



**National Technical University  
“Kharkiv Polytechnic Institute”**

**Department of Continuum Mechanics  
and Strength of Materials**

**WE OFFER:**

**Bachelor (4 years) and Master (6 years)  
programmes in**

**COMPUTER SCIENCE**

**with specialization**

**“COMPUTER MODELLING OF THERMAL  
AND MECHANICAL PROCESSES”**

**in cooperation with the**

**A.N. Podgorny Institute for Mechanical  
Engineering Problems NAS Ukraine**



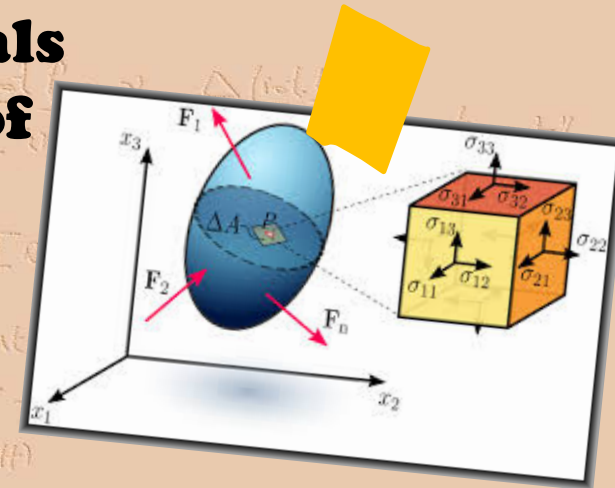
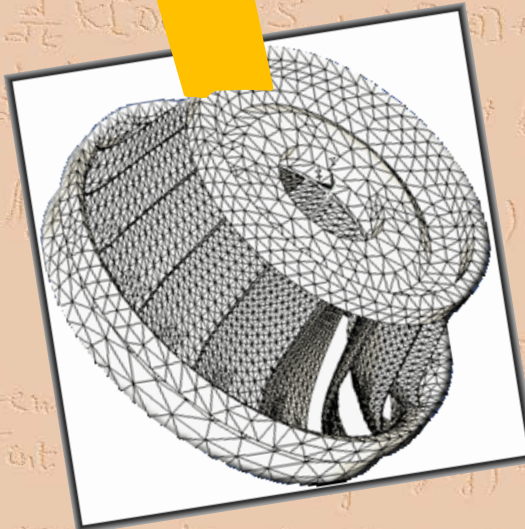


# National Technical University "Kharkiv Polytechnic Institute"

## Department of Continuum Mechanics and Strength of Materials

### AREAS OF STUDYING:

- **Mathematical fundamentals of continuum mechanics of solids, liquids and gas**



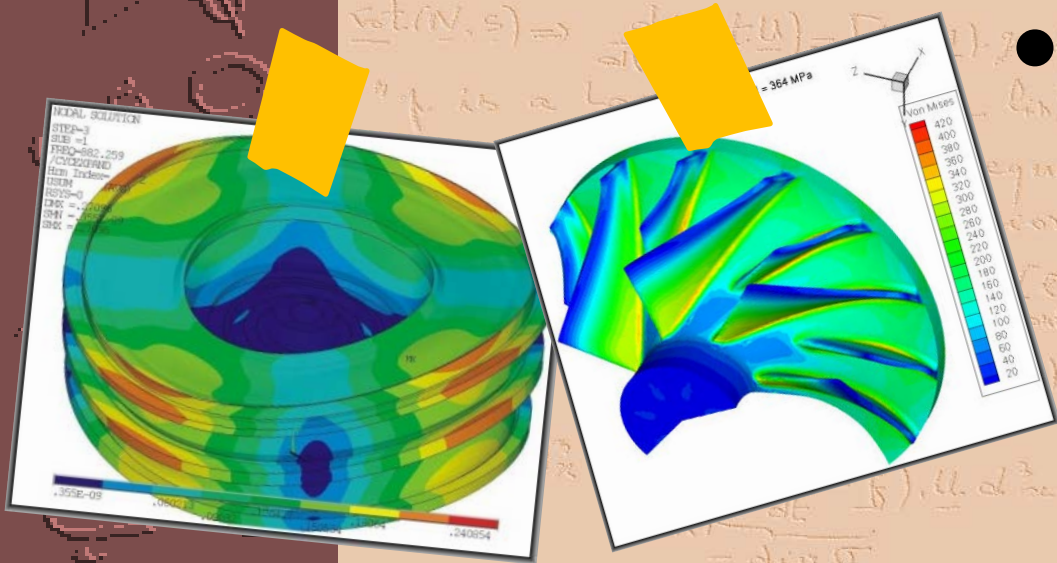
- **Numerical methods in engineering applications of continuum mechanics**



