

Europass Curriculum Vitae



Personal information

First name(s) / Surname(s) **SERHII SHEVCHENKO**
Address(es) Shyshkarivska Str., 15, apt. 15, 40030, Sumy, Ukraine
Telephone(s) Mobile: + 38 066 3562791
Fax(es)
E-mail ShevchenkoSS@nas.gov.ua
Nationality Ukrainian
Date of birth 24.10.1961
Gender male

Current employment / Occupational field

**Doctor of Engineering, senior researcher G.E. Pukhov institute for modelling in energy engineering, National Academy of Sciences of Ukraine
Professor of the Department of Energy and Electrical Engineering, Engineering and Technology Faculty, Sumy National Agrarian University**

Work experience

Dates	10.2024 till now
Occupation or position held	Professor at the Engineering and Technology Faculty
Main activities and responsibilities	Teaching and scientific activities in the sphere of energy in agriculture
Name and address of employer	Sumy National Agrarian University, 160 H. Kondratieva Str., Sumy, 40021, Ukraine
Type of business or sector	Higher Educational Institution (Agricultural Sector)
Dates	07.2020 till now
Occupation or position held	Senior researcher G.E. Pukhov Institute for modelling in energy engineering
Main activities and responsibilities	Scientific activities in the sphere of energy
Name and address of employer	15, General Naumov Str., Kyiv, 03164, Ukraine
Type of business or sector	National Academy of Sciences of Ukraine (Energy Sector)
Dates	05.1994 till now
Occupation or position held	General Director of "United Productions" LLC
Main activities and responsibilities	Manufacturing Enterprise Management
Name and address of employer	36, Svobody Av., Sumy, 40014, Ukraine
Type of business or sector	Production of pumping equipment
Dates	08.1984 – 05.1994

Occupation or position held | Researcher of the branch laboratory of vibration reliability of machines

Main activities and responsibilities | Scientific and research activities: co-executor of works on sealing systems for aerospace technology and nuclear energy

Name and address of employer | Sumy State University, Kharkivs'ka St, 116, Sumy, Sumy Oblast, 40000

Type of business or sector | Higher Educational Institution

Education and training

Dates | 09.1979 – 08.1984

Title of qualification awarded | BSC and MSC in hydraulic machines and automation tools

Principal subjects/occupational skills covered | Creation of hydraulic machines

Name and type of organisation providing education and training | Sumy State University, Ukraine

Level in national or international classification | Dipl. Ing. (University)

Dates | 05.1990

Title of qualification awarded | Candidate of Technical Sciences

Principal subjects/occupational skills covered | Hydraulic machines and hydropneumatics units

Name and type of organisation providing education and training | Sumy State University, Ukraine

Level in national or international classification | PhD in Technical Sciences

Dates | 09.2020 – 06.2023

Title of qualification awarded | DSC in mathematical modeling and computing methods

Principal subjects/occupational skills covered | Mathematical modeling and calculation methods.

Name and type of organisation providing education and training | G.E. Pukhov Institute for Modelling in Energy Engineering, Ukraine

Level in national or international classification | Doctor of Engineering

Personal skills and competences

Reliability, loyalty, sociability, energy, purposefulness

Mother tongue(s) | Ukrainian

Other language(s) | English B 2; Reference № 001001230, 01/08/2023

Self-assessment
European level ()*

English

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
B2	Upper-Intermediate	B2	Upper-Intermediate	B2	Upper-Intermediate	B2	Upper-Intermediate	B2	Upper-Intermediate

Social skills and competences | I have experience working in a team within international scientific projects.

Organisational skills and competences | I was responsible for organizing work of an industrial enterprise.

