FACULTY OF MATERIALS SCIENCE AND TECHNOLOGY
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ANNUAL REPORT 2001

SLOVAK UNIVERSITY OF TECHNOLOGY
BRATISLAVA

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Foreword

The Faculty of Materials Science and Technology (MtF) in Trnava was established on 1 January 1986 by decree of the Czechoslovak Government. It was originally named the Faculty of Machine Technology. However, the history of this Faculty is much older than the date of its establishment shows. Its history is closely connected with the technological branches of machine construction, the foundations of which were laid at the Department of Mechanical and Electrical Engineering in the forties.

In February 1991 the Academic Senate of the Faculty suggested a new name for this institution - the Faculty of Materials Science and Technology - which is its present official name. Faculty of Materials Science and Technology is one of the six faculties of the Slovak University of Technology (STU), the oldest and the largest University of Technology in Slovakia.

In the academic year 2000-2001 the Faculty comprises the following departments:

Department of Applied Mechanics
Department of Engineering Pedagogy and Psychology
Department of Environmental and Safety Engineering
Department of Forming
Department of Foundry
Department of Humane Sciences
Department of Information Technology and Automation
Department of Languages
Department of Machining and Assembly
Department of Management and Quality Engineering
Department of Materials Engineering
Department of Mathematics
Department of Physical Education and Sports
Department of Physics
Department of Technological Devices and Systems
Department of Welding

Detached workplaces in Brezno, Dubnica, Nitra and Komárno

The educational and research activities of the Faculty are aimed at training the experts and solving research tasks in the field of industrial (partially mechanical engineering) production, where issues related to engineering materials, technological processes, production management and quality control, information technologies and automation processes in production plants, together with ecological and humane aspects of production processes are being dealt with.

Following the requirement for diversification of all forms of study and graduate profiles, the Faculty provides Bachelor's degree courses (BSc.), Master's degree courses (MSc.), and postgraduate doctoral (PhD) degree courses. In the academic year 2001/2002 - 3732 students studied at the Faculty in various courses.

As it follows from the results of the successfull accreditation carried out at the Faculty in April 2001, the following majors can be studied within the below mentioned types of accredited courses:

1. Bachelor degree courses (3 years)
Environmental Engineering
Industrial Ecology
Industrial Engineering and Management
Industrial Management

Industrial Technologies
Information Technology and Automation in Industry
Information Technology and Systems
Machine Production Technology
Materials Engineering
Production Quality Engineering
Safety Technology
Technical Materials
Technological Devices and Systems

2. **Master of Science degree courses** (5 years)
Environmental Engineering
Industrial Engineering and Management
Information Technology and Automation in Industry
Machine Production Technology
Materials Engineering
Production Quality Engineering
Safety Technology
Technological Devices and Systems

3. **PhD degree courses** (4 years)
Automation and Control
Materials Engineering and Limiting States of Materials
Machine Technologies and Materials
Production Quality Engineering
Plant Management
Theory of Technical Subjects Training

4. **Complementary Teacher Training** (2 years)
Teaching Technical Subjects

The scientific research of the Faculty of Materials Science and Technology respects the scientific and pedagogic profile of the Faculty and is carried out in the following forms: grant research, institutional research, research within the framework of programmes of international scientific and research co-operation, research within the framework of entrepreneurial Faculty activities.

The basic organisational units promoting the scientific research programme at the Faculty are the departments.

In organising the activities the Faculty builds upon its traditional and long-term relations with foreign partner universities and foreign enterprises. The most important are: Technische Universität Wien Austria, Technische Universität Darmstadt Germany, Technische Universität Cottbus Germany, Fachhochschule Koethen Germany, State University of Technology in Izhevsk Rusia, IFW e.V. Dresden Germany, NIS USA, University of Ljubljana Slovenia, Purdue University Kokomo USA.

International co-operation programmes concentrate especially on co-operation in curriculum development and innovation, professional growth of the Faculty staff and the exchange of students, pedagogic documentation and other information. TEMPUS and CEEPUS (Central European Programme for University Studies) programmes represent a significant form of the updating of our foreign activities.

February 2002

Jozef Sablik, PhD, Professor
Dean of the Faculty

Presidium of the Faculty

Dean:	***Jozef Sablik, PhD, Prof.***
Vice-deans:	Oliver Moravčík, PhD, Prof.
	Milan Turňa, PhD, Prof.
	Jozef Vaský, PhD, Assoc. Prof.
	Alexander Štrpka, PhD, Assoc. Prof.
	Viktor Bajčík, PhD, Assoc. Prof.
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Scientific Board

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Members:

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Jaroslav Šumný, MSc. Eng.
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Branko Katalinic, PhD, Prof.
Miroslava Ožvoldová, PhD, Assoc. Prof.

Academic Senate

Chairman of Senate: Peter Grgač, PhD, Prof.
Chairman of Chamber of Employees: Miroslava Ožvoldová, PhD, Assoc. Prof.
Members:

Viktor Bajčík, PhD, Assoc. Prof.
Karol Balog, PhD, Prof.
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Peter Kotras, PhD, Assoc. Prof.
Ľubomír Martinec, PhD, Assoc. Prof.
Martin Mišút, PhD, Assoc. Prof.
Jozef Mudrik, PhD, Assoc. Prof.
Kvetoslava Rešetová, MSc.
Anton Pokusa, PhD, Assoc. Prof.
Jarmila Šalgovičová, PhD, Assoc. Prof.
Karol Velíšek, PhD, Assoc. Prof.

Chairman of Chamber of Students: Katarína Martyščáková
Members:

Erika Bábeľová
Marcel Biž
Karol Janás
Martin Kúkeľ
Katarína Martyščáková
Martin Mikuláš
Andrej Potfaj

DEPARTMENT OF APPLIED MECHANICS

Head of the Department
Jozef Mudrik, PhD,Assoc. Prof.

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I. STAFF

Professors:	0	Research Fellows:	0
Assoc. Professors:	4	Technical and Admin. Staff:	3
Senior Lecturers:	13	PhD Students:	5
Lectures:	0		

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- Mechanical laboratory
- Tribological laboratory
- Computational laboratory
- Specialised CAD laboratory
- Manufacturing workshop

II.2 Special Measuring Instruments and Systems

- Experimental stend for testing of mechatronic systems
- Equipment for testing of tribological material properties
- Codes - ANSYS, DYNAST, AutoCAD
- Equipment for noise measurements
- Equipment for strain gauges measurements

III. TEACHING

III.1 Bachelor Study (Bc.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Basics of engineering design	1	2-2	Muráň, Lacko
Mechanics of Solids	3	2-2	Mudrik, Pekárek
Mechanics of Solid	3	3-3	Mudrik, Nad'
Strenght of Materials	3	2-2	Jelemenský
Manipulations with materials	4	0-2	Janský
Manipulations with materials	4	2-1	Janský
Basics of Engineering Design	1	9-9	Muráň
Technical documentation	5	5-10	Jánsky

III.2 Graduate Study (Ing.)

H/W Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Basics of engineering design	8,9	2-1	Muráň, Král
Mechanics of solids	7	3-3	Labašová
Hydro-thermomechanics	5,7	2-2	Taraba,Behúlová,Kraváriková
Thermodynamics	6	2-2	Behúlová
Practice of basics of engineering design	4	0-2	Muráň
Strength of materials	4,8	2-2	Jelemenský, Nánási
Mechanisms and machine parts	5	2-2	Muráň
Computer aided design	6	2-2	Muráň
Theory and technology industry heating	9	2-2	Taraba
Mechanics of technological systems	9	2-2	Mudrik
Mechanics of machines	5	2-2	Mudrik
Fracture mechanics	5	2-1	Jelemenský
Finite element method	6	2-1	Jelemenský
Mechanics of manipulation systems	7	2-2	Mudrik
Tribology	8	2-2	Muráň
Mechatronics	8	2-2	Mudrik
Mechanics of materials	9	1-2	Taraba, Nánási
Mechanics of materials	11	5-9	Taraba, Nánási
Strength of materials	4	10-10	Jelemenský
Mechanics of solids	4	14-12	Pekárek
Hydro-thermomechanics	5	14-4	Taraba
Hydro-thermomechanics	7	10-10	Taraba
Mechanisms and machine parts	7	10-8	Muráň
Thermodynamics	7	10-8	Behúlová
Theory and technology industry heating	11	9-9	Taraba
Mechanics of manipulation systems	8	8-8	Mudrik

IV. RESEARCH TARGETS

- Modelling, analysis, simulation and experimental investigation of machine aggregates as mechatronic systems.
- Investigation of new friction materials with progressive tribological properties.
- Research and application of new approaches in numerical methods - analysis and simulation of technological and industrial processes, static and dynamic analysis of engineering structures.
- Research and development in the field of theoretical and applied mechanics.

V. RESEARCH PROJECTS

V.1 Institutional Projects

- Innovation of experimental equipment-tribotestor to tribological properties measurements of soliding bearings (No.815)
- Numerical prediction of temperature fields, energetic and deformation states and structures in technological process problems (No. 817)

V.2 National Grants (VEGA, KEGA)

- Evolution of microstructure of high alloeyd alloys in rapidly solidification process and in continuing temperature-deformation operations VEGA 1/7339/2000 – participation with Department of Materials Engineering

V.3 International Projects

- „Methods of analysis and synthesis of rotational machine aggregates with gearing„ International grant - Cooperation with foreign partners: IzhGTU Izhevsk, Russia, IMS TU Brno, Czech Republic
  Problems of improvement of gears, being the most widespread, universal and effective means of torque and motion transfer, development of new methods of their research, design and production are one of the urgent problems of mechanical engineering and attract the engineers and researchers attention. The stated activity plan involved sections and stages, oriented to a wide class of gears, in particular:
  - development of numerical methods of gear dynamics and geometry modelling,
  - development of the approach to the item design construction based on the composition - decomposition method,
  - development of testing and measuring equipment, the results adaptation, and other, and also sections, connected with development of the theory of spiroid gears, gear-boxes and motor-gears design, with scientific bases and their design, manufacturing and tests practice.

VI. CO-OPERATION

VI.1 National Co-operation

- Department of Machine Parts, Faculty of Mechanical Engineering, Slovak University of Technology in Bratislava

VI.2 International Co-operation

- Co-operation with foreign partners: IzhGTU Izhevsk, Russia; BAS Sofia, Bulgaria; TU Warsaw, Poland; IM RAS Moscow, Russia; IMS TU Brno, Czech Republic

VI.3 Contracts with Industry

- Co-operation with EBO Jaslovské Bohunice, EMO Mochovce, VUJE Trnava.

VII. THESES AND DISSERTATIONS

Supervisors are written in brackets. All theses and dissertations without notice are written in Slovak language.

VII.1 Graduate Theses

Thermal, stress and strain analysis of form tool of high speed steel. (Taraba)
Corelation of temperature fields of MAG welding determined by numerical solution and experiment. (Kravárikoyá)
Effect of shielding gas on temperature fields of TOO structure – MAG welding (Kravárikoyá)
Numerical simulation of spring heating in the continual furnace with the controlled atmosphere. (Behúlová)

VII.2 Dissertations (Ph.D.)

- Kraváriková Helena: GTAW method – experimental and numerical solution of inverse problem of heat transfer.

VII.3 Habilitations (Assoc. Prof.)

VIII. OTHER ACTIVITIES

VIII.1 Visits of Staff Members to Foreign Institutions

- Mudrik Jozef - Institute of Mechanics, Izh.GTU Izhevsk, Russia
- Mudrik Jozef - TU Varna and IM BAS Sofia, Bulgaria
- Mudrik Jozef – UMT VUT Brno, Czech Republik
- Taraba Bohumil – ZČU Plzeň, Czech Republik

VIII.2 Foreign Visitors to the Department

- Abramov I. V., Prof. DrSc. - Izh.GTU Izhevsk, Russia
- Abramova A.M., MSc. (Eng.) - Izh.GTU Izhevsk, Russia
- Kulemin V.J., Assoc. Prof., PhD. - Izh.GTU Izhevsk, Russia
- Sivcev N.S., Assoc. Prof., PhD. - Izh.GTU Izhevsk, Russia
- Elensky A.V, Assoc. Prof., PhD. - Izh.GTU Izhevsk, Russia
- Efimov V.A., Prof. DrSc. - Izh.GTU Izhevsk, Russia
- Balicky A.J., Assoc. Prof., PhD. - Izh.GTU Izhevsk, Russia
- Turigin J.V., Prof. DrSc. - Izh.GTU Izhevsk, Russia
- Dulotin V.A., Assoc. Prof., PhD. - Izh.GTU Izhevsk, Russia
- Baltov A. - IM BAS Sofia, Bulgaria
- Valeva V. - IM BAS Sofia, Bulgaria

VIII.3 Organised Conferences, Seminars and Workshops

- 1st International Conference on Applied Mathematics and Informatics at Universities 2001 – September 6-7, 2001, Gabčíkovo, (participation),
- CO-MAT-TECH 2001 – International Conference, October 25-26, 2001, Trnava (participation)
- 7th International Conference – Akademická Dubnica 2001, November 28-29, 2001, Dubnica nad Váhom, (participation)

IX. PUBLICATION

BEHULOVÁ, M. – MORAVČÍK, R. – KUSÝ, M. – ČAPLOVIČ, Ľ. – GRGAČ, P. – STANČEK, L.: Influence of atomisation on solidification microstructures in the rapidly solidified powder of the Cr-Mo-V tool steel. In: *Materials Science and Engineering*, A304-306, 2001, pp. 540 – 543.

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MUDRIK Jozef: The effect of stiffness of the speed – torque characteristics of the electric motor upon the vibration of the machine aggregate.In: *Hydraulika a pneumatika*, 3, 2001, č. 2, s. 29 –31.

RIEČIČIAROVA Eva:. The possibilities of geometrical model generation by CAD systems in simulation computational codes.In: *VEDECKÉ PRÁCE Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave*: Research papers Faculty of Materials Science and Technology Slovak University of Technology in Trnava. Bratislava: STU, 2001, zväzok 10, s. 91 – 96.

TARABA Bohumil: The design of a computer simulation model for the thermal and structural analysis by the conventional thermal treatment technology. In: *VEDECKÉ PRÁCE Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave*: Research papers Faculty of Materials Science and Technology Slovak University of Technology in Trnava. Bratislava: STU, 2001, zväzok 10, s. 127 – 134.

PEKÁREK František – PEKÁKOVÁ Ružena : The relation between accelerations and velocities of general body motions in E_3. In: *VEDECKÉ PRÁCE Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave*: Research papers Faculty of Materials Science and Technology Slovak University of Technology in Trnava. Bratislava: STU, 2001, zväzok 11, s. 119 – 124.

TARABA Bohumil – LAŠČEK Milan : Thermal and stress analysisi results of the conventional thermal treated solid punch by the simulation model. In: *VEDECKÉ PRÁCE Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave*: Research papers Faculty of Materials Science and Technology Slovak University of Technology in Trnava. Bratislava: STU, 2001, zväzok 11, s. 161 – 167.