# National Technical University "Kharkiv Polytechnic Institute"

## Department of Continuum Mechanics and Strength of Materials

### AREAS OF STUDYING:



- **Strength and reliability of structures under various loading and solid to liquid interactions**

- **Structural dynamics and vibrations**

- **Thermodynamics and heat transfer**

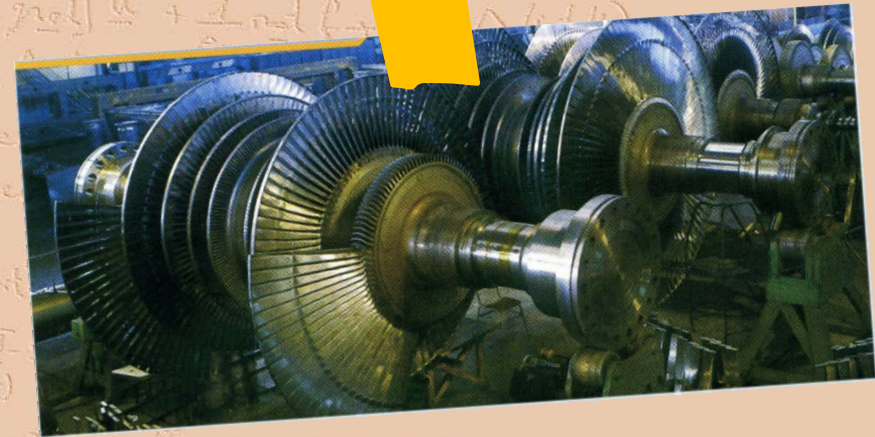
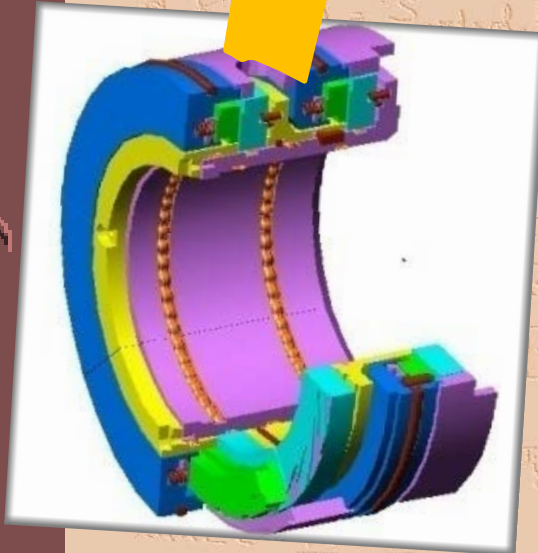


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## Department of Continuum Mechanics and Strength of Materials

### AREAS OF STUDYING:

- **Machine design and prototyping**



- **Computer programming, computer aided design and engineering of structures**

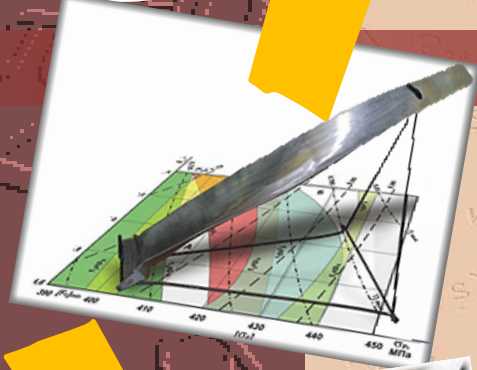


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## Department of Continuum Mechanics and Strength of Materials