Computer skills and competences	Is fluent in computer.
Artistic skills and competences	No
Driving licence	Yes
Additional information: Scientific Research Topic and Publications	<p>Monographs:</p> <ol style="list-style-type: none"> Martsinkovsky, V. A., Shevchenko, S. S. (2018). Pumps of nuclear power plants: calculation, design, operation (S. Shevchenko (ed.)). Private Fund "University Book Publishing House." 472 p. ISBN 978-966-680-866-3. Shevchenko, S. S. (2019). NPP pumps: installation, operation, maintenance, repair. Private Fund "University Book Publishing House." 196 p. ISBN 978-966-680-898-4. Shevchenko, S. S., Gaft, Y. (2020). Stuffing box seals of dynamic pumps: monograph. Private Fund "University Book Publishing House." 215 p. ISBN 978-966-680-954-7. Shevchenko, S. S. (2021). Modeling sealing systems for rotors of centrifugal machines: monograph. Private Fund "University Book Publishing House." 545 p. ISBN 978-966-680-990-5. Shevchenko, S. S. (2023) Sealing systems and dynamics of centrifugal machines. G.E. Pukhov Institute for Modelling in Energy Engineering of the NAS of Ukraine. — Kyiv: Akademperiodyka, 266 p. ISBN 978-966-360-479-4. https://doi.org/10.15407/akademperiodyka.479.266 Shevchenko, S., Chernov O. (2024) Mechanical Seals for Energy Pumps. G.E. Pukhov Institute for Modelling in Energy Engineering of the NAS of Ukraine. — Kyiv: Akademperiodyka, 205 p. ISBN 978-966-360-503-6. https://doi.org/10.15407/akademperiodyka.503.205 <p>Papers:</p> <ol style="list-style-type: none"> Shevchenko, S. S. (2020). Models of Packing Seals Functioning Processes for Improving Sealing Mechanisms. Electronic modeling, 42(6), 91–107. https://doi.org/10.15407/emodel.42.06.091 Shevchenko, S. S., Shevchenko, O. S. (2020). Increasing Tightness and Environmental Safety of NPP Pump Seals. Visnyk of Vinnitsa Polytechnical Institute, 152(5), 89–96. https://doi.org/10.31649/1997-9266-2020-152-5-89-96 Shevchenko, S. S. (2020). Physical Model and Calculation of Face Packing Seals. Journal of Mechanical Engineering. https://doi.org/10.15407/pmach2020.04.045 Shevchenko, S. S., Shevchenko, M. S. (2020). Mathematical modeling of centrifugal machines rotors seals as dynamic systems. Bulletin of the National Technical University "{KhPI}" A Series of "Information and Modeling," 0(2 (4)). https://doi.org/10.20998/2411-0558.2020.02.05 Shevchenko, S. S. (2020). Analysis of the impact of special constructions of gap seals on the dynamics of centrifugal machines. Science Rise, 5, 3–13. https://doi.org/10.21303/2313-8416.2020.001485 Shevchenko, S. S., Shevchenko, M. S. (2020). Calculation of Contact Seals as Automatic Control Systems with Inverse Feedback. Electronic modeling, 42(3), 99–110. https://doi.org/10.15407/emodel.42.03.099 Shevchenko, S. S. (2020). Computational method for mechanical seal as a dynamic system. Electronic modeling, 45(5), 66–81. https://doi.org/https://doi.org/10.15407/emodel.42.05.066 Shevchenko, S. S. (2020). Design Improvement of Stuffing Box Seals of Centrifugal Pump Shafts, Based on the Study of the Sealing Mechanism Physical Model. Journal of Mechanical Engineering, 23(2), 41–52. https://doi.org/10.15407/pmach2020.02.041 Shevchenko, S. S., Shevchenko, O. S. (2020). Determination of the Natural Frequencies of the Centrifugal Machine Rotor with a System of Automatic Balancing of Axial Forces. Electronic modeling, 42(2), 41–58. https://doi.org/10.15407/emodel.42.02.041 Shevchenko, S. S. (2020). Development of mathematical models of sealing systems. Scientific Notes of Taurida National V.I. Vernadsky University. Series: Technical Sciences, 1(6), 165–172. https://doi.org/10.32838/TNU-2663-5941/2020.6-1/27 Shevchenko, S. S., Chernov, A. (2020). Development of pulse mechanical seal calculation methods on the basis of its physical model construction. Eastern-European Journal of Enterprise Technologies, 3(2 (105)), 58–69. https://doi.org/10.15587/1729-4061.2020.206721 (SCOPUS – Q3) Shevchenko, S. S., Shevchenko, O. S. (2020). Improvement of Reliability and Ecological Safety of NPP Reactor Coolant Pump Seals. Nuclear and Radiation Safety, 4(88), 47–55. https://doi.org/10.32918/nrs.2020.4(88).06 (SCOPUS – Q3) Shevchenko, S. S. (2020). The principle of operation and method of computing seals with floating rings. Bulletin of Sumy NAU: Mechanization and Automation of Prod. Proc., 1(39), 49–53. ISSN: 2708-4892. Shevchenko, S. S. (2020). Model and calculation of the hydromechanical system rotor – groove seals. Problems of Computational Mechanics and Strength of Structures, 2(32), 95–111. https://doi.org/10.15421/4220019

