University	Peter the Great St. Petersburg Polytechnic University
Level of English proficiency	Fluent
Courses and fields of studies offered for applicants	5.2.5. World economy
Projects for potential academic supervision	- The impact of the interaction of the real and monetary sectors on crises in the global economy.
	- The influence of global risks on the internationalization of scientific and technical activities of TNCs in developed countries.
	- Factors of innovative development of the secondary sector of the world economy.
	- Assessing the role of the banking sector in the economic growth of countries around the world.
	- Choice of a model of international trade in Russia in modern conditions.
	- Development of tools for modeling the global gas market.
Topics offered for prospective researches	1. Selection of the main trends in trade in goods and services in modern conditions of development of the world economy.
	2. Selection of the main trends in the development of international investment.
	3. Assessing the impact of modern trends in international investment on the economic interests of the country
	4. Selection of a model for the formation of investment portfolios in conditions of economic instability and uncertainty of the global economy.
	5. Formation of new organizational forms of business adequate to competitive conditions during the restructuring of global technological chains.
	6. Forecast for the restructuring of global transport and logistics routes and infrastructure in the context of global risks.
	7. Development of a mechanism to ensure the economic aspects of the country's security in the context of global risks.
	8.Development of methods and tools for assessing the impact of geopolitical contradictions of countries on the world economy.
	9. Development of methods for assessing the likelihood and expected consequences of trade wars at the global and regional levels.
	10. Assessing the effectiveness of international economic organizations in the system of regulating the processes of the world economy.
	11. Assessing the effectiveness of the country's participation in interstate economic associations such as BRICS, ASEAN-5
	12. Development of principles and methods for early identification of risk factors in the global economy.

- 13. Assessment of the prospects for the development of digital currencies of the central banks of countries.
- 14. Selection of the main trends in the development of global labor markets.
- 15. Determination of the main trends in internalization and the role of TNCs in the field of scientific and technical activities.
- 16. Determination of the main trends in global high-tech markets and prospects for the development of markets in individual countries.
- 17. Assessing the effectiveness of international mechanisms for managing climate change.
- 18. Development of a methodology for short- and long-term forecasts of changes in the country's position in the global economy.
- 19. Development of principles and methods for assessing changes in the model and structure of the country's foreign economic relations in the context of global challenges.
- 20. Development and justification of strategic directions for the development of the country's foreign economic activity in the context of global challenges.
- 21. Development of criteria and methods for assessing the impact of growing social inequality and falling incomes on the long-term growth of the world economy.

## World economy

## Supervisor's research interests

Application of mathematical methods and models for analysis and forecasting of processes and objects of the world economy in the context of the main economic trends of the modern world economy.

## Study program highlights

Application of modern achievements in the theory and practice of the world economy; mathematical methods and big data management.

Supervisor's specific requirements:

A few words about the requirements for graduate students.

The main requirements for graduate students are related to the use of mathematical modeling tools for the analysis of processes and objects in the global economy.

The graduate student must have (a) knowledge of the basic theories of the development of the world economy and international economic relations and (b) knowledge in the field of economic and mathematical modeling.

## Supervisor's publications

total number of publications in journals indexed by Web of Science, Scopus, RSCI over the past 5 years: 23.

1. Didenko N.; Skripnuk D.; Merkulov V.; Kikkas K.N.; Skripniuk K. Methodology for the Formation of a Digital Model of the Life Cycle of an Offshore Oil and Gas Platform. Resources, 2023, 12, 86.



Research supervisor:

Didenko Nikolay I.,

Doctor of Economics (Peter the Great St. Petersburg Polytechnic University)

https://doi.org/10.3390/resources12080086 (Scopus, Q2).
2. Skripnuk D.; Didenko N.; Gazizulina A.; Kikkas K.N.;
Skripniuk K. Methodology of a Circular Economy in a Specific
Territory. //Sustainability. 2023, 15(13), 10363.
https://doi.org/10.3390/su151310363 (Scopus, Q1).
3. Didenko N., Skripnuk D., Ilin, I., Tanichev A., Kulik S.V. An
economic model of sustainable development in the russian arctic:
The idea of building vertical farms. //Agronomy, 2021, 11(9),
1863 (Scopus Q1; WoS Q1).
4. Didenko N., Skripnuk D., Kikkas K., Kalinina O., Kosinski E.
The impact of digital transformation on the micrologistic system,
and the open innovation in logistics. //Journal of Open
Innovation: Technology, Market, and Complexity, 2021, 7(2),
115. (Scopus, Q2).
5. Didenko N.I., Romashkina G.F., Skripnuk D.F., Kulik S.V.
Dynamics of trust in institutions, the legitimacy of the social
order, and social open innovation //Journal of Open Innovation:
Technology, Market, and Complexity, 2020, 6(4), pp. 1–24, 111.
(Scopus, Q2).
Impacts of Supervisor's research
1. Didenko N. Modeling the global nickel market with a
triangular simultaneous equations model. International Journal of
Systems Assurance Engineering and Management. 2020. 11, pp.
119–129 (Scopus, Q3).
2. Didenko N.; Skripnuk D.; Barykin S.; Yadykin V.;;
Moshkin I. Impact of Carbon Emission Factors on Economic
Agents Based on the Decision Modeling in Complex Systems.
Sustainability. 2024, 16, 3884.
https://doi.org/10.3390/su16103884 (Scopus, Q1)