


University	Peter the Great St. Petersburg Polytechnic University
Level of English proficiency	Free
Educational program and field of the educational program for which the applicant will be accepted	ECONOMICS & ECONOMETRICS 5.2.3. Regional and sectoral economy 5.2.6. Management
List of research projects of the potential supervisor (participation/leadership)	<p>1) Grant of the Russian Science Foundation 2023-2024gg. Strategic management of effective sustainable ESG development of multi-level cyber-social industrial ecosystem of cluster type in circular economy based on the concept of "Industry 5.0: Methodology, Toolkit, practice", <a href="https://rscf.en/project/23-28-01316">https://rscf.en/project/23-28-01316</a> — scientific director</p> <p>2) Grant of the Russian Science Foundation 2023-2024gg. Formation of an intelligent cyber-physical technopolis of a depressed region on the basis of a system-forming innovation-active cluster to improve the economic security of the region - responsible executive</p> <p>3) Grant of the Government of St. Petersburg in the field of scientific and scientific-technical activities, 2023 Topic: Formation of the intellectual capital of the digital industrial ecosystem in the conditions of technological sovereignty (on the example of the cluster environment of St. Petersburg) - executive</p> <p>4) Grant of the Government of St. Petersburg in the field of scientific and scientific-technical activities, 2022 Topic: Organizational and economic mechanism for managing the intellectual capital of the industrial ecosystem in the new reality (on the example of the innovative and active cluster of St. Petersburg) - responsible executive</p> <p>5) 2021 Grant of the Committee for Science and Higher Education of the Government of St. Petersburg in the field of research and scientific and technical activities - scientific adviser Topic: Development of a comprehensive mechanism for the sustainable development of innovative industrial enterprises and clusters based on the greening of production (on the example of St. Petersburg).</p> <p>6) RFBR grant 2020 - 2022 No. 20-010-00942 A Strategic management of the digital potential of complex economic systems based on the platform concept: theory, tools and practical applications – participant in charge</p> <p>7) RFBR grant 2019-2021 No. 19-010-00968 /19 Methodology and tools for digitalization of quality management of the education system and ensuring the sustainable development of economic agents - participant</p> <p>8) RFBR grant 2018-2020 No. 18-010-01119 Managing the digital transformation of an innovation-industrial cluster as a system-forming element of an industry digital platform: methodology, tools, practice - supervisor.</p>

	<p>9) Grant 2018 of the Government of St. Petersburg, the Committee for Science and Higher Education as part of a competition in the field of research and scientific and technical activities.  Topic Theory and tools for the formation of digital platforms for industrial clusters in the context of digitalization of the economy (on the example of St. Petersburg), state. contract 417/093-18 dated 20.09.2018 – project manager.</p> <p>10) Grant 2017 of the Government of St. Petersburg, the Committee for Science and Higher Education within the framework of the competition in the field of research and scientific and technical activities.  Тема: Theory, methodology and tools for the formation of innovative-active industrial clusters for the digital economy of the region (on the example of St. Petersburg), state. contract, 511/072-17 dated 02.10.2017 – project manager.</p> <p>11) Grant of the Russian Humanitarian Foundation 2015-2017 No. 15-02-00629 "Tools for managing the scientific, industrial and educational complex based on public-private partnership mechanisms and the formation of programs for the introduction of advanced industrial technologies" - participant in charge;</p> <p>12) State. contract of the Ministry of Education and Science of the Russian Federation No. 26.1303.201 / k "Theory and tools for the formation of state industrial policy in an innovative economy" as part of the design part of the state assignment for 2014 - 2017. - supervisor</p>
<p>List of the topics offered for the prospective scientific research</p>	<p>Management of digital maturity of an innovative and active industrial enterprise  Formation of innovative potential of high-tech industry  Sustainable ESG development of high-tech Industrial enterprises  Management of intellectual capital of digital innovation-active enterprise  Entrepreneurship of high-tech enterprises.</p>
<p>Research supervisor:</p> 	<p><i>Social sciences 5.02. Economics and Business, Financial management</i></p> <p>Supervisor’s research interests</p> <p>Economy of Enterprises and Clusters  Innovative potential of enterprises and clusters.  Development of scientific and theoretical foundations of digital transformation of enterprises and industry  - Business activities of enterprises</p> <p>Digital economy, Digital transformation of enterprises, Digital technologies, Digital platforms, Industry 5.0, Industrial clusters, Smart factories, Innovation management, Smart ecosystems, Strategic management</p>

Aleksandr V. Babkin,  
Doctor of Science (Peter  
the Great St. Petersburg  
Polytechnic University)

### Research highlights

Postgraduate students analyze the theory and practice of the development of the digital economy and industry.0/5.0, the main trends in the development of high-tech enterprises and entrepreneurship in the context of the implementation of the concept of Industry 4.0 / 5.0

### Supervisor's specific requirements:

- the desire to study in graduate school and defend the thesis
- diligence in teaching and research
- Mandatory,
- Persistence in achieving results.