15. Shevchenko, O. S., Shevchenko, S. S. (2020). Ways to improve seals to increase the operational safety of NPP pumps. Priazovskyi State Technical University. Section: Technical Sciences, 41, 145–154. <https://doi.org/10.31498/2225-6733.41.2020.226199>
16. Shevchenko, S. S., Shevchenko, O. S., Vynnychuk, S. (2021). Mathematical Modelling of Dynamic System Rotor-Groove Seals for the Purposes of Increasing the Vibration Reliability of NPP Pumps. Nuclear and Radiation Safety, 1(89), 80–87. [https://doi.org/10.32918/NRS.2021.1\(89\).09](https://doi.org/10.32918/NRS.2021.1(89).09) (SCOPUS – Q3)
17. Shevchenko, S. S., Shevchenko, O. S. (2021). Mathematical Model and Calculation Method of a Shaftless Pump with Seals-Bearings. Electronic modeling, 43(1), 03–16. <https://doi.org/10.15407/emodel.43.01.003>
18. Shevchenko, S. S. (2021). Mathematical modeling of centrifugal machines rotors seals for the purpose of assessing their influence on dynamic characteristics. Mathematical Modeling and Computing, 8(3), 422–431. <https://doi.org/10.23939/mmc2021.03.422>
19. Shevchenko, S. S. (2021). Mathematical Modelling of Dynamic System Rotor – Groove Seals. Electronic modeling, 43(3), 17–35. <https://doi.org/10.15407/emodel.43.03.017>
20. Shevchenko, S. S. (2022). General Approach to Modeling of Non-Contact Seals and their Effect on the Dynamics of a Centrifugal Machine Rotor. Journal of Mechanical Engineering, 25(1), 32–39. <https://doi.org/10.15407/pmach2022.01.032>
21. Shevchenko, S. S. (2022). General principles and methods of modeling complex sealing systems. Electronic modeling, 44 (2), 15–25. <https://doi.org/10.15407/emodel.44.02.015>
22. Yu Z, Shevchenko S, Radchenko M, Shevchenko O, Radchenko A. Methodology of Designing Sealing Systems for Highly Loaded Rotary Machines. Sustainability. 2022; 14(23):15828. <https://doi.org/10.3390/su142315828> (SCOPUS – Q1)
23. Shevchenko, S. Development of a Mechanical Seal Closed Design Model. IgMin Res. Feb 20, 2024; 2(2): 113-120. IgMin ID: igmin152; <https://doi.org/10.61927/igmin152>
24. Shevchenko S., Shevchenko S. (2024) Increasing the Operational Safety of NPP Pumping Equipment by Using Interactive Automated Remote Educational and Training Systems. Ядерна та радіаційна безпека, (1(101), 19-27. [https://doi.org/10.32918/nrs.2024.1\(101\).02](https://doi.org/10.32918/nrs.2024.1(101).02) (SCOPUS – Q2)
25. Shevchenko O., Shevchenko S., Radchenko M., Radchenko R., Yang Z. Assessment of Sealing Systems Impact on the Vibration and Environmental Safety of Rotary Machines. Journal of Energy Systems 2024, 8 (3): pp. 153-163, <https://doi.org/10.30521/jes.1379609>. (SCOPUS – Q4)
26. C. Lu, S. Shevchenko, V. Geichuk, M. Korchak, and A. Topalov, “Research on Improving Seals to Suppress Vibration of Rotary Machines”, C. R. Acad. Bulg. Sci., vol. 77, no. 6, pp. 881–891, Jun. 2024. <https://doi.org/10.7546/CRABS.2024.06.11> (SCOPUS – Q3)
27. Yuan, Z.; Shevchenko, S.; Radchenko, M.; Shevchenko, O.; Pavlenko, A.; Radchenko, A.; Radchenko, R. Studies on Improving Seals for Enhancing the Vibration and Environmental Safety of Rotary Machines. Vibration 2024, 7, 776-791. <https://doi.org/10.3390/vibration7030041> (SCOPUS – Q2)
28. Shevchenko, S. Study of the non-contact seals influence on the centrifugal machine's dynamic characteristics. 22nd International Sealing Conference 2024, October 1-2, 2024, Leinfelden-Echterdingen, Stuttgart. B12. <https://doi.org/10.61319/FKOE7DJ9> (SCOPUS – Q3).
29. Kornienko, V., Radchenko, R., Korobko, V., Ostapenko, O., Shevchenko, S. (2024). Analyzing Exergy Losses When Utilizing the Heat of Exhaust Gases in Boiler. In: Nechyporuk, M., Pavlikov, V., Krytskiy, D. (eds) Integrated Computer Technologies in Mechanical Engineering - 2023. ICTM 2023. Lecture Notes in Networks and Systems, vol 1008. Springer, Cham. https://doi.org/10.1007/978-3-031-61415-6_41 (SCOPUS – Q3).

Projects Experience: Computer technology for creating NPP pumping equipment simulators based on 3D models (code: YUPAN), holder. registration No. 0122U002118
Responsible executor
National Academy of Sciences of Ukraine

Annexes