# SUMMARIES

**UDC 658.512.011.56**
**COMPUTER AIDED WORKPIECE SELECTION APPROACH FOR TURNING**

*A. Sharmazanashvili, E.Grishikashvili*

Paper interview CA approach for workpiece selection, based on the K.Swift methodology extention. Optimization rools and software tool kit were described.

**UDC 681.784.8**
**PERSONAL EXPERT SYSTEM EXPRESS'99 OF EARLY DIFFERENTIAL DIAGNOSIS ON EXAMPLE OF BOTULISM**

*I.Khmaladze, Z.Tsikhelashvili, D.Garuchava*

The prelim of intelligence concept formation for making up data and knowledge basis of expert system is considered in accordance to the existing (Hunt method and Acad. V.Chavchanidze "conceptual theory"), as well as, to the proposed approaches. In *Express'99* basic approaches of intelligence concept, as well as, a new description of this notion are considered and logic conclusion-making apparatus of the system is made up accordingly *Express'99* is a virtual program-instrumental system (ready program product) which is realised with the help of modern computers. Commercial realisation of this system within Georgian medical institutions, and also, after corresponding modifications, on international level is taken into consideration.

**UDC 681.784.8**
**ON THE PROBLEM OF CONSTRUCTION OF COMPUTER-AIDED EXPERT SYSTEM ES "Leukos" FOR EARLY LEIKOSIS DIAGNOSIS**

*M.Mchedlidze, Z.Tsikhelashvili, D.Garuchava*

ES "Leukos" is constructed according to an abstract model on "KNOW HOW" principle and will be realised on modern computers. The work is differentiated between expert and traditional intelligent information systems and the role of ES "Leukos" as of computer-aided expert system is marked out. The way of information support program solution according to "ES Leukos" casing components (data and knowledge basis, construction peculiarities of logic solution-making apparatus interface)

is given. Abstract model of ES ”Leukos” is formulated using illegible set theory basis, concept theory and neurone nets. The possibility of using the so-called “cognition style” is introduced in design of ES “Leukos” and the peculiarities of its construction and use are determined. ES “Leukos” is constructed as ready program-instrumental product which could be commercially implemented in different level medical emergency computer-aided centres of Georgia and other countries.

**UDC 621.81:539.4**

## ABOUT TWO SYSTEMS OF GUIDING BASIS RIGIDITY CHARACTERISTICS AND THEIR INTERCONNECTION

*G.Shanshiashvili*

The paper presents the analytical substantiation that the recommended model is equivalent to plane joint (conjugated pair of plane basis surface) elastic system, the so-called, theoretical point model. Determined interdependences of rigidity characteristics of the mentioned models are stated and the advantage of methodical character of the recommended model is shown.

**UDC 621.921**

## BUILDING, FACING AND DECORATED NATURAE STONES MACHINING

*A.Siradze*

The technological project of slabs of naturae stones is described in the work; the technical-economical indices of the worked out technology and the researches of stones machining processes are presented.

**UDC 621.921**

## PRODUCTION DIAMOND STOMATOLOG OF BORONS. G.Ò.U. FAC. MECHANICAL ENGINEERING TECHNIQUE

*À. Siradze, D. Malasidze, G. Sologashvili, B. Bacradze.*

In activity the technical process of production of diamond is considered stomatologists of borons, the technological parameters are submitted the designed technological project. The problem of necessity of a personal complete set of diamond is considered stomatologists of borons for each patient kinds and approximate also are adduced quantity.

**UDC 621.914.2**

## THE EFFICIENCY OF FACE MILLING CALIBRATIONOF WOOD PARTICLE BOARDS

*Z.Chitidze, I.Gelashvili, Q.Tkemaladze*

Calibration process of wood particle boards (WPB) is in— vestigated with the help of sharp blade tools.Recommendations for choosing rational tool materials and cutting conditions are presented. The advantage of board sizing with sharp blade tools compared to abrasive ones is shown. The necessity of construction of a new model of milling-and-calibration machine is substantiated.

**UDC 621.914.2**

## EFFICIENCY INCREASE OF WOOD PARTICLE BOARDS DIMENSIONAL MACHINING

*Z. Chitidze*

The attempt of using superhard materials (Elbore-P, carbo-nado, natural diamond) at dimensional machining of wood particle boards is done. The advantage of these materials compared to hard-alloys and abrasive tools is shown. Technical indices for design of new milling'-and-calibration machines is worked out.

