Candidate supervisor's information summary form
maximum 2 pages – it should be a summary of most important achievements

Name and surname, degree, title:	Alexander Prokopenya, PhD, Dr.Sc.
Academic discipline/disciplines	Informatics
Professional development (degrees and titles) in chronological order	1983 – **Master** in Theoretical and Mathematical Physics, M.V. Lomonosov State University in Moscow, Faculty of Physics 1988 – **PhD** in Theoretical and Mathematical Physics, M.V. Lomonosov State University in Moscow, Faculty of Physics **2007** – **Dr.Sc**. (habilitation), Mathematical Sciences, Specialization: Informatics, A.A. Dorodnitsyn Computing Center of the Russian Academy of Science, Moscow (nostrification at the Jagiellonian University, Cracow, **2010**)
Most important publications/ patents in the last 3 years (maximum 10)	A. Prokopenya, M., Minglibayev, M. Saparova. *Symbolic calculations in the study of secular perturbations in the many-body problem with variable masses*. Programming and Computer Software, **51**(1), 32-40 (2025) A. Prokopenya, M., Minglibayev, A. Ibraimova *Perturbation methods in solving the problem of two bodies of variable masses with application of computer algebra*. Applied Sciences, **14**, 11669 (2024). M.Zh. Minglibayev, A.N. Prokopenya, A.B. Kosherbaeeva. *Secular evolution of circumbinary 2-planet systems with isotropically varying masses*. Monthly Notices of the Royal Astronomical Society, **530**, 2156-2165 (2024) A. Prokopenya. *Resonances and periodic motions of Atwood's machine with two oscillating weights*. Programming and Computer Software, **49**(5), 433-440 (2023) A.T. Ibraimova, M.Zh. Minglibayev, A.N. Prokopenya. *Study of secular perturbations in the restricted three-body problem of variable masses using computer algebra*. Computational Mathematics and Mathematical Physics, **63**(1), 115 – 125 (2023) Zh. Imanova, A. Prokopenya, M. Minglibayev. *Modelling the evolution of the two-planetary three-body system of variable masses*. Mathematical Modelling and Analysis, **28**(4), 636-652 (2023) A. Prokopenya. *Stability analysis of periodic motion of the swinging Atwood machine*. In: F. Boulier, M. England, T.M. Sadykov, E.V. Vorozhtsov (Eds.) Computer Algebra in Scientific Computing / CASC'2022, Lecture Notes in Computer Science, vol. 13366, Springer, Cham, 288 – 299. A.N. Prokopenya, M.Zh. Minglibayev, A.B. Kosherbaeeva *Derivation of evolutionary equations in the many-body problem*

	with isotropically varying masses using computer algebra. Programming and Computer Software, **48**(2), 107-115 (2022) A.N. Prokopenya. *Searching for equilibrium states of Atwood's machine with two oscillating bodies by means of Computer Algebra*. Programming and Computer Software, **47**(1), 43 – 49 (2021).
Experience in work with doctoral students (defended doctoral dissertations, initiated doctoral procedures) in chronological order	**Supervisor of 4 defended PhD dissertations:** **1. Dzmitry Budzko**. Equilibrium solutions of motion's differential equations of restricted four-body problem and their stability. Belarussian State University, Minsk, Belarus, 2012. **2. Gulnara Mayemerova**. Secular perturbations in the problem of three bodies of variable masses. Al-Farabi Kazakh National University, Almaty, Kazakhstan, 2013 **3. Saule Shomshekova**. Investigation of dynamical evolution of non-stationary exoplanetary systems, Al-Farabi Kazakh National University, Almaty, Kazakhstan, 2020. 4. **Saltanat Bizhanova**, Investigation of the rotational-translational motion of a non—stationary dynamically symmetric body in a central gravitational field, Al-Farabi Kazakh National University, Almaty, Kazakhstan, 2024. **Supervisor in 3 open doctoral dissertations:** Zhanar Imanova, Secular perturbations in the two-planetary problem of three bodies of variable masses, Al-Farabi Kazakh National University, Almaty, Kazakhstan, 2015. Oralkhan Baisbayeva, Investigation of the rotational-translatio-nal motion of a non—stationary triaxial body in a central gravitational field, Al-Farabi Kazakh National University, Almaty, Kazakhstan, 2017. Aigerim Ibraimova. Dynamics of a small body of variable mass in the gravitational field of double star with variable mass in presence of reactive forces, Al-Farabi Kazakh National University, Almaty, Kazakhstan, 2019.
Achievements in the area of projects/grants (in the last 5 years)	**Guest researcher grant** on Simulation of quantum computation with Mathematica, XLIM Institute, University of Limoges, France, May-June 2014.
Subject area of the research project for which the candidate student is being recruited	Mathematical modelling; Computer Algebra and Applications; Dynamical systems and motion stability; Simulation of quantum computation
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