Name	Anna Kuznetsova
Position, Department/Faculty	Associate Professor of Department of Theoretical Mechanics, Engineering Science and Robomechanical systems, Faculty of the Aircraft Engines
Academic Degree, Academic Title	PhD in Mechanical Engineering, Associate Professor of Department of Theoretical Mechanics, Engineering Science and Robomechanical systems
Email:	a.kuznetsova@khai.edu
Scopus Author ID:	57733854000
Web of Science ResearcherID:	OIS-6462-2025
ORCID iD:	0000-0001-5843-6569
Google Scholar:	https://scholar.google.com.ua/citations?user=LIGghJ8AAAAJ&hl=uk
ResearchGate:	https://www.researchgate.net/profile/Anna-Kuznetsova-15

EDUCATION:

Education (university, major, year of graduation):
Donetsk National Technical University, Master of Science in Mechanical Engineering, 2007
Donetsk National Technical University, Bachelor of Science in Mechanical Engineering, 2006

Postgraduate/Doctoral studies:
Associate Professor of Department of Theoretical Mechanics, Engineering Science and Robomechanical systems, National Aerospace University “Kharkiv Aviation Institute”, 2018

PhD in Mechanical Engineering Science, National Technical University “Kharkiv Polytechnic Institute”, 2014

Additional training, certification programs:
Advanced training course “Comprehensive course on AI in education”, 26.05.2025 – 09.06.2025, 45 academic hours/ 1,5 ECTS credits

Advanced training course “Terminological support of English-language academic activity in the field of mechanical engineering”, 07.10.2024 – 16.05.2025, 60 academic hours/ 2 ECTS credits

III International program of professional development of heads of educational and scientific institutions, pedagogical and scientific-pedagogical staff “Nobel Course: New Knowledge, Ideas, Experience, Values, Competences”. International Historical Biographical Institute (Dubai, New York, Rome, Jerusalem and Beijing), 03.12.2021-20.01.2022, 180 academic hours/ 6 ECTS credits

Certificate in English, Level B2, Cambridge University ESOL Examinations

WORK EXPERIENCE:

Professional Career (Workplace, Years, Position), Teaching Experience:
National Aerospace University "Kharkiv Aviation Institute", September 2015 – present time, Associate Professor of Department of Theoretical Mechanics, Engineering Science and Robomechanical systems

Donetsk National Technical University, February 2015 – August 2015, Associate Professor of Department of Applied Mechanics and Computer-Aided Design

Donetsk National Technical University, December 2014 – February 2015, Assistant of Department of Applied Mechanics and Computer-Aided Design

Donetsk National Technical University, December 2011 – December 2014, Assistant of Department of Fundamentals of Machine Design

Donetsk National Technical University, January 2008 – November 2008, Assistant of Department of Fundamentals of Machine Design

Experience in International or National Projects:

ACTIVE project (Atlantic Caucasus Technical universities Initiative for Valuable Education), Erasmus Mundus Action 2, Local Coordinator from Donetsk National Technical University, 2015

Executive of state themes of the Ministry of Education and Science of Ukraine:
Research of the efficiency and stress-strain state of elements of mechanical and biomechanical systems (0121U108988), 2021 – 2023
Research of the efficiency and stress-strain state of elements of mechanical and biomechanical systems (0115U001161), 2017 – 2019
Research of the efficiency and stress-strain state of machine parts of various functions, 2015 – 2016

RESEARCH ACTIVITIES:

Main Research Areas:
Durability predicting of heavily loaded gears on the basis of modeling of teeth wear; resource increase of bevel gears with biconvex-concave teeth, mathematical modeling of gears wear, improving the productivity of milling profile grooves.

Number of Publications (Scopus, WoS, others):
42 scientific publications, including 5 indexed articles in Scopus database

Monographs, Textbooks:
Co-author of textbook "Technology of Mechanical Engineering"

Participation in Scientific Conferences:
Participated in more than 30 national and international scientific conferences

TEACHING ACTIVITIES:

Courses Taught:

Theoretical Mechanics and Theory of Mechanisms and Machines (English, Ukrainian)
Applied Mechanics (English)
Fundamentals of Mechanics of Engineering Objects (Ukrainian)
Technical Mechanics (Ukrainian)
Fundamentals of Computer-Aided Engineering (Ukrainian)

Author Courses, Academic Programs:
Applied Mechanics (English), Technical Mechanics (Ukrainian), Fundamentals of Computer-Aided Engineering (Ukrainian)

Methodological Materials, Textbooks:
Co-author of textbook “Technology of Mechanical Engineering”
http://dspace.library.khai.edu/xmlui/handle/123456789/8825
Developed e-learning courses for distance education on the Mentor system based on Moodle

PROFESSIONAL ACHIEVEMENTS AND AWARDS:

Membership in Professional Associations:
A member of professional public association - the public organization "INTERNATIONAL EDUCATORS AND SCHOLARS FOUNDATION" (NGO "MFNO", IESF).