**UDC 621.914.2**

## THE EFFICIENCY OF hard-alloy WOOD WORKING TOOLS

*Z.Chitidze*

The efficiency of hard-alloy wood working tool (circular sawa, cutters) operation has been investigated.. The effect of carbide phase and binder material, as well as, wear-resistive coating (titanium nitride - TiN") on tool durability has been. studied.

**UDC 621.9**

## TO THE PROBLEM OF LASER CUTTING PROCESS OF NONMETALLIC MATERIALS

*E. Semiletova, B. Bokolishvili*

The paper is devoted to the problem of laser cutting process of nonmetallic materials as plastics, monoplastics, ceramics, the composite materials created on the basis of boron and carbon. Here is investigated the physician essence of cutting mechanism and determined the specific energy of process.

**UDC 62-50**

## LIGHT INDUSTRY PRODUCTION FORECASTING BY RANK OF LINK

*O.Verulava, M.tabatadze*

In this article is shown fashion's process development and it's description through the view rank of link method. It is customary that the clusters created by rank of link. On the basise of cluster's parameters it is possible elaborate how well the feature set is structured which is obtained by production's trait. There is working out the method of reformation this traits to quantitative parameters depending on there value.

**UDC 62-50**

## THE METHOD OF FINDING CLUSTER'S SURFACE POINTS AND ITS ALGORITHMICALLY ELABORATION

*M.madzagua, L. Verulava*

The finding of cluster's surface points and corresponding algorithm and programmed modulus in multidimensional space are described in this article. The concept of cluster's surface points is worked out through the view of rank of link method. To check the method and programmed modulus were used cluster's of arbitrary shape in two-dimensional space i.e. on the plane. The results which were achieved from the work of programmed modulus especially the fact that finding of the cluster's surface points doesn't depending on the forms of the cluster are shown in this article.

**UDC 62-50**

## CHOOSING THE CODED INFORMATION FOR THE RECOGNITION OF FACES

*K. Kamkamidze, L. Kadagishvili, M. Zakutashvili*

For the Parametres of the Coded Information the Hypothesis were chosen by wich such algorithm of recogniting is very impout and fromthe point of view of using.

**UDC 621.039**

## COMPUTING REPORT OF ENERGY SYSTEMS OPERATIONS BY PERSONAL COMPUTERS

*K. Kamkamidze, L. Viatkina*

It is preferable to use personal computers in solving complex algorithm tasks and computing programms and analyses of static transmit process

in energy systems. Inthis case it will have a great deal of opportunity to collaborate facilities of computer hardware ane regulation systems in real time. It is offered an example which illustrates a report of SAKENERGO operations.

**UDC 621.039**

**THE METHODS FOR CALCULATION OF ESTABLISHED REGIME PARAMETERS OF POWER SYSTEMS**

***N.Turkia,G.Mariamidze***

Two algorithms of the calculation of regime parameters established by power systems is discribed in the work. The former is based on the equations of the main voltages and is intended for the work basically in autonomous regime. The influence of the voltage regulator maintenance on an electric system is foreseen. The other algorythm, using the so-called fast method of finding stream distribution, is intended for the inclusion in the structure of global problems (tasks). Avoidance of iterative process is achieved in it. The article also examines the foresight algorythms of the existance of various voltage stages in an electric system.

**UDC 621.9.06**

**STRUCTURE AND DYNAMICS OF THE NEW MODEL OF THE HUGNG PENDULUM MACHINE-TOOL**

***K.Sulamanidze,T.Mchedlishvili,N.Sulamanidze,G.Nioradze***

**Inthearticlethereisadescriptionofthestructuralschemeofthenew modelofthemachine-tool.Ithasbeenworkedoutadynamicalcalculating schemeandmadeamathematicalmodelofthedynamicsofthe investigatedsystemofvibroprotectionofthemachine-tooloperator puttingintopracticetheprincipleofdynamicalreducementofvibrations.**

**UDC 621.9.06**

**TO SYNTHESIS OF OPERATION SYSTEM OF VESSEL COURSE WITH ELECTRO HYDRAVLIC ACTURATOV OF A RULLER**

***KochviriM.Z.***

**Thediscriptionofoneofvariantsoffunctionalschemeofoperation systemofvesselcourseisgiveninthiswork.Abiggerfunctionalscheme ofviewedsystemsynthesismethodbythegiventransientprocesses.**