

## ABSTRACTS “INNOVATIVE TECHNOLOGY” 2 / 2016

### FIMM – A MULTI- LANGUAGE WEBSITE

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The Faculty of Mechanics and Mechatronics needs to enhance the visibility as an organization on national and international level and to improve communication among the actors involved in the educational and research field. One of the major types of actors are the students. In order to create the new website of the Faculty of Mechanics and Mechatronics, a team of foreign students was formed. With regard to methodology, a CMS was used to design and build a new website. Moreover, the current Romanian website was used as a springboard for the design of the new website and different other famous university websites of were used as models. This has led to uploading information in five different languages (English, French, Romanian, Swedish and Finnish).

### DESIGN AND CONSTRUCTION OF A NEW, ADAPTABLE, TEST BED MOUNTING SYSTEM FOR AN INTERNAL COMBUSTION ENGINE

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The project consists of redesigning the standard internal combustion engine test bed mounting system used in a university setting in order to allow an easier adaptation of different engines to the basic structure. Our work includes measuring the existing mounting system and drawing it in CATIA and perform a static simulation to check the design in terms of mechanical

resistance and bending. The second task consists of making the same task as the first one, but on an industrial test bench in a Dacia factory.

### INTELLIGENT AUTONOMOUS VEHICLE

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The research and development of an intelligent autonomous vehicle, by understanding and integrating different technologies, techniques and principles such as LIDAR, eWheels, navigational computers, battery packs, aerodynamics and design. The concept car created during this project has been designed for cities, but can also be used in other environments. The modular design makes maintenance easier and affordable.

### METHOD AND TEST RIG AIMED TO DEFINE THE DYNAMIC CHARACTERISTICS AT HELICAL GEARS

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This paper presents a method for measurement of dynamic behaviour of gear mesh and the results obtained for a helical gear pair. Two different gear pairs were tested, having different width, loaded with different torque and operating at various speeds. In this situation, torsional oscillations of the system was measured, using the torque interval indication of the torque sensor.

**CONSUMUL SPECIFIC DE ENERGIE ȘI  
PUTEREA NECESARĂ ANTRENĂRII  
MORILOR TUBULARE CU BILE PENTRU  
MĂCINAREA CIMENTULUI /  
SPECIFIC ENERGY CONSUMPTION AND  
POWER REQUIRED TO DRIVE OF BALL  
MILLS FOR GRINDING CEMENT**

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In the present paper are presented various possibilities for evaluating the specific energy consumption of ball mills, which characterizes the grindability of material and mill efficiency.

The specific energy consumption, which depends on the size and hardness of the material fed into the mill and degree fineness of the product, is the basic parameter for technological dimensioning of the ball mills. The paper also presents, various ways of determining the power required to drive the ball mills.

**DIFERITE MODALITĂȚI DE DETERMINARE  
A GRADULUI DE UMPLERE A MORILOR  
TUBULARE CU BILE /  
DIFFERENT WAYS FOR DETERMINING OF  
THE FILLING DEGREE OF THE BALL MILLS**

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In the present paper are presented various possibilities for determining the filling degree with grinding media of ball mills. It also presents the influence of the filling degree and other factors (the speed of the mill and the type of liners) on the behavior of the mill charge, grinding efficiency and performance of ball mills.

**MOTIVATION AND INFLUENCE FACTORS  
FOR SME'S INTERNATIONALIZATION**

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Many firms, however, start international operations when they are still comparatively small and gradually develop their operations abroad. Observations of born global firms breaking with the traditional paradigm of stage-wise internationalization processes led to the emergence of the field of International Entrepreneurship (IE), an intersection between International Business and entrepreneurship.