### EMPLOYMENT PERSPECTIVES:

- **Industry: design, analysis, testing and expertise of structures, machines and equipment**
- **Research: post-graduate programmes, work in the scientific and academic communities of mechanical engineers, engineering consulting**
- **IT: development, testing and maintenance of both field-specific (CAD, CAE) and non-specific software and IT-environments**





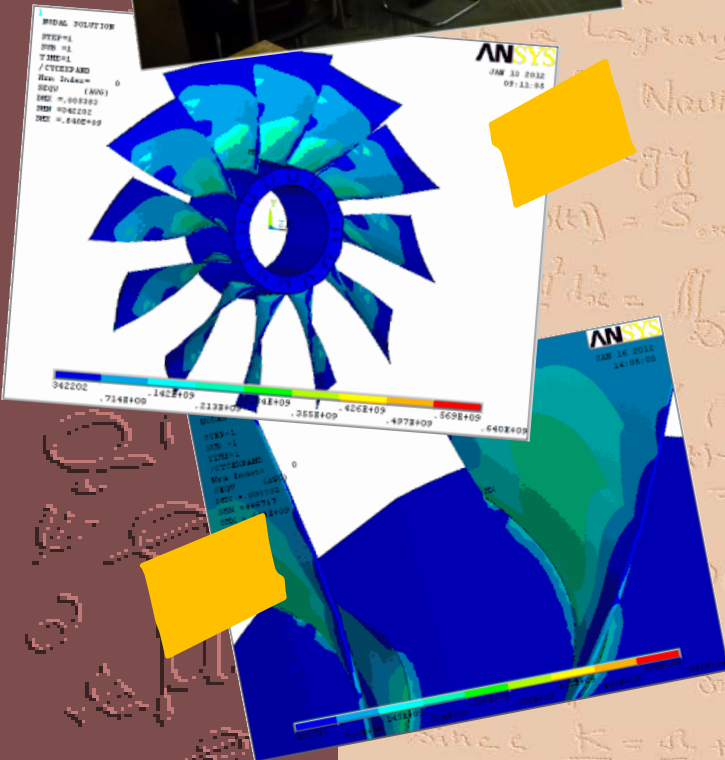
# National Technical University “Kharkiv Polytechnic Institute”

## Department of Continuum Mechanics and Strength of Materials



### SPECIAL ACADEMIC COURSES AT THE BACHELOR LEVEL:

- Special issues of continuum mechanics of solids
- Numerical methods in mechanics of deformable solids
- Computer programming
- Computer modeling in continuum mechanics