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KRAVÁRIKOVÁ Helena – KOVAČÓCY Pavel: Verification of numerical simulation of the HAZ by experiment. In: Zváranie – Svařování, 50, 2001, č. 11- 12, s. 240 – 244.

NAĎ Milan : The determination of a optimal loss factor of vibrating circular plate with rotational damping edge constraint.In: NOISE AND VIBRATION IN PRACTICE : HLUK A KMITANIE V PRAXI : Proceedings of the 6th International Acoustic Conference : Zborník referátov zo 6.medzinárodného akustického seminára. Bratislava: STU, 2001, s. 11 – 16.

NÁNÁSI Tibor: Nontrivial cases of eigenmode localization. In: *NOISE AND VIBRATION IN PRACTICE : HLUK A KMITANIE V PRAXI : Proceedings of the 6th International Acoustic Conference Zborník referátov zo 6.medzinárodného akustického seminára.* Bratislava: STU, 2001, s.17 – 20.

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KUBLIHA Marián – KVETAN Karol – OŽVOLDOVÁ Miroslava – NAĎ Milan: Determination of Young's modulus by means of connected reverse pendulums.In: *Zborník prednášok zo 7.vedeckej medzinárodnej konferencie AKADEMICKÁ DUBNICA 2001.* Bratislava: STU, 2001, s. 65 – 68.

JELEMENSKÝ Jozef – ĎURIŠ Rastislav: Nonlinear analysis of flange joint.In: *Zborník prednášok zo 7.vedeckej medzinárodnej konferencie AKADEMICKÁ DUBNICA 2001.* Bratislava: STU, 2001, s. 37 – 40.

NAĎ Milan – ĎURIŠ Rastislav : Resonant properties of moving belt in drive systém.In: *Zborník prednášok zo 7.vedeckej medzinárodnej konferencie AKADEMICKÁ DUBNICA 2001.* Bratislava: STU, 2001, s. 77 – 80.

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ĎURIŠ Rastislav – NAĎ Milan: A comparison of numreical and analytical results of buckling of a thin in-plane compressed annular plate.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 239 – 244.

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MUDRIK Jozef – LABAŠOVÁ Eva: Electromechanical properties of separatelly excited direct-current motor.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 318 – 323.

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MUDRIK Jozef – KRÁL Štefan : System dynamic properties analysis of a geared machine aggregate.In: *ICMT'2001: Proceedings of the International Conference on Mechanical Transmissions.* Chongping: China Machine Press, 2001, s. 220 – 224.

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MUDRIK Jozef : Contribution to the analysis and modelling of dynamical properties of drive systems with gears.In: 9th *NATIONAL CONGRESS ON THEORETICAL AND APPLIED MECHANICS.* Varna: Bulgarian Academy of Sciences, 2001, 8 s.

MUDRIK Jozef: Mechatronnyje problemy v dinamike privodov.In: *PROSTRANSTVO ZACEPLENIJ: Sbornik dokladov naučnogo seminara Učebno-naučnogo centra zubčatych peredač i reduktorostrojenija.* Iževsk: Elektrostal', 2001, s. 129 – 136.

MUDRIK Jozef – KRÁL Štefan – TOLNAY Marián : A contribution to dynamics of machine aggregate with gearing.In: *SOVREMENNYJE INFORMACIONNYJE TECHNOLOGII. Problemy issledovanija, projektirovanija i proizvodstva zubčatych peredač.* Iževsk: IGTU, 2001, s. 71 – 78.

ORAVCOVÁ Jarmila – RIEČIČIAROVÁ Eva: Measurement of dynamical characteristics gear mechanisms.In: *STROJNÉ INŽINIERSTVO 2001: Mechanical Engineering 2001. Zborník referátov z medzinárodenj konferencie. Proceedings of presented papers.* Bratislava: STU, 2001, II.časť. s. 501 – 504.

LABAŠOVÁ Eva: The influence of the residual stresses on the crack deflection in the lamellar composites.In: *7.medzinárodná konferencia. 7th international conference TECHNOLÓGIA 2001. Zborník prednášok.* 1. diel. Bratislava: STU, 2001, s. 121 – 124.

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TARABA Bohumil: The air flow direct with the heat transfer –3D application by ANSYS-Flotran CFD.In: *VÝPOČTOVÁ MECHANIKA : Computational mechanics 2001.* Plzeň: Západočeská univerzita, 2001, II.díl, s. 401 – 406.

BAČA Jozef – BAČA Marek – ŽATKOVIČ Juraj – JELEMENSKÝ Jozef : Body motion path optical sensor, PS 282 240. 3. 12. 2001.

DEPARTMENT OF ENGINEERING PEDAGOGY AND PSYCHOLOGY

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I. STAFF

Professors:	2	Research Fellows:	0
Assoc. Professors:	3	Technical and Admin. Staff:	3
Senior Lecturers:	7	PhD Students:	30
Lecturers:	0		

II. EQUIPMENT

II.1 Teaching and Research Laboratories

II.2 Special Measuring Instruments and Systems

III. TEACHING

III.1 Bachelor Study (Bc.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Industrial Psychology	1	0-2	Schuller
Communication in Management	8	0-2	Chmelárová

III.2 Graduate Study (Ing.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Psychology in Management	9	0-2	Kováč
Leadership	7	2-2	Schuller
Industrial Psychology	5	0-2	Schuller

IV. RESEARCH TARGETS

V. RESEARCH PROJECTS

V.1 EDUCATION AND RESEARCH PROJECTS

- Education and Training of Engineering Graduates in the Third Millennium. *Grant task VEGA, 770 (1/6186/99).* The aim of the research is to investigate the ways of reshaping the system of education and training of engineering graduates so that they are able to meet the requirements for graduates qualification in the field of intellectually demanding technologies, regarding the pass to information society.
- Pedagogical Study of Tertiary Education Teachers. *Grant G/600/2000.* It is being widely recognized that to ensure continuous increase in a level of higher education in

Slovakia, there is a need for consistent innovation of the contents of education at all faculties and in all specializations with future prospects. However, this is likely to be determined by implementation of progressive organisation forms of education, such as module and distance units.In the case of Pedagogical Study for Higher Education Teachers, the need to shift towards partly distance type of learning is driven by the fact that the curriculum of this study consists in 12 different subjects amounting to 204 lectures.The aim of the present project is, therefore, to convert two main subjects of the Pedagogical Study for Higher Education teachers, in particular Engineering Pedagogy and Psychology, into a module and distance on-line form of instruction.

- Designing the Model of the STU Staff Teacher Training. *Grant KEGA*. The aim of the grant task is making needs analysis of the University staff and its official representatives in-service teacher training, getting their attitudes and opinions on this type of training, and consequently creating the teacher training model based on the needs analysis.
- Slovak Educational System on the Way to European Union. Faculty research, 519
- Projecting Multimedia Applications. Faculty research, 820
- Didactic Parameters of Hypertextual and Multimedia Applications. Faculty research, 810
- Evaluation of Study at MtF STU. Faculty research.

VI. COOPERATION

- Beloruskij Politechnitcheskij Institute, Minsk
- Technische Universität, Dresden
- Muszaki Egyetem, Budapest
- Politechnika Slonska, Gliwice
- Universität für Bildungswissenschaften, Klagenfurt
- Technische Universität, Wien
- Technische Universität, Darmstadt
- Technische Hochschule, Hannover
- Technische Hochschule, Zürich

VII. THESES

Supervisors are written in brackets. All theses and dissertations without notice are written in Slovak language.

VII.1 Graduate Theses

VII.2 Dissertations (Ph.D.)

- Titková,A.: Didactic transformation of aplication software in the subject Informatics at secondary elektrotechnical schools..
- Jamrichová,Z.: The didactics transformation of cad system in subject Engineering bases.

VII.3 Habilitations (Assoc. Prof.)

VIII. OTHER ACTIVITIES

VIII.1 Complementary Pedagogical Study - four-semester, daily:

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Pedagogy I	1	2,3-0	Budinec, Kostelník
Psychology I	1	2,3-0	Borošová, Bustinová
School Youth Biology	1	1,53-0	Broniš
History of Engineering	1	1,53-0	Hambalík
Pedagogy II	2	1,4-0,92	Budinec, Kostelník
Psychology II	2	1,4-0,92	Borošová, Bustinová
Didactics of Special Technical Subjects I	2	1,4-0,92	Vašková, Hrmo, Kundrátová, Tináková, Koláriková
Didactics of Special Technical Subjects II	3	2,3-0	Vašková, Hrmo, Kundrátová, Tináková, Koláriková
Adult Education	3	1,53-0	Kostelník
Basics of Legal Education	3	1,53-0	Kopšová
Mental Hygiene	3	1,53-0	Bajčík
Didactic Techniques	3	1,53-0	Hambalík
Seminar on Pedagogical Practice	4	0-1,53	Vašková, Hrmo, Kundrátová, Tináková, Koláriková
Pedagogical Practice	4	0-3,1	Vašková, Hrmo, Kundrátová, Hambalík, Tináková, Koláriková

VIII.2 Graduation Exam Subjects

- Pedagogy
- Didactics
- Psychology

In 2001 the Department also delivered the following courses:

- Complementary Pedagogical Study (part-time) - three-semester / 300 hrs *Note:* Both types of the Complementary Teacher Training are accredited by the European Monitoring Committee of the International Society of Engineering Pedagogy (IGIP) for an 'ING.PAED-IGIP' degree standards.
- Pedagogical Study for Higher Education Teachers - in compliance with the European standards - 204 hrs.
- The Second Qualification Exam for the High School Pedagogical Workers with at least 10-year Experience - 30 hrs and defence of final work.

IX. PUBLICATIONS

KUNDRÁTOVÁ Mariana – TUREK Ivan: The chaptrs from Engineering Pedagogy: Teaching aims. Bratislava: STU, 2001. 95 s.

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KUNDRÁTOVÁ Mariana: Pedagogical training for university teachers at the Slovak University of Technology in Bratislava. In: *IGIP Report*, 28, 2001, s. 26 – 27.

TUREK Ivan: Pre-gradual education of Collage teachers in Slovakia: 1st part: The present state of pre-gradual education of teachers in Slovakia In: *Technológia vzdelávania*, 9, 2001, č. 5, s. 2– 7.

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DEPARTMENT OF ENVIRONMENTAL AND SAFETY ENGINEERING

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I. STAFF

Professors:	4	Research Fellows:	2
Assoc. Professors:	3	Technical and Admin. Staff:	2
Senior Lecturers:	5	PhD Students:	0
Lecturers:	1		

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- Teaching laboratory for chemistry
- Laboratory of flammability testing

II.2 Special Measuring Instruments and Systems

- Polaro ECOR 626 Metrohm Ltd Swiss DC polarography/voltammetry DP polarography /voltammetry
- PHOTOMETER SQ 118 Merck Germany
- HPLC Hitachi system Hitachi Belgium

III. TEACHING

III.1 Bachelor Study (Bc.)

H/W: Hours per Week L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Chemistry	1	2-1	Škárka, Fendrich
Industrial Technologies and Production Equipments	1	3-2	Monček
Work Safety	2	1-1	Sabo
Chemsitry II	4	2-4	Fendrich
Industrial Technologies and Environment	4	3-2	Murgaš, Šilhár
Monitoring of Environment	4	2-2	Kočan
Risk Judgement	4	2-2	Sabo
Safety Systems	4	2-2	Boleman
Protection of Radiation	4	2-2	Kováč
Technology for Waste Treatment	5	3-1	Lacuška
Environmental Management I., II.	5, 6	2-1	Rusko
Remediation of Ecosystems	5	2-2	Longauer, Rusko
Water Protections	5	2-2	Soldán
Reliability of Technical Systems	5	2-0	Sabo
Environmental Chemistry	5	2-0	Fendrich
Environmental Law	5	2-1	Cáliková
Bachelor Project	5	0-2	Sabo
Energy of Environment	6	2-2	Wittlinger
Data processing	6	2-2	Žatkovič
Dangerous Materials	6	2-2	Póor
Non-metallic Materials	6	2-1	Martinec

III.2 Graduate Study (Ing.)

H/W: Hours per Week L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Basics of Environmentalistics	5	2-2	Tureková
Basics of Biological Systems	5	2-2	Škárka
Environmental Physics	6	22	Kováč
Environmental Chemistry	7	2-2	Fendrich
Machine Technology and Environment	7	2-1	Murgaš
Environmental Management I	7	2-1	Polívka
Environmental Engineering	7	2-2	Hostin
Structure and Date and Database Systems	7	2-2	Tanuška
Energy and Materials Transport	7	2-2	Wittlinger
Reliability of Technical systems	7	2-1	Sabo
Biotechnologies and Environment	8	2-1	Polívka
Industrial Toxicology	8	2-2	Poór
Environmental Engineering II	8	2-2	Tureková, Kočan
Environmental Management II	8	2-1	Polívka
Chemical technologies and Environment	8	2-1	Škárka
Working Environment in Industry	8	2-1	Sabo
Risk Judgement	8	2-1	Sabo
Fire Engineering	8	3-0	Balog
Environmentalistics	8	1-1	Polívka, Tureková
Waste Economy Technologies	9	2-2	Lacuška
Environmental Informatics	9	2-3	Balog
Remediation of Ecosystems	9	2-2	Longauer, Rusko
Environmental Engineering III.	9	2-2	Lehotay
Environmental Law	9	2-1	Čáliková
Final Project	9	0-5	Polívka, Balog
Safety of Chemical Compounds and Matters	9	2-3	Poór

IV. RESEARCH TARGETS

- Problem of wastes of cutting fluids, cooling emulsion their life cycle prolongation, changes of composition during microbial contamination
- Potential decomposition of grinding, brushing sludge and utilisation of metal parts
- Engineering analysis of industrial fire hazard, dangerous wastes, hazardous substances
- Halons alternatives

V. EDUCATION and RESEARCH PROJECTS

V.1 Institutional Projects

- Database of dangerous and unhealthy materials. No. 826.
- The waste production analysis, information systém for waste management at MtF STU. No.829.
- Contract N.68/99 : Exaction of safe disposal with halons and alternative of halon´s alternative.

V.2 National Grants (VEGA, KEGA)

- New generation of cooling and luricant fluids for machining.

V.3 International Projects

- Selection of Environmentally Friendly Gaseous Extinguishing Substances.
- Occupational Safety and Health Systems in the European Union.
-

VI. CO-OPERATION

VI.1 National Co-operation

- Technical University Košice
- Technical University Zvolen
- Fire Research Institute Bratislava
- Ministry of the Environment of Slovak Republic
- Slovak Environment Agency, Center of Waste Management, Bratislava
- Regional Training Center for Implementation of the Basel Convention, Bratislava
- Research Institute of Safety on Workplace, Bratislava
- Ministry of Labour, Social Affairs and Family of the Slovak Republic
- The National Labour Inspectorate
- The Slovak Association of Fire Protection Development

VI.2 International Co-operation

- VŠB - Technical University of Ostrava, Department of Fire Protection Engineering and Industrial Safety, Czech Republic.
- Technical Institute of Fire Protection, Prague.
- University Pardubice, Department of Theory and Technology of Explosives.

