research on working bodies of hammer crushers employing the finite element method. *Environment. Technology. Resources*, 3, 65–68. .

Effectiveness of cognitive digressions in classes of general technical disciplines in institutions of higher education of agro-technical direction

Yermakov, S., Hutsol, T., Devin, V., Oleksiyko, S., & Potapskyi, P. (2022). Effectiveness of cognitive digressions in classes of general technical disciplines in inst. of h. ed. of agro-techn. direction. *Engineering for Rural Development*, 21, 460–465.

Primary assessment of the degree of torrefaction of biomass agricultural crops. 2021

Yermakov, S., Hutsol, T., Glowacki, S., Hulevskyi, V., & Pylypenko, V. (2021). Primary assessment of the degree of torrefaction of biomass agricultural crops. *Vide. Tehnologija. Resursi - Environment, Technology, Resources*, 1, 264–267.

Evaluation of effective parameters of biomass heat treatment in processing for solid fuel 2021

Yermakov, S., Hutsol, T., Rozkosz, A., Glowacki, S., & Slobodian, S. (2021). Evaluation of effective parameters of

biomass heat treatment in processing for solid fuel. Engineering for Rural Development, 20, 1114–1119.

Features of weediness of the field by root residues of corn. 2021

Yermakov, S., Korchak, M., Hutsol, T., Burko, L., & Tulej, W. (2021). Features of weediness of the field by root residues of corn. Environment. Technology. Resources, 1, 122–126.

Calculation algorithm for the dynamic coefficient of vibro-viscosity and other properties of energy willowcuttings movement in terms of their unloading from the bunker. 2020

Yermakov, S., Ivanyshyn, V., Ishchenko, T., Mudryk, K., & Hutsol, T. (2020). Calc. alg. for dyn. coef. of vibro-visc. E3S Web Conf., 154.

Problems of field contamination when growing energy corn as monoculture 2020

Yermakov, S., Korchak, M., Maisus, V., Pukas, V., & Zavadskaya, I. (2020). Problems of field contamination when growing energy corn as monoculture. E3S Web of Conferences, 154.

The analysis of stochastic processes in unloading the energy willow cuttings from the hopper. 2019

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Yermakov, S., Taras, H., Mudryk, K., Dziedzic, K., & Mykhailova, L. (2019). The analysis of stochastic processes in unloading the energy willow cuttings from the hopper. Environment. Technology. Resources, 3, 249–252. .

Mathematic simulation of cutting unloading from the bunker. 2019

Yermakov, S., Hutsol, T., Ovcharuk, O., & Kolosiuk, I. (2019). Mathematic simulation of cutting unloading from the bunker. Independent Journal of Management & Production, 10(7), 758–777. .

Development of the design of the mechanism for automated cuttings selection and feeding in energy culturesplanters. 2023

Yermakov, S. V. (2023). Dev. of mech. for auto. cut. sel. & feed. in energy cult. plant. Bull. Sumy Natl. Agrar. Univ., (4(54)), 22–28.