SELECTED PUBLICATIONS:

Key Articles (Scopus, WoS, others):

A. V. Kuznetsova. Increasing the durability of bevel gears with biconvex-concave teeth. (2025). Open Information and Computer Integrated Technologies: Collection of Scientific Papers / Ministry of Education and Science of Ukraine, National Aerospace University “KhAI”, No. 104, pp. 223–242. https://doi.org/10.32620/oikit.2025.104.15

Dotsenko V., Gnytko O., Koveza Y., Kuznetsova A., Usik V. (2024). Experience of using ceramics (Si3N4) as a material for rolling bearings of high-speed machines. Journal of Achievements in Materials and Manufacturing Engineering, 125/1, pp.16-24. https://doi.org/10.5604/01.3001.0054.7777.

Dotsenko V., Gnytko O., Koveza Y., Kuznetsova A. (2023). Experimental Determination of Power Losses in Steel and Hybrid Rolling Bearings. International Conference on Reliable Systems Engineering (ICoRSE). Lecture Notes in Networks and Systems, vol 762. Springer, Cham. https://doi.org/10.1007/978-3-031-40628-7_13

Gnytko, O., Kuznetsova, A. (2023). Substantiation of Chip Removal Models During Milling of Closed Grooves. Advances in Design, Simulation and Manufacturing VI. DSMIE 2023. Lecture Notes in Mechanical Engineering. Springer, Cham. https://doi.org/10.1007/978-3-031-32767-4_23

Dotsenko, V., Koveza, Y., Gnytko, O., Kuznetsova, A. (2023). Use of Ceramic and Hybrid Rolling Bearings in Modern Technology and Their Comparative Tests. 19th International Scientific Conference on Industrial Systems. IS’23, Serbia, p. 479-485. https://doi.org/10.24867/IS-2023-VP1.1-4_05941

Gnytko O., Kuznetsova A. (2022). Theoretical research of the chip removal process in milling of the closed profile slots. Archives of Materials Science and Engineering, 113/2, pp.69-76. https://doi.org/10.5604/01.3001.0015.7019

Gnytko O., Kuznetsova A. (2022). Increasing the productivity of profile groove milling by improving the chip removal system. Aerospace Engineering and Technology: collection of scientific papers. Ministry of Education and Science of Ukraine, National Aerospace University "KhAI". Kharkiv, Ukraine, № 2(178), pp.31–37.

Vitaliy Pavlenko, Tetiana Pavlenko, Olga Morozova, Anna Kuznetsova, Olena Voropai. (2017). Solving transport logistics problems in a virtual enterprise through artificial intelligence methods. Transport Problems. International Scientific Journal. Gliwice, Poland, Volume 12, Issue 2, pp.31-42 https://doi.org/10.20858/tp.2017.12.2.4

Andriienko S.V., Ustinenko A.V., Protasov R.V., Kuznetsova A.V. (2015). Modeling the wear process of an involute tooth profile of a chain bush-roller transmission sprocket. Bulletin of the National Technical University "KhPI". Collection of Scientific Papers. Series: Problems of Mechanical Drive, Kharkiv, Ukraine, № 34 (1143), pp.10-15.

Kuznetsova A.V., Gnytko O. M., Tereshchenko T.V. (2015). Predicting the service life of bevel gears with biconvex-concave teeth. Bulletin of the National Technical University "KhPI". Collection of Scientific Papers. Series: Technologies in Mechanical Engineering. Kharkiv, Ukraine, № 4 (1113), pp.119-123.

Kuznetsova A.V., Gnytko O. M., Onishchenko V.P. (2015). Assessment of the influence of meshing parameters of bevel gears with biconvex-concave teeth on their service life. Bulletin of the National Technical University "KhPI". Collection of Scientific Papers. Series: Problems of Mechanical Drive. Kharkiv, Ukraine, № 35 (1144), pp.75-79.

Gnytko O. M., Kuznetsova A.V., Golenko S.P. (2015) Increasing the productivity of profile groove milling. Scientific Works of Donetsk National Technical University. Series "Mechanical Engineering and Machine Science". Krasnoarmiisk, Ukraine, Issue 1 (12), pp.16-19.

ADDITIONAL INFORMATION:

Language Proficiency:
Ukrainian, English

IT Skills:
MathCad, SolidWorks, ANSYS, MS Office