VI.3 Contracts with Industry

- Nuclear power plants Jaslovské Bohunice (The danger and threat analysis).
- Nuclear power plants Jaslovské Bohunice (The programme of environmental education in nuclear power plant Jaslovské Bohunice).
- Swedword Ltd, Malacky (Fire risk identification of selected workplace).

VII. THESES AND DISSERTATIONS

Supervisors are written in brackets. All theses and dissertations without notice are written in Slovak language.

VII.1 Graduate Theses

BAČOVÁ Jana: Ecological methods for the cleaning surfaces of freight containers. (Karol Balog)
BELKOVÁ Viera: Verification of catalysts efficiency after recycling. (Emil Fendrich)
ČAMBÁL Peter: The comparison of influence of EBO and ENO power plant's on environment and health condition of population. (Branislav Mihály)
ČIČMANEC Anton: The influence of oxygen concentration on smoldering combustion of wood sawdust. (Karol Balog)

ČUPAJ Jozef: The solution of the problems concerning purifying of waste water in S - ČOV Žilina. (Maroš Soldán)
DUDA Marcel: Oxidation by ozone using manganese dioxide catalyst.(Emil Fendrich)
DROZDOVÁ Adriana: Model project for separate scrap collecting in Trnava. (Emília Čáliková)
FRANKOVÁ Gabriela: Project of operating instruction for solid communal waste in Hontianske Tesáre. (Oleg Leontiev)
FILINOVA Nadežda: Influence of innovation on decreasing of emission charging environment CEMMAC a.s. Horne Srnie.(P. Martauz)
GLEMBEK Radoslav: Preaudit analysis application EMS in ESSEL a.s. Slovenská Ľupča. (Ľudovít Polívka)
HERICH Milan: Identification of risk factors by welding . (Milan Sabo)
HIPSOVÁ Valéria: Influence of form mixture on the compost's microorganisms. (Peter Pástor)
KRIŠKOVÁ Eva: Influence of form mixture on the ground microorganisms. (Bohumil Škárka)
KRNÁČ Jaroslav: Valuation of effectivity in waste waters cleaning in ČOV Levice. (Maroš Soldán)
KUCHÁROVÁ Daniela: Choice and modification of the catalysts for pollutants oxidation in waste water. (Emil Fendrich)
LACKOVÁ Silvia: Monitoring of pollution in the surrounding of SLOVNAFT. (V.Harč)
MORAVCOVÁ Anna: Analysis of risks in semiconductors production in Slovakia Electronics Industries a.s. (Ľudovít Tibenský)
MIKULÁŠOVA Lae: Monitoring of waste waters in the dairy of Senická mliekareň a.s.(Emília Čáliková)
STRAKULA Slavomír: Management of economic activities in PIENAP and its protected area. (Štefan Danko)
SIROTA Ján: Catalytic properties of ferric oxide. (Emil Fendrich)
ŠALATA Stanislav: The characteristic of surface waters of the protected area Upper Orava. (Róbert Trnka)
ŠUPA Juraj: Factors of acrobic mud in washing from settling tank. (Ivana Tureková)
VLČKOVÁ Zuzana: Characteristic waste waters resulted from processes of enhancing surface treatment of metals in SACHS s.r.o.(Emília Čáliková)

VII.2 Bachelor Theses:

BARTEK Alojz: Plastics and environment. (Ľubomír Martinec.)
CSJERNYIK Ján: Analyze risks in producing ships. (Ondrej Hano)
FÁBER Marcel: Work safety analysis in sanitation of crude oil accident. (Maroš Soldán)
GOLIS Jozef: The population protection in the case of dangerous material spill in AQUACHEMA Žilina (Pavel Košinár)
GRÓFOVÁ Emília: Safety and thermoisolative polycarbonate glass. (Maroš Soldán)
HALOVÁ Edita: Danger identification of falls from communication systems in Slovak telecommunications. (Ľubomír Brzáč)
HAMM Bedřich: Environmentally friendly extinguishing materials. (Ivana Tureková)
HROMADOVÁ Anna: Responsibility for damages by industrial accidents and occupation diseases. (Soňa Oslanská)
CHVÁLNA Božena: The influence of risk factors on human body in work environment. (Karol Balog)
ILIŤ Boris: Security of technical and fire - technical requirements in Slovak railways. (Ján Kandráč)
ÍRÓ Michal: Requirements for electrical equipment's security (STN 34 3100). (Juraj Lipták)
JACKULÍK Peter: Work environment in metallurgic production of ferroalloys. (Anton Povalač)
JASENICKÝ Štefan: Organization and management of work safety in division of railway vehicles. (Jozef Koreň)
JAKUBEC Štefan: Dangerous materials transport railway station equipment. (Ivana Tureková)
JASTRABÍKOVÁ Karolína: The model project of work safety in ASA Slovakia. (Ľudovít Polívka)
KUBALA Marian: Work and rest time in transport. (Milan Sabo)
KUDLÁČ Juraj: Safety and environmental demands for combined transport. (Miroslav Horečný)
NAGY Marcel: The safety requirement to the working of the reserved source of electrical energy - agregat. (Milan Sabo)
RAČKO Tibor: Hazardous substances. (Dušan Skarba)
REISINGER Miloslav: Safety demands for dangerous materials transport. (Róbert Poór)
SABO Marcel: Waste waters production and treatment in CHEMOLAK Smolenice. (Róbert Bachratý)
SOBOTOVÁ Beáta: Work safety organization Slovak Gas Industry Bratislava. (Helena Rybnikárová)
STAVNIKOVIČ Ján: Risk analysis in boiler plant of heat power plant Vojany. (Jozef Bačani)
SZABÓ Vendel: The model project of HACCP in area canteen. (Ľudovít Polívka.)
ŠELLENG Eduard: The work safety audit in selected working division in CHEMOSVIT Svit. (Jozef Rajzinger)
ŠIMONČIČ Jozef: Analysis of safety legislative in Slovakia and implementation of safety regulations valid in EU. (Karol Balog)

TURCOVSKÝ Ladislav: Risk management in CHEMES a.s. Humenné. (Vasil Lauruský)
WEISS Peter: Risk analysis in polyethylene transparent films production in CHEMOSVIT Svit. (Milan Oravec)

VII.2 Dissertations (Ph.D.)

VII.3 Habilitations (Assoc. Prof.)

VIII. OTHER ACTIVITIES

VIII.1 Visits of Staff Members to Foreign Institutions

- Technical Institute of Fire Protection, Prague.
- Department of Safety Engineering, Technical University Ostrava.
- Department of Fire Protection, Technical University Budapest.
- Department of Theory and technology of Explosives, University Pardubice.

VIII.2 Foreign Visitors to the Department

- Technical Institute of Fire Protection, Prague.
- Department of Safety Engineering, Technical University Ostrava.
- Faculty of Forestry, Czech University of Agriculture Prague
- Department of work research, Brandengurg Technical University Cottbus

VIII.3 Organised Conferences, Seminars and Workshops

IX. PUBLICATIONS

ŠKÁRKA Bohumil – BALOG Karol – POLÍVKA Ľudovít – LUKÁČOVÁ Viera – FENDRICH Emil: Chemistry. Bratislava: STU, 2001. 162 s. + 11 príl.

ŠKÁRKA Bohumil – POLÍVKA Ľudovít: Basics of biological systems. Bratislava: STU, 2001. 134 s.

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FENDRICH Emil – LUKÁČOVÁ Viera – ŠKÁRKA Bohumil: Chemistry. Exercises, examples and directions for partices. Bratislava: STU, 2001. 95 s.

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FENDRICH Emil – BELKOVÁ Viera – KUCHÁROVÁ Daniela – POLÍVKA Ľudovít: Catalyc oxidation of waters using hydrogen peroxide and ozon. In: *VEDECKÉ PRÁCE Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave*: Research papers Faculty of Materials Science and Technology Slovak University of Technology in Trnava. Bratislava: STU, 2001, zväzok 11, s. 29 – 33.

FENDRICH Emil – DUDA Marcel – SIROTA Ján – ČAPLOVIČ Ľubomír: Catalytic oxidation of waste water by airoxygen. In: *VEDECKÉ PRÁCE Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave*: Research papers Faculty of Materials Science and Technology Slovak University of Technology in Trnava. Bratislava: STU, 2001, zväzok 11, s. 35 – 38.

PÁSTOR Peter – LONGAUER Štefan – RUŽIČKOVÁ Anna : Influence of water ozonization on bacteria surviving. In: *VEDECKÉ PRÁCE Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave*: Research papers Faculty of Materials Science and Technology Slovak University of Technology in Trnava. Bratislava: STU, 2001, zväzok 11, s. 115 – 118.

TUREKOVÁ Ivana – BALOG Karol: Flame ignition parameters of plyethylene and activation energy of initiation of combustion proces. In: *VEDECKÉ PRÁCE Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave*: Research papers Faculty of Materials Science and Technology Slovak University of Technology in Trnava. Bratislava: STU, 2001, zväzok 11, s. 181 – 186.

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SOLDAN Maroš – TUREKOVÁ Ivana : New halon alternative. Hasiaca látka FE-36, HFC-236fa: Hexafluórpropán. In: Arpos, 2, 2001, č. 1, s. 8.

TUREKOVÁ Ivana – RAČKO Tibor : Confinement of halons use in new objects and devices. In: Arpos, 2, 2001, č. 3-4, s. 48 – 51.

ORAVEC, M. – BALOG Karol.: The HAZOP method. In: Arpos, 2, 2001, č. 1, s. 1.

SABO Milan: Possibility of safety risks identification in business enterprises. In: Spravodajca požiarnej ochrany – Teória a prax, 32, 2001, č. 3, s. 8 – 12.

FENDRICH Emil – POLÍVKA Ľudovít : The exploitation of ozon for decontamination of organic polutants in waste waters.In: *Medzinárodná konferencia Technika ochrany prostredia TOP 2001 : Zborník*. Bratislava: STU, 2001, s. 227 – 231.

BALOG Karol : Management and techniques of risk analysis in industrial activities..In: *Zborník z 5.medzinárodného sympózia konaného dňa 10. 10. 2001 v rámci medzinárodného veltrhu SECURITY 2001*. Bratislava: Akadémia Policajného zboru, 2001, s. 15 – 26.

BELKOVÁ Viera – KUCHÁROVÁ Daniela – FENDRICH Emil: Oxidation of contaminated waste using ozon and air oygen..In: *Zborník prednášok z 9.konferencie so zahraničnou účasťou EKOTECH 2001*. Bratislava: DT ZSVTS, 2001, s. 74 – 78.

POLÍVKA Ľudovít – ŠKÁRKA Bohumil: Biological systems in remediation technologies.In: *Zborník prednášok z 9.konferencie so zahraničnou účasťou EKOTECH 2001*. Bratislava: DT ZSVTS, 2001, s. 122 – 128.

JANČOVIČOVÁ, V. – SOLDÁN, M. – FEDÁK, J.: Factors influencing curing process of commercial UV varnishes.In: *Seminár POLYGRAFIA ACADEMICA*. Bratislava: STU, 2001, s. 246 – 250.

BLAŽKOVÁ, A. – REHÁKOVÁ, M. – SOLDÁN, M. – DVONKA, V.: UV cured compositions – preparation and properties. In: *Seminár POLYGRAFIA ACADEMICA*. Bratislava: STU, 2001, s. 262 – 266.

SOLDÁN, M. – REHÁKOVÁ, M. – DVONKA, V. – FEDÁK, J.: The influence of initiator concentration and light intensity on radical photopolymerization of some acrylated monomers monitored by RTIR.In: *Seminár POLYGRAFIA ACADEMICA*. Bratislava: STU, 2001, s. 267 – 271.

SOLDÁNOVÁ Zuzana: Manipulation with hazardous substances.In: *Zborník prednášok zo 7.vedeckej medzinárodnej konferencie AKADEMICKÁ DUBNICA 2001*. Bratislava: STU, 2001, s. 239 –242.

SABO Milan : Risk management of enterpriese.In: *Zborník prednášok zo 7.vedeckej medzinárodnej konferencie AKADEMICKÁ DUBNICA 2001*. Bratislava: STU, 2001, s.379 – 384.

BALOG Karol – TUREKOVÁ Ivana – SLOŠIARIK Ján: Effect of oxygen concentration on the propagation of smouldering combustion of wood sawdust.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 211 – 216.

DUDA Marcel – ŠIROTA Ján – FENDRICH Emil: Efficiency of catalytic ozonization.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 235 – 238.

KRIŠKOVÁ Eva – ŠKÁRKA Bohumil – POLÍVKA Ľudovít: Used casts as a potential source of danger for soil microorganisms.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 285 – 287.

LONGAUER Štefan – PÁSTOR Peter - POLÍVKA Ľudovít: The survey of contemporary applicated remediation technologies.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 298 – 301.

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PÁSTOR Peter - POLÍVKA Ľudovít: Microbial consortium for remediation technologies.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 330 – 333.

POLÍVKA - Ľudovítm - ŠKÁRKA Bohumil: New strategy for bioremediations.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 334 – 340.

SABO Milan: Die Applizierung das Sicherheitssystem im Management der Arbeitgeber: Application Safetysystem in Management Employer's.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 346 – 351.

SOLDÁN Maroš – ČUPAJ Jozef: The efficiency of phosphorus and nitrogen elimination from waste waters.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 368 – 372.

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WITTLINGER Viktor: Der Energieverbrauch als Entwicklungsanzeiger.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 428 – 432.

TUREKOVÁ Ivana – BALOG Karol: Elimination of halons from using as an contribution to the protection of the Earth's Ozone Layer.In: *Zborník príspevkov z medzinárodnej vedeckej konferencie GLOBALIZÁCIA A JEJ SOCIÁLNO-EKONOMICKÉ DOSLEDKY.* Žilina: ŽU, 2001, s. 245 – 250.

BALOG Karol – TUREKOVÁ Ivana : Strategy of halons management in Slovak Republic.In: *21th International Symposium INDUSTRIAL TOXICOLOGY '2001. Proceedings.* Bratislava: Slov.spol.priemysel.chémie ZSVTS, 2001, s. 119 – 124.

WITTLINGER, V.: The solution of complex engineering models.In: *SCHOLA 2001: 4.medzinárodná vedecká konferencia KIPP : Multimédiá v pedagogickom vzdelávaní.* Bratislava: STU, 2001, s. 355 – 358.

SABO Milan: Safety – important parameter of product quality.In: *TRENDY LESNÍCKEJ, DREVÁRSKEJ A ENVIRONMENTÁLNEJ TECHNIKY A JEJ APLIKÁCIE VO VÝROBNOM PROCESE. Medzinárodná vedecká konferencia. Sekcia č. 3. Trends of wood working, forest and environmental technology development and their applications in manufacturing process. Inter. Science Conference. Section 3.* Zvolen: TU, 2001, s. 169 – 177.