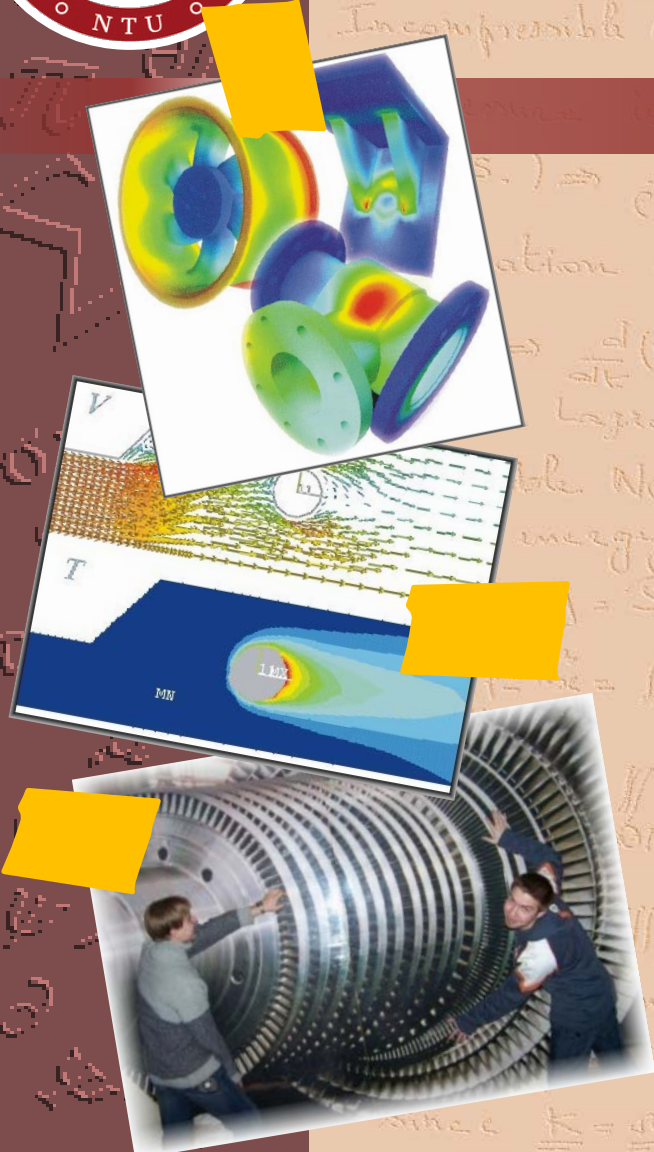


# National Technical University "Kharkiv Polytechnic Institute"

## Department of Continuum Mechanics and Strength of Materials

### SPECIAL ACADEMIC COURSES AT THE BACHELOR LEVEL:

- Theory of vibrations
- Design of power machines and equipment
- Fluid dynamics
- Numerical modeling in fluid dynamics



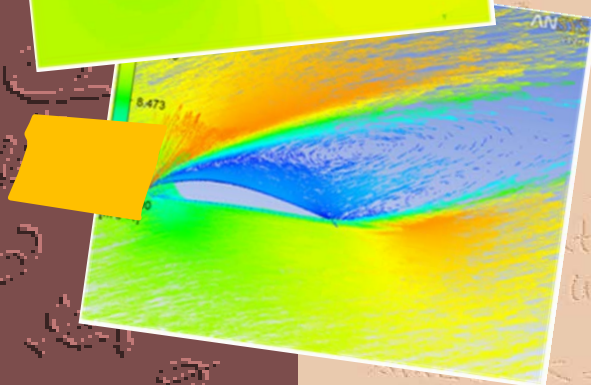
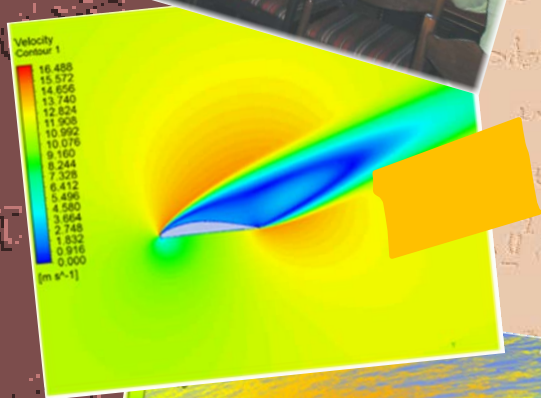


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## SPECIAL ACADEMIC COURSES AT THE MASTER LEVEL:

- **Combustion theory**
- **Mathematical methods of optimal design**
- **Special issues of heat transfer**
- **Multi-phase flow dynamics**







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## **OUR CONTACTS:**

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# National Technical University "Kharkiv Polytechnic Institute"

## Department of Continuum Mechanics and Strength of Materials

**WE ARE LOOKING FORWARD  
TO GREETING YOU  
AT OUR UNIVERSITY!**

