



СИБИРСКИЙ
ФЕДЕРАЛЬНЫЙ
УНИВЕРСИТЕТ | SIBERIAN
FEDERAL
UNIVERSITY

Portfolio of scientific supervisors of the participants of the postgraduate track of the International Olympiad of the Global Universities Association

University	Siberian Federal University
Level of English proficiency	B2
Educational program and field of the educational program for which the applicant will be accepted	2.3.1 System analysis, management and information processing
List of research projects of the potential supervisor (participation/leadership)	<p>Grant of the President of the Russian Federation for state support of young Russian scientists - PhDs (Competition - MK2020), project "Non-parametric intelligent data analysis algorithms for modeling and managing multidimensional production processes under uncertainty", 2020-2021, supervision;</p> <p>State assignment of the Ministry of Science and Higher Education of the Russian Federation (scientific topic code FSRZ2020-0011) "Development of principles for the creation and technologies for the synthesis of materials and products with a multilevel (nanomicro-meso-macro) structure based on nanodispersed powders, alloys and compounds of metals, semimetals and semiconductors, software and informatics in the field of end-to-end digital technologies", 2019-2021, participation;</p> <p>RFBR grant, project "Creation of efficient distributed networks of temperature sensors for satellite onboard equipment", 2018 - 2020, participation;</p> <p>Program "Participant of the youth scientific and innovative competition" "UMNIK-2016", R & D "Development of a software module for an adaptive system for data mining and modeling of technological processes in metallurgy", 2016 - 2018, supervision.</p>
List of the topics offered for the prospective scientific research	<p>Development of data analysis algorithms</p> <p>Development of control algorithms for multidimensional processes</p>
	Computer and data science
	<p>Supervisor's research interests:</p> <p>The field of scientific research is nonparametric modelling of technical multidimensional processes. Data analysis and control theory.</p>
	<p>Research highlights:</p> <p>Best campus in Russia.</p>



Research supervisor:

Ekaterina A. Chzhan, Candidate of Technical Science (Siberian State University of Science and Technology named after Academician M.F. Reshetnev, Krasnoyarsk)

Supervisor's specific requirements:

- English B2,
- Basic knowledge of Python (Pandas, NumPy).

Supervisor's main publications:

Web of Science, Scopus – 35

1. Chzhan, E. A., & Raskina, A. V. (2022). Nonparametric algorithm for dual control of objects with delay using fuzzy variables doi:10.1007/978-981-16-8759-4_29.
2. Raskina, A. V., Kornet, M. E., Chzhan, E. A., Korneeva, A. A., & Kononova, N. V. (2021). Design of multi loop control systems with decision makers under incomplete information doi:10.1007/978-3-030-77448-6_1.
3. Chzhan, E. (2020). A new nonparametric algorithm for preprocessing stochastic data with uncertainty. Paper presented at the E3S Web of Conferences, 223 doi:10.1051/e3sconf/202022302012.
4. Shaydurov, V. V., Korneeva, A. A., & Chzhan, E. A. (2020). Multichannel measuring device with two switches. Paper presented at the Journal of Physics: Conference Series, 1679(4) doi:10.1088/1742-6596/1679/4/042064.
5. Korneeva, A. A., Chzhan, E. A., Denisov, M. A., Medvedev, A. V., Kukartsev, V. V., & Tynchenko, V. S. (2019). Non-parametric algorithm of omissions filling in stochastic data. Paper presented at the Journal of Physics: Conference Series, 1333(3) doi:10.1088/1742-6596/1333/3/032038.

Results of intellectual activity:

Adaptive Model of the BOF Steel Melting Process, Rospatent RU2019610404.

Software module for generating sequences of pseudo-random numbers, Rospatent RU 2019612780.

A program for modeling processes under uncertainty using nonparametric algorithms, Rospatent RU 2020619798.