BALOG Karol – SABO Milan: The risk factors in welding.In: *Sborník přednášek BEZPEČNOST A OCHRANA ZDRAVÍ PŘI PRÁCI 2001 : Mezinárodní symposium.* Ostrava: VŠB-TU, 2001, s. 19 – 30.

KAPUSTOVÁ Mária – BALOG Karol – TRUBENOVÁ Jaroslava : Importance of mathematical model for evaluation of greatness of human body's working load in engineering service.In: *Sborník přednášek BEZPEČNOST A OCHRANA ZDRAVÍ PŘI PRÁCI 2001 : Mezinárodní symposium.* Ostrava: VŠB-TU, 2001, s. 101 – 109.

SABO Milan : Safety – important factor of product quality.In: *Sbornik přednášek BEZPEČNOST A OCHRANA ZDRAVÍ PŘI PRÁCI 2001 : Mezinárodní symposium*. Ostrava: VŠB-TU, 2001, s. 205 – 216.

DEPARTMENT OF FORMING

Head of the Department:
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I. STAFF

Professors:	2	Research Fellows:	1
Assoc. Professors:	3	Technical and Admin. Staff:	3
Senior Lecturers:	2	PhD Students:	8
Lecturers:	0		

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- Laboratories of Forming
- Laboratories of Computing Machinery
- Laboratories of High-parametric Forming

II.2 Special Measuring Instruments and Systems

- EU40 and TIRATEST tearing machine
- Hardness tester
- Pendulum impact
- Tool - maker's microscope
- Profile projector

III. TEACHING

III.1 Bachelor Study (BC.)

III.2 Graduate Study (ING.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Technology of Forming	6	2-2	Bača, Kotras
Theory of Forming	7	3-1	Polák
Volume Forming	9	2-2	Bača
Plat Forming	9	2-2	Kotras
Machines and Equipment for Forming	8	2-2	Ulík
Final Project	9	0-5	Kapustová
Technical Preparation for Manufacturing	9	2-2	Polák
Machines for Forming	7	2-2	Ulík
Modelling of Forming Processes	9	2-1	Žatkovič
Safety of Machines and Production Facilities	9	2-1	Kapustová
Automation of Forming	8	2-1	Ulík
Experimental Methods of Forming	7	2-1	Žatkovič
High Parametric Forming	9	2-1	Bača

IV. RESEARCH TARGETS

- Research of new materials forming
- Formability of new materials
- High parametrical forming
- Hardening of surface layer
- Experimental methods for forming
- Computer Simulation

V. RESEARCH PROJECTS

V.1 Institutional Projects

- Technological engineering, No.808

V.2 National Grants (VEGA, KEGA)

- Production of cavity tools by high-parameter forming. No.776 VEGA.Project solves the design and application of new non-conventional technology of cavity and cavity bimetallic tools by high-parameter forming with aim by expensive and deficient materials saving. It deal mainly with preparation of new bimetallic materials by surfacing and plating of higher quality and plating of higher quality (move expensive) material on basic (tess quality or less expensive) substrate with following deformation (cavity production) by high-parameter shooting or high-pressure (hobbing methods joined with suppression of residual tensile strains negative effects on the face of cavity tool.

VI. CO-OPERATION

VI.1 National Co-operation

- University of Žilina, Faculty of Mechanical Engineering, Žilina
- University of Technology Košice, Faculty of Metallurgy, Košice
- University of Technology Košice, Faculty of Mechanical Engineering, Košice
- Slovak University of Technology, Faculty of Mechanical Engineering, Bratislava

VI.2 International Co-operation

- University of mining, TU Ostrava, Czech Republik
- Politechnika Katovice, Poland
- VUT Brno, Czech Republik

VI.3 Contracts with Industry

- SE, EBO Jaslovské Bohunice

VII. THESES and dissertations

Supervisors are written in brackets. All theses and dissertations without notice are written in Slovak language.

VII.1 Graduate Theses

KUREK,M.: Continual cold bending of thin-walled profilles and possibilities of their marking . (Bílik, J.)

VAŠINA,D.: Importance of forming processes at low and high radioactive metal waste liquidation. (Kapustová,M.)

SZOKE,A.: Forging on high speed forging hammers. (Polák,K.)

HERMAN, R.: Influence of forging temperatures on decarbuzation depth. (Bača,J.)

HERIBAN,F.: Design of new technological forging procedure "Flange" drop stamping. (Kapustová, M.)

TICHÁ, V.: Isothermal forging at semiheating. (Polák, K.)

LAZAR,R.: Influence of nitrooxidation on mechanical properties and deep-drawing property of low alloyed deep-drawing sheets. (Kotras,P.)

NOVYSEDLÁKOVÁ,V.: Research of Al-alloys formability at increased temperatures. (Kapustová,M.)

SÁDOVSKÝ,J.: Forging in metallurgical relationship. (Polák,K.)

VII.2 Dissertations (Ph.D.)

VII.3 Habilitations (Assoc. Prof.)

VIII. OTHER ACTIVITIES

VIII.1 Visits of Staff Members to Foreign Institutions

VIII.2 Foreign Visitors to the Department

VIII.3 Organised Conferences, Seminars and Workshops

- FORMING 2001, International scientific conference, Stará Lesná, 2001.

IX. PUBLICATIONS

ŽATKOVIČ Juraj – BAČA Marek - MIKLEŠOVÁ Katarína- ALBRECHTOVÁ Irena – KREMPASKÝ Jozef: Contribution to temperature transmission scale from standard to working gauge. In: Jemná mechanika a optika, 2001, č. 7-8, s. 247 – 248.

BAČA Jozef – SHIMANOVICH Igor – SCHIMANOVICH Olga: The definition of power characteristics during processing of superficial layers of a metallic band by means of rolling with dragging. In: *VEDECKÉ PRÁCE Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave*: Research papers Faculty of Materials Science and Technology Slovak University of Technology in Trnava. Bratislava: STU, 2001, zväzok 10, s. 9 – 14.

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POLÁK Karol – KOTRAS Peter – BÍLIK Jozef : Adiabatic deformation processes.In: *Medzinárodná vedecká konferencia FORMING 2001 : Plasticita materiálov*. Zory: Oldprint, 2001, s. 183 – 186.

ULÍK Anton : Utilization of Metal Forming Parameters for Volume Forming Processes Simulation.In: *Medzinárodná vedecká konferencia FORMING 2001 : Plasticita materiálov*. Zory: Oldprint, 2001, s.233 – 238.

ŽATKOVIČ Juraj – BAČA Jozef – BAČA Marek: Experience with regressian methods during the data elaboration.In: *Medzinárodná vedecká konferencia FORMING 2001 : Plasticita materiálov*. Zory: Oldprint, 2001, s. 249 – 252.

BAČA Jozef – BÍLIK Jozef:. The forming and calibrating of cylinder tubes with compilated cross section by fixed mould and fluent or gaseous punch.In: *TRANSFER 2001: Využívanie nových poznatkov v strojárskej praxi: Zborník prednášok medzinárodnej vedeckej konferencie*. Trenčín: FŠT, 2001, s. 171 – 174.

ULÍK Anton: The use of simulation program in precision die forging.In: *TRANSFER 2001: Využívanie nových poznatkov v strojárskej praxi: Zborník prednášok medzinárodnej vedeckej konferencie*. Trenčín: FŠT, 2001, s. 325 –330.

BAČA Jozef – BÍLIK Jozef : The analysis of surface layers mechanical hardening methods.In: *Zborník prednášok zo 7.vedeckej medzinárodnej konferencie AKADEMICKÁ DUBNICA 2001*. Bratislava: STU, 2001, s. 123 – 126.

KAPUSTOVÁ Mária – KOŠŤÁLOVÁ Miroslava – KADLEC Rudolf: Influence of temperature on mechanical properties and volume plasticity of Al-alloy STN 424400.In: *Zborník prednášok zo 7.vedeckej medzinárodnej konferencie AKADEMICKÁ DUBNICA 2001*. Bratislava: STU, 2001, s. 169 – 172.

KOTRAS Peter – POLÁK Karol: Improvement strenght of metal plate and pressed work by chemical and thermal elaboration.In: *Zborník prednášok zo 7.vedeckej medzinárodnej konferencie AKADEMICKÁ DUBNICA 2001*. Bratislava: STU, 2001, s. 173 – 176.

POLÁK Karol – KOTRAS Peter: Superposition of press and thermal effect as adiabatic deformation process.In: *Zborník prednášok zo 7.vedeckej medzinárodnej konferencie AKADEMICKÁ DUBNICA 2001*. Bratislava: STU, 2001, s. 217 – 220.

ULÍK Anton : Design of forming machine elements.In: *Zborník prednášok zo 7.vedeckej medzinárodnej konferencie AKADEMICKÁ DUBNICA 2001*. Bratislava: STU, 2001, s. 263 – 266.

ŽATKOVIČ Juraj – BAČA Jozef – BAČA Marek : Contribution of the temperature measurements of shaped substance in proces of its forging.In: *Zborník prednášok zo 7.vedeckej medzinárodnej konferencie AKADEMICKÁ DUBNICA 2001*. Bratislava: STU, 2001, s. 279 – 281.

BAČA Jozef – BÍLIK Jozef : A model solution of the polygon size calculation in gauge at the drawing reduction of tubes.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 1*. Bratislava: STU, 2001, s. 168 – 171.

BAČA Jozef – ŽATKOVIČ Juraj – BAČA Marek : Some experiences with numerical solution of temperature scale.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 1*. Bratislava: STU, 2001, s. 172 – 175.

KAPUSTOVÁ Mária – KOŠŤÁLOVÁ M.: Correct selection of technological conditions streel forming at semiheating.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 1*. Bratislava: STU, 2001, s. 240 – 245.

KAPUSTOVÁ Mária – BÍLIK Jozef – ŽATKOVIČ Juraj – ŠUGÁROVÁ J.: Temperature dependence of Al-alloy STN 424400 deformation strenght curves.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 1*. Bratislava: STU, 2001, s. 246 – 250.

POLÁK Karol: Cumulative effects of forming.In:*CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 1*. Bratislava: STU, 2001, s. 346 – 348.

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KOŠŤÁLOVÁ Dana – GRMELA Ľubomír: Image resolution and digital imaging in scanning probe microscopy.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2*. Bratislava: STU, 2001, s. 273 – 278.

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KOTRAS, P. – KOŠŤÁLOVÁ, M.: Drifting of holes on the plane surfaces and inside closed light-gauge profiles.In: *INFORMACIONNYJE TECHNOLOGII V INNOVACIONNYCH PROJEKTACH: Trudy III meždunarodnoj naučno-techničeskoj konferencii.Časť 1.* Iževsk: Izdateľstvo Iževskogo radiozavoda, 2001, s. 143 – 144.

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POLÁK Karol: Transport Technologies and logistics.In: *STROJNÉ INŽINIERSTVO 2001: Mechanical Engineering 2001. Zborník referátov z medzinárodnej konferencie. Proceedings of presented papers.* Bratislava: STU, 2001, II.časť, s. 390 – 395.

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ULÍK Anton: Prediction of Production Machines and Facilities Development.In: *TRENDY LESNÍCKEJ, DREVÁRSKEJ A ENVIRONMENTÁLNEJ TECHNIKY A JEJ APLIKÁCIE VO VÝROBNOM PROCESE. Medzinárodná vedecká konferencia. Sekcia č. 3. Trends of wood working, forest and environmental technology development and their applications in manufacturing process. International Science Conference. Section 3.* Zvolen: TU, 2001, s. 117 – 120.

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BAČA Jozef – BAČA Marek – ŽATKOVIČ Juraj – TURŇA Milan : Calibration device of optical sensor of trajectory performed by moving entity. PS 282 241. 3. 12. 2001.

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DEPARTMENT OF FOUNDRY

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I. STAFF

Professors:	1	Research Fellows:	2
Assoc. Professors:	3	Technical and Admin. Staff:	3
Senior Lecturers:	4	PhD Students:	4
Lecturers:	0		

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- Laboratory of foundry theory
- Laboratory of powder metallurgy
- Laboratory of plasma-electrolytic technology
- Laboratory of molten metal
- Laboratory of electromagnetic method and magnetohydrodynamics
- Laboratory of manual formation
- Robotised working-place of die casting

II.2 Special Measuring Instruments and Systems

- The vertical electromagnetic caster for the small profiles
- The high-frequency generator - 400 kHz for the levitation melting
- The medium-frequency induction furnaces 40/100 kg
- The vacuum induction furnace 50 l
- The electric resistance furnace 90 kg for non-ferrous metal
- The electric chamber furnace 35 l

III. TEACHING

III.1 Bachelor Study (Bc.)

III.2 Graduate Study (Ing.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	semester	H/W L-P	Reader's Name
Technology of Casting and Powder Metallurgy	8	2 - 2	Pokusa
Materials and Technologies	2	2 - 3	Podhorský
Processes of Heat-Treatment and Sintering	7	2 - 2	Pokusa
Foundry Technology	5	2 - 1	Pokusa
Tools and Jigs	7	2 - 2	Makovník
Selected Technologies of Mechanical Engineering	7	3 - 2	Podhorský

Name of subject	semestar	H/W L.P.	Reader's Name
Equipment and Tools in Casting and Heat-Treatment	7	2 - 2	Chaus
Technology of Casting and Welding	7	4 - 2	Pokusa
Engineering Technologies and Ecology	7	4 - 2	Murgaš
Non-conventional Metallurgical Processes	8	3 - 2	Murgaš
Technical Preparation of Manufacturing	8	2 - 2	Chaus
Foundry Metals and Alloys	8	3 - 2	Murgaš
Theory of Metallic Powder Material Preparation	9	2 - 2	Pokusa
Technology of Metallic Powder Material Processing	9	3 - 2	Pokusa
Foundry Metals and Alloys and their Preparation	9	2 - 2	Murgaš
Special Production Method in Foundry	9	2 - 2	Makovník
Projecting of Manufacturing Processes and Systems in Foundry	9	2 - 2	Chaus
Automation of Casting Processes	9	2 - 2	Beznák
Theory of Foundry	7,8	2 - 2	Chaus
Preparation and Processing of Ceramic and Friction Materials	9	2 - 1	Makovník
Manufacturing Technology of Composite Materials	8	2 -1	Chaus
Final Project	9	0 - 4	Tóth
Selective subject: Programming in Foundry	8	1 - 2	Podhorský
Prognosis and Trends of Casting Production Development	8	2 - 1	Pokusová

IV. RESEARCH TARGETS

- Foundry - preparation of the molten metal
- Preparation of moulding materials
- Powder metallurgy - technology of the powder processing
- Plasma-electrolytic technology - surface treatment of the metals
- Magnetohydrodynamics
- Continuous casting

V. EDUCATION AND RESEARCH PROJECTS

V.1 Institutional Projects

- Surface pretreatment of the metals by plasma discharges in electrolyte, Podhorský, Š.

