

«MECHANICS» – A NEW INTERNET TUTOR

Dr. Aleksandr Kositsyn

Odessa State Academy of Civil Engineering and architecture, Department of Theoretical Mechanics, Odessa, Ukraine

Summary Website "Mechanics" (URL: www.emomi.com) – is an attempt to create a capacious ducational resource for the Internet on theoretical mechanics with the purpose of helping those interested in learning mechanics, and making it by far more attractive to students. The Site is intended for both students and educators.

In teaching theoretical mechanics there is quite often a gap between learning theoretical models by a student and the comprehension of the possibility of their practical use. To help in learning Mechanics, to show how abstract models work in engineering tasks and to make Mechanics more attractive for students are the basic ideas which were incorporated in the concept of the website "Mechanics" (URL: <http://www.emomi.com>).

The history of engineering knows many cases when mistakes have resulted in serious consequences. The analysis of such incidents from the point of view of mechanics happens rather instructively. The site pages <Situations> and <Practice-theory> are devoted to such analysis. In sections <Training>, <Crossword and Tests> a trainee can get the opportunity to experience on-line control of skills on Mechanics. In <Download> it is possible to find educational and methodical literature on Mechanics. Good help to the student in studying this discipline, and to the educator in organizing classes can be rendered with applets-demonstrations of various mechanical processes. One can expand the outlook, having visited pages <History of engineering> and <News of engineering>.

The architecture of the site allows for participation in its development. Each visitor can offer qualified materials or references to Internet-resources on the page <Our references>, which do not break the concept of the site. Professors, experts and students can take part in the discussion of problems of Mechanics and Education on the page <Forum>.

The site is already rather extensive and is replenished regularly. In <News> it is easy to keep up with the occurrence of new materials and to receive access to them. To navigate around the site one can use the detailed <Site map>.

The realization of <Contests> on Mechanics for students of all rates is being planned in the future. Professors can find for their work examples of the tasks of a number of contests on Theoretical Mechanics. Not only students, but also young educators will find useful materials for their work. Each visitor can leave record in the <Guest book>, and in case of the necessity to contact the authors there is the page <Contacts>.

The biographies of great scientists and inventors, crosswords, literature, bibliography, abstracts, demonstration programs on Mechanics and others can be found on the site «Mechanics». The project gives new opportunities for distant learners to increase the level of their knowledge on Engineering Mechanics. An opportunity of opening a new heading <Improvement of professional skills for engineers> is being considered.

The site «Mechanics» has been available to visitors since July 2003, and is continuing to be developed. Each month we record thousands of visitors from many countries in the world. There are Russian and the initial English versions of the Site now. We believe, that the English version of a site will render help in studying Mechanics for tens of thousands of students annually, allowing distant learning to raise the qualification of future engineers and beginner educators from many countries of the world. Experts could share their experiences in teaching Theoretical/Engineering Mechanics.