### Supervisor's main publications

1. Babkin A., Shkarupeta, E., Tashenova, L., Malevsky-Malevich, E., & Shchegoleva, T. Framework for assessing the sustainability of ESG performance in industrial cluster ecosystems in a circular economy // Journal of Open Innovation: Technology, Market, and Complexity (Q1, 2023 r.)
2. Babkin, A., Kvasha, N., Demidenko, D., Malevskaia-Malevich, E., Voroshin, E. Methodology for Economic Analysis of Highly Uncertain Innovative Projects of Improbability Type // Risks (Q1), 2023, 11(1)
3. Babkin A., Shkarupeta E., Malevskaia-Malevich E., Pogrebinskaya E., Batukova L.) Managing Circularity in Industrial Ecosystems: Introducing the Concept of Circular Maturity and its Application in NLMK Group // International Journal of Technology (Q2, 2023 r.)
4. Babkin, A., Tashenova, L., Mamrayeva, D., Shkarupeta, E. Industry 5.0 and Digital Ecosystems: Scientometric Research of Development Trends // Digital Transformation on Manufacturing, Infrastructure & Service. Lecture Notes in Networks and Systems, vol 684. Springer, Cham. (2023 r.)
5. Babkin, A., Alekseeva, N., Tashenova, L., Ochilov, A. (2023). Socioeconomic Mechanisms of Managing Intellectual Capital of the Industrial Ecosystem. // Digital Transformation on Manufacturing, Infrastructure & Service. Lecture Notes in Networks and Systems, vol 684. Springer, Cham.
6. Babkin, A., Gileva, T., Galimova, M., Karimov, D. Industrial enterprise digital transformation navigator: Stages and tools for strategic change // Book Chapter
7. *Digital Challenges: What Is the Response of the Economy* 2023, pp. 555–566 Shkarupeta, E., Tikhonov, V.S., Sunteev, A.N., Veis, Y.V., Babkin, A.V.) Assessment of the Digital Production Management Potential Based on Costs Statistical Analysis in Machine Industry Digital Transformation on Manufacturing, Infrastructure & Service. DTMIS 2022.

Lecture Notes in Networks and Systems, vol 684. Springer, Cham (2023 г.)

8. *Pletnev D., Babkin A., Levikova T., Popova A., Tashenova L.*) Industrial ecosystem entities business success // E3S Web of Conferences. International Scientific Conference “Ural Environmental Science Forum “Sustainable Development of Industrial Region” (UESF-2023) (2023 г.)

9. *Babkin A., Mikhailov P.*) Investment analysis of the formation of a digital platform of a cluster-type industrial ecosystem //E3S Web of Conf. International Scientific Conference Energy Management of Municipal Facilities and Environmental Technologies (EMMFT-2023) (2023 г.)

10. *Babkin A., Maksyutina E., Shkarupeta E., Mikhailov P.*) The strategy for the development of the fusion of customized production as the basis for reset of the Industry 5.0 // E3S Web of Conferences. International Scientific Conference Energy Management of Municipal Facilities and Environmental Technologies (EMMFT-2023) (2023 г.)

11. Alexandr Babkin, Elena Shkarupeta, Pavel Mikhailov, Dier Karimov.

Stages of sustainable ESG development of SMART cluster ecosystems // E3S Web of Conferences, International Scientific Conference on Biotechnology and Food Technology (BFT-2023). – 2023. – vol.460. – pp. 1-7

11. *Malevskaia-Malevich E. , Babkin A., Kudryashov V. , Klimov I.*) Adaptation of investment analysis to the features of socially oriented investments // E3S Web of Conf. International Scientific Siberian Transport Forum - TransSiberia 2023 (2023 г.)

12. *Alexandr Babkin, Diana Burkaltseva, Svetlana Kirilchuk, Natalia Apatova, Elena Vorobyova, Lyudmila Borsch, Ekaterina Nalivaychenko, Oleg Blazhevich, Olga Guk, Daniil Bondarenko, Elnara Osmanova, Svetlana Polskaya, Nazira Kalieva* // DECISION MAKING IN AGRICULTURAL ORGANIZATIONS: INTEGRAL ASSESSMENT METHODOLOGY // Web of Conferences (EDP Sciences as the original publisher), December, 2023

13. Babkin, A., Shkarupeta, E., Kabasheva, I., Rudaleva, I., Vicentiy, A., 2022. A Framework for Digital Development of Industrial Systems in the Strategic Drift to Industry 5.0. International Journal of Technology. Volume 13(7), pp. 1373-1382 DOI : <https://doi.org/10.14716/ijtech.v13i7.6193>

14. Babkin, A., Tashenova, L., Mamrayeva, D., Shkarupeta, Y., Pulyaeva, V., Leifei, C., 2022. Digitalization of Industry in Russia and Kazakhstan: the Best Practices. International Journal of Technology. Volume

13(7), pp. 1568-1577 DOI :

<https://doi.org/10.14716/ijtech.v13i7.6200>

	<p>15. Babkin, A., Tashenova, L., Mamrayeva, D., Shkarupeta, Y., Karimov, D., 2022. Digital Platforms for Network Innovation-Intensive Industrial Clusters: Essence and Characteristics. International Journal of Technology. Volume 13(7), pp. 1598-1606 DOI : <a href="https://doi.org/10.14716/ijtech.v13i7.5538">https://doi.org/10.14716/ijtech.v13i7.5538</a></p> <p>16. Babkin, A., Glukhov, V., Shkarupeta, E., Kharitonova , N., Barabaner, H., 2021. Methodology for Assessing Industrial Ecosystem Maturity in the Framework of Digital Technology Implementation. International Journal of Technology. Volume 12 issue 7 (SE), December 2021, pp. 1397-1406. DOI : <a href="https://doi.org/10.14716/ijtech.v12i7.5390">https://doi.org/10.14716/ijtech.v12i7.5390</a></p> <p>17. Babkin, A., Tashenova, L., Mamrayeva, D., Andreeva, T., 2021. A Structural Functional Model for Managing the Digital Potential of a Strategic Innovatively Active Industrial Cluster. International Journal of Technology. (IJTech). Volume 12 issue 7 (SE), December 2021, pp. 1359-1368. DOI: <a href="https://doi.org/10.14716/ijtech.v12i7.5350">https://doi.org/10.14716/ijtech.v12i7.5350</a></p>
	<p>Results of intellectual activity</p> <p>Certificate of state registration of the database "Clusters of regions of Russia" No. 2017620659</p>