V.2 National Grants (VEGA, KEGA)

- Project VEGA - Electromagnetic processing of metal material's No. 1/6187/99, Murgaš Marián.
  The aim of the project is the development of the progressive electromagnetic methods for technical metal materials processing, and the research of the phenomena accompanying the application of these methods. Theoretical research of the physical phenomena, which occur during the technical metal material's solidification under the action of electromagnetic force, the magnetic field and electric one. The qualitative analisys of the individual factors partaking in the effect on the primary crystallization process. The investment of the MHD interactions occurring at the molten metal surface shaping in the electromagnetic caster of the horizontal arrangement for the continuous casting of the Al-alloy strip; and the development of the inductors, which allow the homogeneous distribution of the magnetic field in the solidification zone. Obtaining of information for the property prediction of the selected metal materials

that are effected by the action of electromagnetic force, the movement or magnetic field during the solidification.

VI. CO-OPERATION

VI.1 National Co-operation

VI.2 International Co-operation

VI.3 Contracts with Industry

- OSRAM Slovakia, a.s, Nové Zámky - The development of the heat-resistant cast iron and Al-alloys for the machine's parts for the lamp production.
- Town Brezno - Casting of the sculpture of gen. M. R. Štefánik

VII. THESES

Supervisors are written in brackets. All theses and dissertations without notice are written in Slovak language.

VII.1 Graduate Theses

BÁLINT, J.: The computer simulation using at design of thick-walled tube casting production process. (Marcela Pokusová)
CÍBIKOVÁ, Z.: The coating composition for surface treatment of the moulds and cores for high – alloy and manganase steels. (Marcela Pokusová)
HABART, R.: The condensing unit adjusment at device for plasma - electrolytic technology. (Štefan Podhorský)
KUBAČKA, D.: The design of gas heated pot furnace for melting of non – ferrous metals. (Marcela Pokusová)
PASOVSKÝ, R.: The influence of plasma – electrolytic proces on treated object. (Roman Tóth)
SCHULLER, M.: The activation of sintering process with using of boron. (Marcela Pokusová)

VII. 2 PhD Theses

VIII. OTHER ACTIVITIES

VIII. 1 Visits of Staff Members to Foreign Institutions

VIII. 2 Foreign Visitors to the Department

VIII. 3 Organized Conferences, Seminars and Workshops

IX. PUBLICATIONS

KOMAROV, O. S. – DANILKO, B.M.-KOVALEVSKIJ, V. N. – MAKAJEVA, G.G. – CHENOV, O.V. – ČAUS, A.S. – ČIGRINOV, V. J.: Technologija konstrukcionnych materialov. Minsk: Dizajn PRO, 2001 416 s.

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CHAUS, A.S.: Effect of Boron on Cast Tungsten-Molybdenum High-Speed Steels. *The Physics of Metals and Metallography*, 91, 2001, No.5, pp. 463 – 473.

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ČAUS, A.S.: O mechanizme vlijanija bora v litych vol'framomolibdenovych bystrorežuščich staljach. Fizika metallov i metallovedenije, 91, 2001, No.5, s. 36 – 46.

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ČAUS Alexander S.- RUDNITSKII, F.I. : Crystallization of high-speed steel in graphite mould cooled in liquid nitrogen. In: *Acta Metallurgica Slovaca*, 7, 2001, č.3, s. 208 – 213.

POKUSOVÁ Marcela – MURGAŠ Marián – BERTA Igor: The properties of the Al-alloy solidified in direct magnetic field. In: *Acta Metallurgica Slovaca*, 7, 2001, č. 3, s. 287 – 292.

TÓTH Roman – CHHIM, K.: Dimension changes of castings after PEL-treating. In: *Acta Metallurgica Slovaca*, 7, 2001, č. 1-2, s. 402 – 406.

PODHORSKÝ Štefan – GOGOLA, S. – HOCHMANOVÁ, A.: Surface treatment of precision castings by electric disharges in electrolyte. In: *Acta Metallurgica Slovaca*, 7, 2001, č. 1-2, s. 414 – 419.

POKUSA Anton – BEŽNÁK, M. – TEHLÁR, P.: Wear resisting covers formed by alloy spraying of a mould. In: *Acta Metallurgica Slovaca*, 7, 2001, č. 1-2, s. 342 – 347.

MURGAŠ Marián – BELICA , E.: The plaster mixture for art foundry.In: *Acta Metallurgica Slovaca*, 7, 2001, č. 1-2, s. 36 – 41.

PODHORSKÝ Štefan: Precision and operative density determination of electrolyte. In: *VEDECKÉ PRÁCE Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave*: Research papers Faculty of Materials Science and Technology Slovak University of Technology in Trnava. Bratislava: STU, 2001, zväzok 10, s. 85 – 90.

TÓTH Roman: Influence of plane orientation on taking – off after plasma electrolytic treatment. In: *VEDECKÉ PRÁCE Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave*: Research papers Faculty of Materials Science and Technology Slovak University of Technology in Trnava. Bratislava: STU, 2001, zväzok 10, s. 135 – 139.

TÓTH Roman : Plasma – electrolytic polishing of trough holes. In: *VEDECKÉ PRÁCE Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave*: Research papers Faculty of Materials Science and Technology Slovak University of Technology in Trnava. Bratislava: STU, 2001, zväzok 11, s. 169 – 174.

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CHHIM Kosal – SOLÁR Jozef – NOVOTNÝ Ivan: Metrological characteristics of metal surface treated by plasma – electrolytic technology.In: *DOKSEM 2001. Seminár doktorandov*. Žilina: ŽU, 2001, s. 45 – 49.

CHAUS Alexander – MURGAŠ Marián: The ways of improvement of structure and properties of high-speed steels for cast cutting tools.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 1.* Bratislava: STU, 2001, s. 86 – 92.

MURGAŠ Marián: Verwendung der Electroschlacke-Giessen mit Wirkung des magnetischen Feldes.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 1.* Bratislava: STU, 2001, s. 308 – 313.

POKUSA Anton: Sintering of metal powder applying the electrocontact method.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 1.* Bratislava: STU, 2001, s. 324 – 329.

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POKUSA Anton – POKUSOVÁ Marcela: The property improvement of the electroslag remelted steel STN 42 2933 using magnetic field.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 1.* Bratislava: STU, 2001, s. 335 – 340.

POKUSOVÁ Marcela : Abrasion resistant high-chromium cast irons.In:*CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 1.* Bratislava: STU, 2001, s. 341 – 345.

BELICA, E.: The plaster mixture for art foundry.In: *7.medzinárodná konferencia, 7th international conference TECHNOLÓGIA 2001. Zborník prednášok.* 2. diel. Bratislava: STU, 2001, s. 482 – 485.

DEPARTMENT OF HUMANE SCIENCES

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I. STAFF

Professors:	1	Research Fellows:	0
Assoc. Professors:	4	Technical and Admin. Staff:	1
Senior Lecturers:	5	PhD Students:	0
Lecturers:	1		

II. EQUIPMENT

II.1 Teaching and Research Laboratories

II.2 Special Measuring Instruments and Systems

III. TEACHING

III.1 Bachelor Study (Bc.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
History of the Science and Technology	2	0-2	Petráš
Principles of the Philosophy, Methodology and Logic	1	0-2	Šíma
Philosophy of Technology	2	0-2	Skalský
Psychology of Personality	6	1-2	Končal
Ground of the Communication	2	2-2	Odlerová
Sociology	3	0-2	Csampai
General Economic Theory	6	2-1	Mrvová
Politology	4	0-2	Končal

III.2 Graduate Study (Ing.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
International Economic Relations	4	0-2	Mrvová
Humane Ecology	5	0-2	Odlerová
History of Technology	5	0-2	Chyba
History of Philosophy	5	0-2	Šima
Industrial Sociology	6	0-2	Csampai
Ground of the Communication	6	0-2	Odlerová
Fundamentals of Law for Technics	7	2-1	Paulíčková
Fundamentals of Law for Managers	7	2-1	Paulíčková
Introduction into Research Work	9	0-2	Skalský
Introduction into Research Work	8	1-1	Skalský
Prognostics	8	0-2	Dubnička
Introduction into Law for Engineers	7	2-1	Paulíčková
Synergetic	8	0-2	Dubnička
Social Politics	8	0-2	Holkovič

IV. RESEARCH TARGETS

- Human Sciences
- Social Sciences
- Philosophy
- Cosmology
- Physics
- Deep Ecology

V. EDUCATION and RESEARCH PROJECTS

V.1 Institutional Projects

- The Human and Social Sciences - the Advicer Garant of the process Human Education of the Students on the Technical University

V.2 National Grants (KEGA)

- Model and its Creation in the education of the society – science objects on the Universities and its context with the model of the education and the human education in the countries EU.

V.3 International Projects

IDEP
Internet Distanc Course of the Social Management

VI. CO-OPERATION

VI.1 National Co-operation

VI.2 International Co-operation

- Technical University Izhevsk - Russia

VI.3 Contracts with Industry

VII. THESES AND DISSERTATIONS

Supervisors are written in brackets. All theses and dissertations without notice are written in Slovak language.

VII.1 Graduate Theses

VII.2 Dissertations (PhD.)

VII.3 Habilitations (Assoc. Prof.)

VIII. OTHER ACTIVITIES

VIII.1 Visits of Staff Members to Foreign Institutions

VIII.2 Foreign Visitors to the Department

- Ph.D.Assoc.Prof. Alexander Balitsky – Izevsk State Technical University, Russia

VIII.3 Organised Conferences, Seminars and Workshops

IX. PUBLICATIONS

CSÁMPAI Ottó: A nemzetközi migráció mint transznacionális veszélyforrás. In: Társadalom és honvédelem, 5, 2001, č. 1, s. 26-37.

PETRÁŠ Milan : The circumstances of professor Štefan Bella's arrival to Slovakia. In: *VEDECKÉ PRÁCE Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave*: Research papers Faculty of Materials Science and Technology Slovak University of Technology in Trnava. Bratislava: STU, 2001, zväzok 11, s. 125 – 128.

ODLEROVÁ Eva: Ethics aspect of the environmental education.In: *CESTY DEMOKRACIE VO VÝCHOVE A VZDELÁVANÍ: V.ročník: Ústredná téme : prostredie – človek – príroda*. Bratislava: Iuventa, 2001, s. 42 – 44.

SKALSKÝ Vladimír : Ontology and Cosmology.In: *FILOZOFIA A DOBA*. Bratislava: IRIS, 2001, s. 130 – 139.

ŠÍMA Rudolf: Proffesion, personality and civil profilation Universities education and its importance philosophy. In: *MODELY A FUNKČNOSŤ VÝUČBY SPOLOČENSKOVEDNÝCH DISCIPLÍN NA VYSOKÝCH ŠKOLÁCH. Zborník referátov z 5.vedeckého seminára*. Bratislava: STU, 2001, s.7 – 16.

SAWICKI Silvester: Contribution good – quality of the methodology in the research.In: *MODELY A FUNKČNOSŤ VÝUČBY SPOLOČENSKOVEDNÝCH DISCIPLÍN NA VYSOKÝCH ŠKOLÁCH. Zborník referátov z 5.vedeckého seminára*. Bratislava: STU, 2001, s. 17 – 23.

KONČAL Viliam: Process of the education and its analysis.In: *MODELY A FUNKČNOSŤ VÝUČBY SPOLOČENSKOVEDNÝCH DISCIPLÍN NA VYSOKÝCH ŠKOLÁCH. Zborník referátov z 5.vedeckého seminára*. Bratislava: STU, 2001, s. 24 – 28.

CHYBA Juraj: Dionýz Ilkovič – scientist, teacher and humanist.In: *MODELY A FUNKČNOSŤ VÝUČBY SPOLOČENSKOVEDNÝCH DISCIPLÍN NA VYSOKÝCH ŠKOLÁCH. Zborník referátov z 5.vedeckého seminára*. Bratislava: STU, 2001, s. 35 – 42.

ODLEROVÁ Eva: Some questions to the methodics of the environmental education.In: *MODELY A FUNKČNOSŤ VÝUČBY SPOLOČENSKOVEDNÝCH DISCIPLÍN NA VYSOKÝCH ŠKOLÁCH. Zborník referátov z 5.vedeckého seminára*. Bratislava: STU, 2001, s. 43 – 47.

SKALSKÝ Vladimír: Analysis of the classification and the credite system on the Faculty of Materials Science and Technology Slovak University of Technology.In: *MODELY A FUNKČNOSŤ VÝUČBY SPOLOČENSKOVEDNÝCH DISCIPLÍN NA VYSOKÝCH ŠKOLÁCH. Zborník referátov z 5.vedeckého seminára*. Bratislava: STU, 2001, s. 61 – 67.

MRVOVÁ Ľubica: Education – the first condition for the economy growing in the Slovak Republic.In: *MODELY A FUNKČNOSŤ VÝUČBY SPOLOČENSKOVEDNÝCH DISCIPLÍN NA VYSOKÝCH ŠKOLÁCH. Zborník referátov z 5.vedeckého seminára*. Bratislava: STU, 2001, s. 68 – 73.

CSÁMPAI Otto: Sociology – on the third civilisation wave. In: *MODELY A FUNKČNOSŤ VÝUČBY SPOLOČENSKOVEDNÝCH DISCIPLÍN NA VYSOKÝCH ŠKOLÁCH. Zborník referátov z 5.vedeckého seminára*. Bratislava: STU, 2001, s. 78 – 82.

HOLKOVIČ Ľubomír: Society – science disciplinies on the Technical Universities and some notes of its.In: *MODELY A FUNKČNOSŤ VÝUČBY SPOLOČENSKOVEDNÝCH DISCIPLÍN NA VYSOKÝCH ŠKOLÁCH. Zborník referátov z 5.vedeckého seminára.* Bratislava: STU, 2001, s. 83 – 87.

PETRÁŠ Milan: Education on the Technical Universities in the first 20.century – reform, opinions, efforts.In: *MODELY A FUNKČNOSŤ VÝUČBY SPOLOČENSKOVEDNÝCH DISCIPLÍN NA VYSOKÝCH ŠKOLÁCH. Zborník referátov z 5.vedeckého seminára.* Bratislava: STU, 2001, s. 102 – 108.

RIMAN Jozef: View on the ecology consiousness and environmental loyality of the students from the standpoint research..In: *MODELY A FUNKČNOSŤ VÝUČBY SPOLOČENSKOVEDNÝCH DISCIPLÍN NA VYSOKÝCH ŠKOLÁCH. Zborník referátov z 5.vedeckého seminára.* Bratislava: STU, 2001, s. 109 – 118.

ODLEROVÁ Eva:. Ethics of the peoples time and ecology.In: *Zborník vedeckých prác k 10.výročiu založenia katedry ZA HUMÁNNE ŽIVOTNÉ PROSTREDIE.* Bratislava: STU, 2001, s. 81 – 85.

