# ABSTRACTS

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## GEARING WITH VARIABLE GEAR RATIO APPLIED IN MECHANICAL SYSTEMS

(pages 1-5)

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***Keywords:*** gear design, variable gear ratio, FEM, stress
***Abstract:*** The gearing with changing transmission gear ratio is used as synchronization component and for specific parameters. The gearing with changing transmission gear ratio is used in the practice, even though the "standard" gearing with constant transmission gear ratio are used more often. This article describes how to optimize the design of pitch curves of non-circular gear for given parameters. The non-circular gearing is consisting of two identical gear wheels. For a non-standard gearing was applied eccentric elliptical gear drive with continuously changing transmission gear ratio. The kinematic properties of this gearing are different from the properties of standard circular gears – spur gear. Thus, the gear ratio changes over the time of one revolution. The article is devoted to problems determining of the stress in a dangerous section of tooth foot using FEM.

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## THIN CLIENT IN MASSIVE RLS WITH CLOUD APPLICATION

(pages 7-12)

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***Keywords:*** remote laboratories, cloud computing, REMLABNET, thin client, datacentre
***Abstract:*** Many organizations, both large and small, are investigating the potential of thin client architectures for their companies. In general, a thin client is the one which does not have any local storage and we are using this because of their many advantages. Few years ago, we build our own virtualized cloud for REMLABNET and we still are taking benefits of this decision. This item handles with using Cloud computing platform for providing Remote laboratories. This work shows, how it is possible to save money if we use centralized system for more consumers. Every consumer can use access to centralized portal in the Cloud computing from Consortium REMLABNET. Every item is focused on environments of universities, where this cloud is existing, and this is what we want to use for remote labs. This is item from practice knowledge and experiences about system function and managing virtual platform and next construction this proposal.

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# DETERMINATION OF POISSON NUMBER AT THIN ROD-SAMPLES WITH NON-STANDARD CROSS-SECTIONS BY PENDULUM METHODS

(pages 13-17)

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***Keywords:*** Tensile modules, Poisson number, vibration methods, thin samples, non-standard cross-sections
***Abstract:*** The paper describes the measurements of modulus of elasticity of thin samples and related Poisson number by one device – Searle´s pendulum. We have focused our attention mainly to non-traditional samples with non-standard (i.e. other than circular) cross-sections.