



<b>Name</b>	Oleksandr Naryzhniy
<b>Position, Department/Faculty</b>	Associate Professor of Department of Theoretical Mechanics, Engineering and Robotic Systems
<b>Academic Degree, Academic Title</b>	Doctor of Philosophy in solid mechanics Associate Professor
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<b>ResearchGate:</b>	<a href="https://www.researchgate.net/profile/Oleksandr-Naryzhniy">https://www.researchgate.net/profile/Oleksandr-Naryzhniy</a>

## EDUCATION:

### Basic education (university, major, year of graduation):

Mechanical engineer in aircraft construction Kharkiv Aviation Institute, Kharkiv, Ukraine, 1967-1973

### Postgraduate/Doctoral studies:

Associate professor, Ministry of Education and Science of Ukraine 2011

PhD in solid mechanics, Higher Attestation Commission of Ukraine 2007

### Additional training, certification programs:

## WORK EXPERIENCE:

### Teaching Experience:

Associate professor of department of theoretical mechanics, engineering and robotic systems, National Aerospace University – Kharkiv Aviation Institute, 2007-current

Associate professor of department of information technologies of the designing (off hour job), National Aerospace University – Kharkiv Aviation Institute, 2015-2023

Senior lecturer of department of theoretical mechanics, engineering and robotic systems, National Aerospace University – Kharkiv Aviation Institute, 2003-2007

Assistant of department of theoretical mechanics, engineering and robotic systems, National Aerospace University – Kharkiv Aviation Institute, 2001-2003

### Experience in International or National Projects:

Performer of the scientific subject “Research on the performance and stressed-deformed state of elements of mechanical and biomechanical systems” (state registration number 0121U108988), 2021-2023

Performer of the scientific subject “Study of the working capacity of stress-strain states of elements of



mechanical and biomechanical systems" (state registration number 0115U001161), 2017-2020

Contribute to grant P326 of the UNTC, 2007-2009

Performer of the scientific subject "Research on the performance and stressed-deformed state of elements of mechanical and biomechanical systems" (state registration number 0121U108988)

## RESEARCH ACTIVITIES:

### Main Research Areas:

Dynamics of heterogeneous mechanical systems, problems of continuum mechanics, computer modeling of electro hydraulic forming using numerical methods

### Number of Publications (Scopus, WoS, others):

Over 100 scientific publications, including indexed articles in Scopus and Web of Science databases; multiple conference proceedings and applied research outputs.

### Monographs, Textbooks:

Co-author of 1 monographs and 4 textbooks in the electro hydraulic forming, theoretical mechanics, numerical methods for solving differential equations

### Participation in Scientific Conferences:

Regular participant (more 40) and speaker at international and national scientific conferences on mechanics, technology, mathematical simulation of mechanical processes

## TEACHING ACTIVITIES:

### Courses Taught:

Theoretical foundations of engineering analysis, modern methods of modeling tests, computer mechanics, dynamics of mechanical systems, dynamic stability of industrial robots, applied mechanics

### Author Courses, Academic Programs:

Author of the course «Theoretical foundations of engineering analysis», «Modern methods of modeling tests», «Computer mechanics», «Dynamics of mechanical systems», «Dynamic stability of industrial robots», «Applied mechanics»

### Methodological Materials, Textbooks:

Co-author of textbooks in the field theoretical mechanics, numerical methods for solving differential equations

Developed electronic resources and video materials for hybrid and online teaching (Mentor)

## GRANTS AND PROJECTS:

### Participation in International and National Projects:

Research on the performance and stressed-deformed state of elements of mechanical and biomechanical systems (state registration number 0121U108988), 2021-2023

Study of the working capacity of stress-strain states of elements of mechanical and biomechanical systems (state registration number 0115U001161), 2017-2020

### Grants, Scholarships, Academic Mobility Programs:

Contribute to grant P326 of the UNTC Research on the performance and stressed-deformed state of elements of mechanical and biomechanical systems" (2007-2009, state registration number 0121U108988)

## SELECTED PUBLICATIONS:



**Key Articles (Scopus, WoS, others):**

Taranenko M., Naryzhniy O.. Modelling of the process of interaction of multi-impulse local loading at electrohydraulic forming of large-dimensional bottoms. Mechanics and Advanced Technologies, v.9, 1(104), 2025.–pp. 22-31. DOI: [https://doi.org/10.20535/2521-1943.2025.9.1\(104\).314726](https://doi.org/10.20535/2521-1943.2025.9.1(104).314726)

Нарижний О. Г. , Тараненко М. Є. МОДЕЛЮВАННЯ ВІЛЬНОГО ДЕФОРМУВАННЯ ТРУБЧАСТОЇ ЗАГОТІВКИ ЗА УМОВ ДІЇ ЕЛЕКТРОГІДРАВЛІЧНОГО НАВАНТАЖЕННЯ. Обробка матеріалів тиском, Збірник наукових праць. №1 (53), Краматорськ, 2024.- с. 43-52. DOI: 10.37142/2076-2151/2024-1(53)43

Нарижний О. Г. , Тараненко М.Є., Богачьова Т.Б. МЕТОДИКА ТА ДОСЛІДЖЕННЯ ТОЧНОСТІ РОЗРАХУНКУ МАТЕМАТИЧНОЇ МОДЕЛІ ЕЛЕКТРОГІДРАВЛІЧНОГО ЕФЕКТУ Відкриті інформаційні та комп'ютерні інтегровані технології : збірник наукових праць. – Х. : Нац аерокосм. ун-т «ХАІ». Вип.. 100, 2024.с. 35-57. DOI: [10.32620/oikit.2024.100.03](https://doi.org/10.32620/oikit.2024.100.03). ISSN 2663-2411

Taranenko M., Naryzhniy O. Modelling the Process of Interaction of a Pulsed Jet with a Workpiece by Electrohydraulic Forming Integrated Computer Technologies in Mechanical Engineering – 2021, M. Nechyporuk et al. (Eds.): ICTM 2021, M. Nechyporuk et al. (Eds.): ICTM 2021, LNNS 367, – p. 484–496. [https://doi.org/10.1007/978-3-030-94259-5\\_41](https://doi.org/10.1007/978-3-030-94259-5_41), 2022.

M.Taranenko, O. Naryzhniy, A. Symonova, D. Moloshtan, V. Drahobetskyi, S. Shlyk - Energy-flow control in liquid at electro-hydraulic forming.– Прикладна механіка, Вісник КрНУ ім.. М. Остроградського (Кременчук), вип.. 6/2022 (137), с. 63-72. <https://doi.org/10.32782/1995-0519.2022.67>

**Books, Chapters in Collective Monographs:**

М.Є. Тараненко, О.Г. Нарижний, Т.Б. Богачьова ЕЛЕКТРОГІДРАВЛІЧНЕ ДЕФОРМУВАННЯ МЕТАЛІВ: МОДЕЛЮВАННЯ КЕРОВАНОВОГО НАВАНТАЖЕННЯ, ДОСВІД ВПРОВАДЖЕННЯ ТЕХПРОЦЕСІВ Монографія Харків : ТОВ «ДІСА ПЛЮС», 2025. – 156 с. ISBN 978-617-8688-46-2

**Links to Citation Database Profiles:**

<https://scholar.google.com.ua/citations?user=iUhqeTMAAAAJ&hl?> SCOPUS: 55813149500, ORCID ID: 0000-0002-5379-1964

**ADDITIONAL INFORMATION:****Language Proficiency:**

Ukrainian, English

**IT Skills:**

Microsoft Office, MathCAD, LS-DYNA