CHYBA Juraj : The limits of technologies.In: *Zborník prednášok zo 7.vedeckej medzinárodnej konferencie AKADEMICKÁ DUBNICA 2001.* Bratislava: STU, 2001, s. 161 – 164.

KONČAL Viliam : The human celebrity and a building his character in the process of the education.In: *Zborník prednášok zo 7.vedeckej medzinárodnej konferencie AKADEMICKÁ DUBNICA 2001.* Bratislava: STU, 2001, s. 339 – 342.

MRVOVÁ Ľubica : European union starting point adoptet to harmonize educational system with the labor market needs.In: *Zborník prednášok zo 7.vedeckej medzinárodnej konferencie AKADEMICKÁ DUBNICA 2001.* Bratislava: STU, 2001, s. 363 – 366.

ODLEROVÁ Eva: To the notion of the ecologies rationalism.In: *Zborník prednášok zo 7.vedeckej medzinárodnej konferencie AKADEMICKÁ DUBNICA 2001.* Bratislava: STU, 2001, s. 367 – 370.

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SAWICKI Silvester – HOLKOVIČ Ľubomír : Some inperfections of model university education.In: *Zborník prednášok zo 7.vedeckej medzinárodnej konferencie AKADEMICKÁ DUBNICA 2001.* Bratislava: STU, 2001, s. 393 – 396.

SKALSKÝ Vladimír : The fundamental ontological concepts „being" and „not being" and their mutual relations.In: *Zborník prednášok zo 7.vedeckej medzinárodnej konferencie AKADEMICKÁ DUBNICA 2001.* Bratislava: STU, 2001, s. 397 – 400.

SKALSKÝ Vladimír: The model properties of the expansive and isotropic relativistic universe.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 362 – 367.

CHYBA Juraj – KONČAL Viliam : Die Position der Ingenieure in der Industriegesellschaft.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 520 – 525.

CSÁMPAI Otto: Globalisation and the international migration processies.In: *Zborník príspevkov z medzinárodnej vedeckej konferencie GLOBALIZÁCIA A JEJ SOCIÁLNO-EKONOMICKÉ DOSLEDKY.* Žilina: ŽU, 2001, s. 161 – 167.

SAWICKI, S. – HOLKOVIČ, Ľ.: Internet on the Universities distance education.In: *SCHOLA 2001: 4.medzinárodná vedecká konferencia KJPP : Multimédiá v pedagogickom vzdelávaní.* Bratislava: STU, 2001, s. 279 – 282.

DEPARTMENT OF INFORMATION TECHNOLOGY AND AUTOMATION

Head of the Department:
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I. STAFF

Professors:	2	Research Fellows:	0
Assoc. Professors:	5	Technical and Admin. Staff:	4
Senior Lecturers:	13	Ph.D. Students:	25
Lecturers:	0		

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- CAD/CAM System Pro/ENGINEER Laboratory (1 Sun Ultra Creator 3D, 4 Sun SPARCstation 4, 3 HP 715/50,)
- Automation and Control Laboratory
- Unix Laboratory (16 alpha-numeric terminals)
- 3 PC Laboratories
- Internet Laboratory
- Robotics Laboratory
- X-Terminals Laboratory
- Multimedia Laboratory

II.2 Special Measuring Instruments and Systems

- PCL System

III. TEACHING

III.1 Bachelor Study (Bc.)

H/W: *Hours per Week*
L-P: *Lectures-Practices*

Name of subject	Semester	H/W L-P	Reader's name
Information Technology Basics I,II	1,2	1-2	Schreiber
Software Technologies I,II	3,4	1-2	Tanuška, Michalčonok
Graphical Data Processing	5	3-3	Nemlaha
Database Systems	5	3-3	Tanuška
System Programming	5	2-2	Halenár
Computer Networks	5	2-2	Halenár
Project	5	0-4	Važan
Economica Computer Science	6	2-2	Iringová
Automation in Industry	6	3-3	Božek
Information Systems	6	3-3	Mišút
Computer Science and Society	6	2-0	Schreiber

III.2 Graduate Study (Ing.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Theory of Automatic Control	7	3-3	Vrban, Pecko, Gese
System Programming I,II	7,8	2-2	Michalčonok, Halenár
Artificial Intelligence	7	2-3	Schreiber
Graphics Systems I, II	7,8	2-3	Vaský, Nemlaha
Technical Devices of Automatic Control	8	3-3	Michalčonok
Information Systems I, II	8,9	3-3	Mišút
Modelling and System Simulation	8	2-2	Važan
CIM	7	3-3	Važan
Control of the Automatic Production Devices	7	3-3	Božek
NC Programming	7	3-3	Božek
Production System Planning	8	3-2	Mišút
Digital Control Systems	8	3-2	Božek
Computer Networks	9	3-3	Halenár
Production Systems Design	9	2-3	Mišút
Computer Science and Society	9	2-0	Schreiber
Project	9	0-5	Važan
CAD/CAM Systems	9	3-3	Vaský
Production Systems Control	9	3-3	Važan

IV. RESEARCH TARGETS

- Information and database systems
- Client-server architecture systems (design, tuning, data management, data security, applications)
- Control systems
- Artificial intelligence and expert systems
- Modelling and simulation of systems (discrete-event simulation, Petri-nets, queuing theory)
- Computer networks
- Computer graphics, graphical and CAD/CAM systems
- CIM
- Multimedia, virtual reality
- E-learning

V. EDUCATION and RESEARCH PROJECTS

V.1 Institutional Projects

- Multimedia support of teaching
- Robustness of the control systems
- Automation of department administration
- PROMAN-W: Research projects administration
- Accouting of the travel costs of the faculty staff

V.2 National Grants (VEGA, KEGA)

- Design and implementation of the mechatronical system control algorithms with using of computer graphic methods – VEGA
- Computers in the pedagogical process – (VEGA, Co-operation with the Pedagogical Faculty of Trnava University)

V.3 International Projects

- Socrates Programme (student mobilities abroad, 7 stays in Germany)
- PROMAN-W: Research Projects Administration. Common software development with the Institut für Festkörper- und Werkstofforschung in Dresden, Germany
- E-learning of the Social Management (Project founded by Open Society Foundation, in Co-operation with the Department of the Humane Sciences)

VI. CO-OPERATION

VI.1 National Co-operation

- Faculty of Electrotechnic and Computer Science STU Bratislava
- Faculty of Engineering STU Bratislava
- Trnava University Trnava
- University of Cyril and Metod Trnava
- Faculty of Electrotechnic TU Košice
- Fakulty of pedagogical sciences UKF Nitra
- Faculty of Engineering Žilina
- Research Institute of Nuclear Power Supply Trnava
- Nuclear Power Jaslovske Bohunice
- AITEN ltd. Trnava

VI.2 International Co-operation

- IFW e. V. Dresden, Germany
- TU Darmstadt, Germany
- University of Lisboa, Portugal
- Politechničeskij universitet Peterburg, Russia
- Universitzy of Zelona Gora, Poland
- KAHO Gent, Belgium
- FH Köthen, Germany
- FH Darmstadt, Germany
- Brandenburgische Technische Universität, Cottbus, Germany

VI.3 Contracts with Industry

- The proposal of the methodology for the data evaluation in selected technical systems

- The proposal of the methodology for the waste management in the Nuclear power station Jaslovske Bohunice
- Courses in the Nuclear power station Jaslovske Bohunice
- Identification of the fail sources binary control devices in the Nuclear power station Jaslovske Bohunice
- Project of a support system for the accident control in the Nuclear power station Jaslovske Bohunice (contract with the Research Institute of Nuclear Power Supply Trnava)

VII. THESES AND DISSERTATIONS

Supervisors are written in brackets. All theses and dissertations without notice are written in Slovak language.

VII.1 Graduate Theses

BENČÚRIK Ján: Information system of a department.(Škrovánek,A.)
BEZÁK Pavol: Database application in Intranet environment.(Nemlaha,E.)
BLAHA Marián: The Web interface design and implementation for relational data base.(Škrovánek,A.)
BULLA Michal: Information system for administration of LAN networks.(Halenár,I.)
ĎURČI Martin: Information system of a department.(Tanuška,P.)
ĎURIŠ Daniel: Application design and realisation for creation, editing and archiving of authentication transactions in ORACLE.(Gese,A.)
ELIÁŠ Michal: IS - apartmenthouse administration.(Husárová,B.)
GONO Pavol: Integration of network operating system in LAN network on TCP/IP protocol.(Halenár,I.)
GRZNÁR Róbert: Industrial network LON (Local Operating Network).(Masár,R.)
HALENÁR Rober: Applications design and development for universal geographic client GEOMEDIA 3.0.(Lackovič,T.)
KANÓCZBranislav: Simulation of mechanical system.(Michalčonok,G.)
KAŠŠA Tomáš: 3D STUDIO software exploitation for technical scene modelling and technical process animation.(Vaský,J.)
KEBÍSEK Michal: Information system of a department.(Tanuška,P.)
KLČO Ľuboš: Distributed applications INTERNET/INTRANET on XML standard basis.(masár,R.)
KLIEŠTINEC Martin: News software support for scientism-research activity (as a part of a department information system).(Mišút,M.)
KLIŽAN Jaroslav: Information system of a department.(Juhás,M.)
KOČTÚCH Miroslav: Information system design for accommodation equipment.(Miksa,F.)
KOHÚT Peter: Design of multimedia application for CAD / CAM training support.(Vaský,J.)
KOSTEREC Štefan: Microcomputer control.(Michalčonok,G.)
LEITNER Roman: Multimedia in an education.(Juhás,M.)
MAKYŠ Peter: Software support system of administration activity for head of Study and Information centre.(Mišút,M.)
MALACHOVSKÝ Daniel: Multimedia in an education.(Vážan,P.)
MASÁROVÁMichaela: Design of multimedia application of educational software.(Vaský,J.)
MATAVA Ľubomír: Exploitation of Intranet solution in IIS -SE environment.(Halenár,I.)
MORGOŠ Michal: Determination of area limit from statements received from CT for 3D model generation.(Vaský,J.)
NIEDL Juraj: Verification of PVS control strategies by simulation.(Vážan,P.)
ONDRIŠ Marián: 3D STUDIO software exploitation for modelling of technical scene and technical process animation.(Vaský,J.)
PARÁK Martin: Multimedia in an education.(Schreiber,P.)
RADOŠICKÝ Gabriel: Design of multimedia application of educational software.(Vaský,J.)
REKEM Roman: Dialogue panel generator in AutoCAD graphic interface.(Vaský,J.)
SEDLÁK Radoslav: New system control creation for robot MSR-84.(Božek,P.)
ŠTELLER Michal: Information system design for small firm.(Miksa,F.)
ŠTRAUCHOVÁ Marcela: Analysis and design of solution of data acquisition for information system in Slovnaft Benzinol, a.s. Bratislava.(Paulinová,E.)

ŠTUK Martin: IS of a small organisation.(Tanuška,P.)
ŠURAN Jozef: Exploitation of CAD / CAM system script files for education support.(Vaský,J.)
TOMAŠOVIČ Róbert: Automatic generation of LOD for VRML.(Vaský,J.)
TUČEK Slavomír: Exploitation of CAD / CAM system script files for education support.(Vaský,J.)
VLASÁK Tibor: Multimedia exploitation at education.(Lackovič,T.)
ZWIRŽINA Juraj: Database system for evidence of values, measuring instruments and account of index predisposition Cg. and CgK with Intranet support in condition of VUJE Trnava.(Husárová,B.)

Bachelor Theses

BROZMANOVÁ Andrea: Information system of stock management for little businesses.
GAŽO Daniel: Design of chosen parts of IS for West Slovak museum in Trnava.
KOSORÍN Ľuboš: Design of chosen parts of IS for West Slovak museum in Trnava.
MACEK Mich: Ddata warehouse in banking institution.
MELÚCHOVÁ Mária: IS of Health care.
SAWICKI Karol: Information system for storage facilities.

VII.2 Dissertations (Ph.D.)

VII.3 Habilitations (Assoc. Prof.)

- Važan,P.: Verification of Flexible Manufacturing Systems Control by Simulation Methods. MtF STU Trnava, 2001.

VIII. OTHER ACTIVITIES

VIII.1 Visits of Staff Members to Foreign Institutions

- IFW Dresden, Germany (2 stays)
- FH Köthen, Germany (6 stays)

VIII.2 Foreign Visitors to the Department

- FH Köthen, Germany (2 stays)
- IFW Dresden, Germany (3 stays)
- BTU Cottbus, Germany (2 stays)

VIII.3 Organised Conferences, Seminars and Workshops

- Workshop on the Neuronal Networks

IX. PUBLICATIONS

VRBAN Anton: Delay compensating by control of linear dynamic system. In: AT&P Journal, plus, 2001, č. 1, s. 42 – 43.

VRBAN Anton : Control process sensitivity on the time constant of regulator.In: *Zborník prednášok zo 7.vedeckej medzinárodnej konferencie AKADEMICKÁ DUBNICA 2001.* Bratislava: STU, 2001, s. 105 – 108.

VASKÝ Jozef – MASÁR Ladislav:CAD/CAM technology in the area of designing and manufacturing the customized hip joint implant.In: *Zborník prednášok zo 7.vedeckej medzinárodnej konferencie AKADEMICKÁ DUBNICA 2001.* Bratislava: STU, 2001, s. 267 – 272.

SCHREIBER Peter – TANUŠKA Pavol: Wissenbasis eines expertsystems verwaltene durch relationales datenbankverwaltungssystem.In: *COMPUTER INTEGRATED MANUFACTURING: Proceedings of the Inaternational Conference CIM 2001.* Zakopane: Wydawnictwo Naukowo-Techniczne, 2001, s.151 – 158.

VAŽAN Pavol: Manufacturing Systems Control Strategy Simulation.In: *COMPUTER INTEGRATED MANUFACTURING: Proceedings of the Inaternational Conference CIM 2001.* Zakopane: Wydawnictwo Naukowo-Techniczne, 2001, s. 263 – 271.

ELIÁŠ Michal – ĎURČI Martin –KEBÍSEK Michal – MAKYŠ Peter : Team development of database application.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 245 – 250.

IRINGOVÁ Miriam: Modern 32-bit microcontrollers for embedded applications.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 261 – 266.

MICHAĽČONOK German – PAVLINOVÁ Jevgenija : Design of phase control system with a compensation device.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 314 – 317.

SCHREIBER Peter – TANUŠKA Pavol: E-learning als Mittel der Fernausbildung an dem Lehrstuhl für die angewandte Informatik der FWT STU.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 356 – 361.

VASKÝ Jozef - ELIÁŠ Michal: An interactive design system for user definable dialog boxes generation.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 395 – 399.

VAŽAN Pavol - MORAVČÍK Oliver - KŇAŽÍK Marek – PRIBILA Miroslav: Production efficiency evaluation of cars final production by using simulation.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 400 – 405.

