# YEKATERINA VASIL'YEVNA STEFANYUK

**SAMARA POLYTECH** Flagship University

Professor, Theoretical Foundations of Heat Engineering and Hydromechanics Department,
**Doctor of Technical Sciences**

## Education

Samara State Aerospace University named after S.P. Korolev

## Work Experience

17 years

## Professional Development

**1.** Mathematical Methods in Engineering and Technology, Samara State Technical University, 2016

**2.** Design and Development of Electronic Training Courses, ANO "eNano", 2017

**3.** Digitalization of Education and Management, Yerevan Research Institute of Communications. Training and Research Center, 2019

## Teaching

- Fluid and Gas Dynamics
- Hydrodynamics and Heat Transfer in Liquids
- Mathematical Modeling of Energy Processes and Systems
- Oil and Gas Hydromechanics
- Numerical and Analytical Methods for Solving Boundary-Value Heat Transfer Problems

## Research Interests

- Modeling of heat and mass transfer processes
- Study of heat transfer in the flow of liquids
- Mathematical models of oscillatory processes
- Heat and mass transfer and thermomechanics

## THE MOST IMPORTANT Scientific Papers

**PLATE VIBRATION DURING HEAT IMPACT ON ITS EXTERNAL SURFACES.**

Proceedings of the XXI International Conference on Control and Modeling Problems in Complex Systems, Samara State Technical University, 2019, pp. 334-337.

**ANALYTICAL METHOD FOR DETERMINING THE THICKNESS OF DEPOSITS ON THE INTERNAL SURFACES OF HEAT EXCHANGERS.**

Scientific and Technical Journal of Urban Planning and Architecture, 2019, volume 9, no 1 (34).

**METHOD OF DECREASING THE ORDER OF A PARTIAL DIFFERENTIAL EQUATION BY REDUCING TO TWO ORDINARY DIFFERENTIAL EQUATIONS.**

Russian Mathematics, Pleiades Publishing, 2018, volume 62, issue 8, pp. 27–37. DOI: https://doi.org/10.3103/S1066369X18080054.

**COMPUTER MODELS OF PIPELINE SYSTEMS BASED ON ELECTRO HYDRAULIC ANALOGY,**

IOP Conference Series: Earth and Environmental Science, Series: Innovations and Prospects of Development of Mining Machinery and Electrical Engineering - Power Supply of Mining Companies, 2017.

**A GENERALIZED FUNCTION IN HEAT CONDUCTIVITY PROBLEMS FOR MULTILAYER STRUCTURES WITH HEAT SOURCES.**

Journal of Machinery Manufacture and Reliability, 2018, no 3.

**MATHEMATICAL MODELING OF STRONGLY NON-EQUILIBRIUM TRANSFER PROCESSES AT NANOSCOPIC SCALE.**

Advances in Engineering Research Proceedings, 2017.

**METHOD OF OBTAINING EXACT ANALYTICAL SOLUTIONS OF HEAT CONDUCTIVITY WITH WARMTH SOURCES.**

Proceedings of the Higher Educational Institutions. Ferrous Metal Industry, 2017, volume 60, no 11.

**STUDY OF FAST RELAXING EXCITATIONS CAUSED BY ULTRASHORT LASER PULSES IN NANOSCALE DOMAIN.**

Advances in Engineering Research. Proceedings of the International Conference on Actual Issues of Mechanical Engineering, 2017, volume 133, pp. 202-208.

**STUDY OF THERMOSTRESSED CONDITION CYLINDER OF HIGH PRESSURE OF STEAM TURBINE T - 100 – 130.**

Scientific and Technical Journal of Space, Time and Fundamental Interactions, 2018, no 3 (24).

**HEAT EXCHANGE IN A CYLINDRICAL CHANNEL WITH STABILIZED LAMINAR FLUID FLOW.**

Scientific and Technical Journal of Applied Mathematics and Mechanics, 2018, volume 82, no. 1.

**A Number of Diploma Papers Defended under Your Guidance**

4

**A Number of Defended Dissertations under Your Guidance**

3

tt@samgtu.ru