PIVARČIOVÁ Elena – BOŽEK Pavol: Neue Trends in Multimedienausnutzung im Lehrprozess.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 593 – 597.

JOEHNK, P. – MORAVČÍK Oliver – MICHAĽČONOK, G. F.: Control of scientific and technological grants in Germany on example IS PROMAN-W.In: *INFORMACIONNYJE TECHNOLOGII V INNOVACIONNYCH PROJEKTACH: Trudy III meždunarodnoj naučno-techničeskoj konferencii.Časť 1.* Iževsk: Izdatel'stvo Iževskogo radiozavoda, 2001, s. 19 – 21.

KEBÍSEK Michal – MAKYŠ Peter: Knowledge discovery from databases.In: *The 1st International conference on applied mathematics and informatics at universities'2001. Zbornik prednášok z medzinárodnej vedeckej konferencie.* Bratislava: STU, 2001, s. 212 – 217.

MICHALČONOK German – PAVLINOVÁ Jevgenia : Spectral analyse of mechatronic system model in MATLAB environment.In: *The 1st International l conference on applied mathematics and informatics at universities'2001. Zbornik prednášok z medzinárodnej vedeckej konferencie.* Bratislava: STU, 2001, s. 230 – 235.

SCHREIBER Peter: Some aspects in education of the applied mathematic at technical universities.In: *The 1st International conference on applied mathematics and informatics at universities'2001. Zbornik prednášok z medzinárodnej vedeckej konferencie.* Bratislava: STU, 2001, s. 240 – 244.

TANUŠKA Pavol: Security of IT. In: *The 1st Inetrnational conference on applied mathematics and informatics at universities'2001. Zbornik prednášok z medzinárodnej vedeckej konferencie.* Bratislava: STU, 2001, s. 266 – 271.

VÁŽAN Pavol – SCHREIBER Peter: Simulation as tool for evaluation of FMS.In: *The 1st Inetrnational l conference on applied mathematics and informatics at universities'2001. Zbornik prednášok z medzinárodnej vedeckej konferencie.* Bratislava: STU, 2001, s. 282 – 286.

VRBAN Anton: Paradoxs of the development of Information society..In: *The 1st Inetrnational conference on applied mathematics and informatics at universities'2001. Zbornik prednášok z medzinárodnej vedeckej konferencie.* Bratislava: STU, 2001, s. 287 – 292.

BOŽEK Pavol: Design of multimedia application.In: *The 1st Inetrnational conference on applied mathematics and informatics at universities'2001. Zbornik prednášok z medzinárodnej vedeckej konferencie.* Bratislava: STU, 2001, s. 306 – 310.

SCHREIBER, P. – HALENÁR, I.: Approarchs to valuation of multimedia authoring language.In: *SCHOLA 2001: 4.medzinárodná vedecká konferencia KIPP : Multimédiá v pedagogickom vzdelávaní.* Bratislava: STU, 2001, s. 283 – 286.

SCHREIBER, P. – TANUŠKA, P.: Comment to development of multimedia authoring language from software engineer point of view.In: *SCHOLA 2001: 4.medzinárodná vedecká konferencia KIPP : Multimédiá v pedagogickom vzdelávaní.* Bratislava: STU, 2001, s. 287 – 290.

DEPARTMENT OF LANGUAGES

Head of the Department:
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I. STAFF

Professors:	0	Research Fellows:	0
Assoc. Professors:	0	Technical and Admin. Staff:	1
Senior Lecturers:	6	PhD Students:	0
Lecturers:	0		

II. EQUIPMENT

II.1 Teaching Language Laboratories

- Audio-Video Workshop

II.2 Special Measuring Instruments and Systems

III. TEACHING

III.1 Bachelor Study (Bc.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
English	2 – 4	0-2	Mironovová, Rusková,Miština
German	2 – 4	0-2	Reháková, Tandlmajerová
Russian	2 – 4	0-2	Rusková

III.2 Graduate Study (Ing.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
English	2 – 5	0-2	Mironovová, Miština, Rusková
German	2 – 5	0-2	Reháková, Tandlmajerová
Russian	2 – 5	0-2	Rusková

III.3 Ph.D. Study

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
English		0-2	Mironovová, Miština
German		0-2	Reháková
Russian		0-2	Bujnová

IV. RESEARCH TARGETS

- Improving professional communication of PhD candidates in written and spoken English using e-mail and Internet
- Designing and creating distance on-line English language course for professional purposes

V. EDUCATION AND RESEARCH PROJECTS

V.1 Institutional Projects

- Improving language competence of PhD students at MtF STU within international scientific communication in English

V.2 National Grants (VEGA, KEGA)

- A Model for an International Collaborative Student Experience , KEGA 970 Project

V.3 International Projects

- Development of Communicative Skills Via Internet, OSF G/607/2000 of the IDEP Programme

VI. CO-OPERATION

VI.1 National Co-operation

- Language Department, FEI STU Bratislava

VI.2 International Co-operation

- The British Council in Bratislava
- Purdue University, Kokomo, Indiana, USA
- The Pushkin Institute in Moscow
- The Goethe Institute in Bratislava

VI.3 Contracts with Industry

VII. THESES AND DISSERTATIONS

Supervisors are written in brackets. All theses and dissertations without notice are written in Slovak language.

VII.1 Graduate Theses

VII.2 Dissertations (Ph.D.)

VII.3 Habilitations (Assoc. Prof.)

VIII. OTHER ACTIVITIES

VIII.1 Visits of Staff Members to Foreign Institutions

VIII.2 Foreign Visitors to the Department

- Barrie Robinson, British Council London, Great Britain, 17 May 2001
- Jim McGrath, British Council, Bratislava, 17 May 2001
- Marion Hughes, British Council, Bratislava, 17 May 2001
- Kevin D. Taylor, associate professor, Department of Electrical Engineering Technology, Purdue University, Kokomo, Indiana, USA, 18 – 22 November 2001

VIII.3 Organised Conferences, Seminars and Workshops

- Spektrum 2001, Workshop N°3 for secondary and tertiary LSP (Language for Specific Purposes) teachers from the region of Trnava, 29 March 2001.
- Germaniac – multimedia German language programme, workshop, 30 May 2001.
- Art of Methodology in Teaching Foreign Languages, workshop, 28 November 2001.
- Spectrum 2001, Workshop N° 4 for secondary and tertiary LSP teachers from the region of Trnava, 5 December 2001.

IX. PUBLICATIONS

BUJNOVÁ, E. – RUSKOVÁ, D.: Vstreči s Rossijej Putevoditeľ v mire biznesa. Metodická príručka, cvičenia a slovník. Bratislava: MC, 2001. 70 s.

MIRONOVOVÁ Emília – MIŠTINA Juraj: Spektrum a Regional LSP Project in Trnava. In: ESP Spectrum, 2001, č. 22, s. 6 –8.

MIRONOVOVÁ Emília : Grand Celebration in Trnava. In: ESP Spectrum, 2001, č. 22, s. 10 – 11.

MIŠTINA Juraj: The overhead projector in teaching English to technically trained students.In: *XIII. DIDMATTECH 2000 : Časť II.* Prešov: Prešovská univerzita, 2001, s. 269 – 272.

REHÁKOVÁ Anna: Application of PC programme in Language Preparation of Post-graduate Students.In: *XIII. DIDMATTECH 2000 : Časť II.* Prešov: Prešovská univerzita, 2001, s. 348 – 350.

MIRONOVOVÁ Emília – MIŠTINA Juraj: Project Spectrum – an alterantive to further teacher training.In: *SPEKTRUM 2000: Zborník metodických námetov pre výučbu cudzích jazykov s profesijným zameraním.* Bratislava: STU, 2001, s. 5-6.

CAGÁŇOVÁ Dagmar – RUSKOVÁ Dagmar: Preparation, Piloting and Evaluation of Questionnaire as a Specific Teaching Language Skill.In: *SPEKTRUM 2000: Zborník metodických námetov pre výučbu cudzích jazykov s profesijným zameraním.* Bratislava: STU, 2001, s. 13 – 14.

MIRONOVOVÁ Emília: Dictation – a creative form of gaining, developing and testing language knowlwdge and skills. In: *SPEKTRUM 2000: Zborník metodických námetov pre výučbu cudzích jazykov s profesijným zameraním.* Bratislava: STU, 2001, s . 27 – 28.

MIRONOVOVÁ Emília : Using associations, connotations and acronyms in gaining and recycling lexical units.In: *SPEKTRUM 2000: Zborník metodických námetov pre výučbu cudzích jazykov s profesijným zameraním.* Bratislava: STU, 2001, s . 29 – 30.

MIŠTINA Juraj: Scientific poster simulation and its presentation at the foreign language lesson..In: *SPEKTRUM 2000: Zborník metodických námetov pre výučbu cudzích jazykov s profesijným zameraním.* Bratislava: STU, 2001, s. 31 – 32.

MIŠTINA Juraj: Verbal and non-verbal communication while groupwork at the foreign language lesson.In: *SPEKTRUM 2000: Zborník metodických námetov pre výučbu cudzích jazykov s profesijným zameraním.* Bratislava: STU, 2001, s . 33 – 34.

REHÁKOVÁ Anna: Interview – symbiosis of language creativity with professionalism.In: *SPEKTRUM 2000: Zborník metodických námetov pre výučbu cudzích jazykov s profesijným zameraním.* Bratislava: STU, 2001, s. 37 – 38.

TANDLMAJEROVÁ Anna : Learning foreign vocabulary vua visuals.In: *SPEKTRUM 2000: Zborník metodických námetov pre výučbu cudzích jazykov s profesijným zameraním.* Bratislava: STU, 2001, s. 41 – 43.

MIŠTINA Juraj – HRMO Roman : E-communication – new needs in English language syllabus.In: *Zborník prednášok zo 7.vedeckej medzinárodnej konferencie AKADEMICKÁ DUBNICA 2001.* Bratislava: STU, 2001, s. 359 – 362.

CAGÁŇOVÁ Dagmar – RUSKOVÁ Dagmar: How to make ESP more effective and interesting with focus on project and computer.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 2.* Bratislava: STU, 2001, s. 473 – 476.

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DEPARTMENT OF MACHINING AND ASSEMBLY

Head of the Department:
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I. STAFF

Professors:	1	Research Fellows:	0
Assoc. Professors:	6	Technical and Admin. Staff:	4
Senior Lecturers:	2	PhD Students:	11
Lecturers:	2		

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- Measurement Laboratory
- Assembly Laboratory
- Mechanical Engineering Laboratory
- CAD/CAM Laboratory

II.2 Special Measuring Instruments and Systems

- DKM1-3000 DP co-ordinate measurement apparatus fy Zeiss
- Zeiss length gauge l m
- Zeiss universal microscope
- Zeiss universal length gauge
- Hilger Watts autocollimator + mirror polygon
- Zeiss collimator + telescope

III. TEACHING

III.1 Bachelor Study (Bc.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Industrial Technologies and Production Equipment	1	3-2	Lipa, Štefánek
Industrial Technology I	3	3-2	Štefánek
Industrial Technology II	5	2-2	Štefánek
Tools and Fixtures	4	3-2	Charbula
Final Work	6	0-2	Janáč
Production Metrology	7	2-2	Borovička
Automatization of production planning	6	2-2	Peterka, Kuric

III.2 Graduate Study (Ing.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Machining Technology	6	2-2	Lipa
Metrology	5	2-2	Maduda, Borovička
Fundamentals of Assembly	5	2-1	Valentovič
Machining Theory	7	3-2	Békés, Peterka
Cutting Machines and Equipment	8	2-2	Valentovič
Assembly Technology	7	2-1	Valentovič
NC Machine Programming	7	1-2	Peterka
Metrology Practice	8	0-4	Maduda
Progressive Machining Methods	9	3-2	Hrubec
Production Planning	9	2-2	Békés, Peterka
Mechanisation and Automation	9	3-2	Potocký
Final Project	9	0-5	Janáč, Slanina
Finishing Machining Methods	9	2-1	Lipa
Computer Controlled Production	9	2-1	Peterka, Kurlc
Experimental Machining Methods	9	2-1	Lipa
CAD/CAM Systems	9	1-2	Peterka
Design for Manufacture	8	2-1	Hrubec
NC Machine Programming II	8	0-4	Peterka
Prediploma praxis	10		
Diploma project	10		

IV. RESEARCH TARGETS

- Theory of machining parts manufacturing, measurement and assembly,
- CIM, CAD/CAM, CAPP, CAQ, CAA,
- 3D art engraving,
- Manufacturing of dies,
- Ecological aspects of machining.

V. EDUCATION and RESEARCH PROJECTS

V.1 Institutional Projects

- Machining of metal and ceramics depositions created by fire- splutter plasma and by other techniques, No.804 (Lipa, Z.)
- Set of inaccuracy problems by high-precision measurements of complex workpieces. No.844 (Janáč, A.)

V.2 National Grants (VEGA, KEGA)

- Structures of machinery production objects and processes VEGA 1/6188/99 MŠ SR, (Janáč, A.)
  Research of structures of machinery production objects and processes is not till now systematic developed. New solutions were created accidentally, method experiment-mistake; experiment-success was used. It influenced prosperity of machinery production. The project is targeted for debugging of this deficiency. Solvers intend, that systematic research will lead to new scientific method of creative proposing of new production structures of processes, machines and equipment and will contribute to development of national economy.

- Towards Ecologically Friendly Machining, MŠ SR Project - PL95978058S (Peterka)Ecological behaviour of subject in human society is the priority for modern civilization today. In engineering production we must run over ecological acceptable technology. The technology of chip removal has majority in engineering production, therefore our research is targeted to ecological machining. In project we reveal solution which has minimum unecological influence to surroundings. The way are :
  - machining with minimum cutting liquid
  - machining without cutting liquid.

V.3 International Projects

- Towards Ecologically Friendly Machining (ECOFRIM) - INCO-COPERNICUS Project - PL95978058 (Peterka). The project solution on international level of ecological totool completely from legal regulations, order and standard ecological cutting liquid. We solution again employ and liquidation cutting liquid in life environment. The project is direct on creation data base about ecological totool, data base of notion and on internet inform about new knowledges from this area.
- CEEPUS PL-0001-99/00 Geometrical Surface Structure of Machine (Janáč, A.)

VI. CO-OPERATION

VI.1 National Co-operation

- Faculty of Mechanical Engineering, Slovak University of Technology, Bratislava
- Slovak Academy of Science

VI.2 International Co-operation

- National Institute of Standard and Technology, Gaithersburg, USA
- Faculty of Mechanical Engineering, Technical University of Vienna, Austria
- Faculty of Mechanical Technology, Technical University of Gliwice, Poland

VI.3 Contracts with Industry

- VUNAR a.s. Nové Zámky,
- MAGNA SLOVTECA s.r.o. Nové Mesto nad Váhom,
- Jacobs Suchard Figaro a.s. Bratislava,
- SKLOPLAST a.s. Trnava,
- SACHS Slovensko s.r.o. Trnava,
- TZK a.s. Trnava,
- TOMA Trnava,
- TRENS Trenčín,
- IDC Holding Trnava.

VII. THESIS AND DISSERTATIONS

Supervisors are written in brackets. All theses and dissertations without notice are written in Slovak language.

VII.1 Graduate Thesis

BEŇOVSKÝ, B.: Preparation of teaching aid "setting-up-fixation"(Békés,J.)
BERÁK,R.: Tightening of critical bolted connections (Valentovič,E.)
BOČKAJ,I.: design and production of contoured parts on NC and CNC machines in VW Bratislava (Peterka, J.)
BÓNIŠOVÁ, M.: Production technology for parts with 3D surfaces in car production (Slanina,F.)
DÍBALOVÁ,M.: Increasing of quality and productivity in company CSM Ltd Tisovec(Janáč,A.)
GAVENDA, A.: Wear of cutting wedge and machined surface roughness in dependence on machined surface (Borovička,M.)
GOGA, M.: Micromachinability (Lipa,A.)
GUNČAGa,D.: Project of workplace for satellite machining by arrangement of machines into production cell (Jašurek,J.)
HOLOŠ,P.: Rationalization of doubled body part No.215347 for Mevo technology Ltd. (Janáč,A.)
KĽOCOVÁ,K.: Geometrical accurary of holes production by drilling operations (Gorog,A.)
KRÁLIK,R.: Machinability by finishing machining methods (Lipa,Z.)
KRÁSNY, M.: Project of utilization of CA technologies in food industry dies production (Peterka,J.)
MATÚŠ,V.: Titan alloys machinability in aircraft industry in company Widia Slovensko Ltd.(Slanina,F.)
MIHÁL, A.: Hole production inaccuracy analysis based on production deviation measurement (Maduda,M.)
PRÍSAŽNÝ, P.: Ultrasonic intensification of machining methods (Štefánek,M.)
ŠICOVÁ,M.: Classification of machinery technology production methods (Békés,J.)
TEREKOVÁ, J.: Turned parts circularity deviation (Gorog,A.)
TOMÁNEK, R.: Project of knife sharpening for cutting of glass fibres in joint –stock-company in Skloplast (Valentovič,E.)
VÁCLAV, Š.: Machinability of Cr-Ni steels (Charbula,J.)
NÉMETH,R.: Designation of roll-bearings rolls measuring uncertainly (Borovička,M.)

VII.2 Dissertations (Ph.D.)

- GÖRÖG Augustín: Simulation of surface roughness after singleoscillation superfinishing.

VII.3 Habilitations (Assoc. Prof.)

- VALENTOVIČ Ernest: Contribution to general theory of discrete production processes. Complete works.
- ŠTEFÁNEK Michal: Technological equipment for assembly. Complete works.

VIII. OTHER ACTIVITIES

VIII.1 Visits of Staff Members to Foreign Institutions

- TU Vienna,
- BUTE Budapest,
- WUT Warsaw,
- ČVUT Praha,
- VUT Brno,
- TU Berlin,
- VŠB Ostrava,
- TU Kielce,
- TU Maribor,

- IOS Krakov

VIII.2 Foreign Visitors to the Department

- Prof. P. H. Osanna, Ass. Prof. Durakbasa, Prof. K. Kocman

VIII.3 Organised Conferences, Seminars and Workshops

- Seminar Tools for progressive machining

IX. PUBLICATIONS

VALENTOVIČ Ernest : *Fundamentals of assembly.* Bratislava: STU, 2000.136 s.

BOROVIČKA Milan: Law of resistance annealed platinum for thermometer sensor. In: Jemná mechanika a optika, 2001, č. 7-8, s. 251 – 254.

PETERKA Jozef : Application of cold air cooling by production of Cu-electrodes. In: *Materials Science and Technology, 1, 2001, č. 1, www.mtf.stuba.sk/casopis/casopis.html*

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PETERKA Jozef – JANÁČ Alexander : State of the art CAD/CAM and CNC technologies help by oririn of new bikes. In: Strojárstvo v hospodárstve a priemysle, 5, 2001, č. 9, s. 16 – 17.

JANÁČ Alexander – VALENTOVIČ Ernest : Complex structures of CNC machines and robots. In: Strojárstvo v hospodárstve a priemysle, 5, 2001, č. 11, s. 54.

PETERKA Jozef: Relation between HSM and CA technologies.In: *Doktorandský seminár : Automatizácia a počítačová podpora predvýrobných etáp, výrobných a technologických procesov*. Žilina: ŽU, 2001, s. 18 – 22.

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DEPARTMENT OF MANAGEMENT AND QUALITY ENGINEERING

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I. STAFF

Professors:	2	Research Fellows:	2
Assoc. Professors:	6	Technical and Admin. Staff:	3
Senior Lecturers:	14	PhD Students:	15
Lectures:			

II. EQUIPMENT

II.1 Teaching and Research Laboratory

- Personal Computer Laboratory

II.2 Special Measuring Instruments and Systems

- Testing system for psychology studies Ergometer
- Basic technical equipment for labour environment studies

III. TEACHING

III.1 Bachelor Study (Bc.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Enterprise Economy	1	3-2	Ščepka
Statistical Methods	1	2-2	Kučerová
Enterprise Management	1	2-2	Čambál
Accounting	1	2-3	Mulíková
Marketing	2	2-2	Jedlička
Information System	2	2-3	Ončák
Operational Research	2	2-3	Štrpka
Industrial Technologies	2	3-2	Velíšek
Production Management	2	2-2	Čambal
Personnel and Social Programme	3	3-1	Holková
Computer Aided Management	3	1-3	Šrubařová
Logistics	3	2-2	Červeňan
Economical Analysis	3	3-3	Doubková
Investment Development	3	3-3	Sablik
Ergonomic	4	2-2	Sablik
Information Systems Automation	4	2-4	Dobrotka
Engineering Metrology	4	2-2	Maduda
Value Analysis	4	2-2	Molnár
Machines and Equipment Maintenance	4	2-2	Burcl
Final Project	4	2-1	
Plant Information System	4		
Taxation			

III.2 Graduate study (Ing.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Management of Enterprise Development	7	3-2	Molnár
Accounting	7	2-1	Mulíková
Information Systems Automation	7	2-3	Dobrotka
Operationel Research	7	3-3	Štrpka
Marketing	7	3-1	Brezník
Production Management	8	3-3	Čambál
Management and Banking	8	3-2	Červeňan
Taxation	8	2-2	Mulíková
Enterprise Economy	6	3-2	Ščepka
Accounting in Enterprise Activities	9	0-3	Horváthová
Economical Analysis	9	2-2	Doubková
Finances and Banking	9	2-2	Nováková
Quality Management	9	3-2	Linczényi
Enterprise Management	6	3-2	Čambál
Operational Research	7	3-3	Štrpka
Management of Enterprise Development	7	3-2	Molnár
Quality Management	7	3-2	Linczényi
Tools and Techniques of Quality Management	7	2-2	Šalgovicová
Logistics in Quality Assurance	8	2-2	Brezník
Marketing in Quality Management	8	3-2	Jedlička
Production Management	8	3-3	Čambál
Statistical Methods of Quality Inspection	8	2-3	Kučerová
Personal Management	8	2-2	Holková
Information Systems	7	2-2	Oncák
Computer Operating	8	0-2	Šrubarová
Taxation	8	2-1	Mulíková
Certification of Products, Quality Control System and Personnel	9	1-1	Linczényi
Statistical Methods of Quality Inspection	9	2-3	Kučerová
Computer Aided Quality Control	9	2-2	Dobrotka
Logistics	9	2-2	Červeňan
Final Project	9	0-5	

IV. RESEARCH TARGETS

- Progressive forms of managers education
- Quality control in industrial enterprises
- Quality control in service enterprises
- Value management application
- Advanced information technologies implementation
- Environmental Management

IV. EDUCATION AND RESEARCH PROJECTS

V.1. Institutional Projects

- Economics problems of industrial plants ecologysation in market economy

- Quality assurance system at production and maintenance organisations in aviation industry
- Quality of communication system as Agent Influencing Competitiveness of Small and Medium Companies

V.2. National Grants (VEGA, KEGA)

- Synchronisation of project management education at Slovak universities with methodology applied in EU countries (KEGA 990)
- Quality assurance system at production and maintenance organisations in aviation industry (VEGA 1/7166/20)
- Quality of communication system as Agent Influencing Competitiveness of Small and Medium Companies (VEGA 1/7162/20)

V.3. International Projects

- Co-operation with TU Košice on Program TEMPUS – STAMP (University Utrecht University Palermo)
- IB – JEP – 14092, Modul „Quality Professional"

VI. CO – OPERATION

VI.1. National Co-operation

- Technical University Košice
- Technical University Zvolen
- Faculty of Engineering Bratislava
- Faculty of Engineering Žilina

VI.2. International Co – operation

- Department of Work Sciences, Brandenburg Technical University, Cottbus, Germany
- Agricultural University of Poznań Chair of Economic and Wood Industry Management, Poznań, Poland
- Institut für Festkorper und Werkstofforschung, SRN, Dresden

VI.3. Contracts with Industry

- Contract with Tatravagonka, a.s. Poprad „Monitoring the Processes Quality Costs"
- Contract with LOT Trenčín „Quality Assurance in Maintenance Organisation"
- Contract with Slovakofarma a.s. Hlohovec „Validation of company management system"

VII. THESES AND DISSERTATIONS

Supervisors are written in brackets. All theses and dissertations without notice are written in Slovak language.

VII.1. Graduate Theses (Number of the Thesis - 290)

Fields in which the Thesis are elaborated:

- Field of quality control systems
- Costs analysis
- Value analysis application
- Company organisational models
- Enterprises marketing management
- Operational research application
- Controlling application

VII.2. Dissertations Ph.D)

VII.3. Habilitations (Assoc.Prof.)

VII.4. Other Activities

VII.5. Visits of Staff Members fo Foreign Institutions

- TU Dresden, Germany
- TU Utrecht, Holland

VII.6. Foreign Visitors to the Department

VII.7. Organised Conferences, Seminars and Workshops

- Specialised course in the field of work rationalisation
- Seminars in the field of project management

VIII. OTHER ACTIVITIES

VIII.1 Visits of Staff Members to Foreign Institutions

VIII.2 Foreign Visitors to the Department

VIII.3 Organised Conferences, Seminars and Workshops

IX. PUBLICATIONS

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DEPARTMENT OF MATERIALS ENGINEERING

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I. STAFF

Professors:	4	Research Fellows:	2
Assoc. Professors:	3	Technical and Admin. Staff:	9
Senior Lecturers:	11	PhD Students:	8
Lecturers:	0		

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- X-ray Diffraction Laboratory
- Electron Microscopy Laboratory
- Light Microscopy Laboratory
- Laboratory of Physical Measurement
- Mechanical Testing Laboratory
- Heat Treatment Laboratory
- Laboratory of Hard Magnetic Materials
- Laboratory of Vacuum and Plasma Metallurgy
- Laboratory of Isostatic Pressing

II.2 Special Measuring Instruments and Systems

- Transmission Electron Microscopes JEOL 200 CX, TESLA BS 500
- Scanning Electron Microscopes TESLA BS 300, TESLA BS 343
- X-ray Diffractometers DRON 3M, HZG 4, MIKROMETA 2
- Light Microscopes NEOPHOT
- Induction Magnetometer
- Image Analyser MINI BVS
- FPZ 100/l Direct Stress Testing Machine
- EDZ 40 dyn Direct Stress Lasting Machine
- Hardness Testers ZWICK 3212, RB 1, HPO 250, HPO 3000
- Pendulum Impact Testing Machines PS 30
- Isostatic Press QICH 16

III. Teaching

III.1 Bachelor study (Bc.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Material Science I	2	3-3	Grgač,Hrivňáková
Materials Science II	3	3-3	Šimkovič

III.2 Graduate study (Ing.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Physical Metallurgy	4	3-2	Hrivňáková
Experimental Methods of Material Science	6	2-2	Čaplovič
Plasma and Vacuum Technology	6	1-1	Žitňanský
Technology of Heat Treatment and Surfacing	7	2-2	Grgač
Processes of Heat Treatment and Sintering	7	2-2	Grgač
Theory of Phase Transformation	7	2-1	Hrivňáková
Mechanical Testing of Materials	7	2-2	Hrivňák
Thin layers and surface spectroscopy	7	2-1	Čaplovič
Information Technology in Materials Science	7	1-2	Čaplovič
Experiment planing and evaluating	7	2-1	Varkoly
Basics of Stereology Metallography	7	2-2	Martinkovič
Vacuum Technology	8	3-2	Žitňanský
Experimental Methods of Material Research I	8	1-2	Čaplovič
Structure and Properties of Plastics	8	2-2	Martinec
Corrosion, Tribology and Surfacing	8	2-2	Opravil
Utility Properties and Choice of Materials	8	3-2	Hrivňák
Machinery of Plastic Technology	8	2-1	Horváth
Composite Materials	9	2-2	Šebo
Experimental Methods of Material Research II	9	1-3	Čaplovič
Degradation Processes and Time Life Prediction	9	2-2	Hazlinger
Final Project	9	0-5	all KMI
Fractography	9	2-1	Bošanský
Radiation Degradation of Materials	9	2-1	Hrivňák
Vacuum Technology in Heat Treatment	9	1-2	Žitňanský
Advanced Methods of Heat Treatment	9	3-2	Hazlinger
Safety of Atomic Power Plant Equipment	9	2-1	Kupča
Projecting of Production Processes and Systems in Heat Treatment	9	2-2	Onderčanin
Theory and Technology of Plastics Treatment	9	3-2	Horváth
Metrology and Testing of Plastics	9	2-2	Grom
Bonding of Plastics	9	2-1	Martinec
Production Plastics Tools	9	3-2	Horváth

IV. RESEARCH TARGETS

- Vacuum metallurgy, metal rafination, crystallisation of metals, materials science
- Tool steels and nickel alloys
- Biocompatible materials

- Powder metallurgy
- Structure and weldability of polymers
- Weldability of steels
- Hard magnetic materials
- Boronizing of steels

V. EDUCATION AND RESEARCH PROJECTS

V.1 Institutional Projects

- Structure stability, properties and weldability of supermartensitic stainless steels. (Hrivňák, I.)
- Study of low interstitial elements steels grain boundaries. (Hrivňáková,D.)
- Innovation of an equipment for metallurgy preparing of biomaterials. (Žitňanský, M.)

V.2 National Grants (VEGA, KEGA)

- Research of the Method of Preparation of Human Joints and Sceleton. VEGA 1/7170/20, (Žitňanský, M.)
  Research and development of a model total hip replacement /THR/ and spinal fixator with the goal to construct at prevalence measure so working process utilising contemporary research knowledge of top Slovak specialists in materials research and orthopaedic surgery.
- Weldability of High Strenght Steels - II . VEGA 1/7168/20, (Hrivňák, I.).Welding and weldability problems of electron beam welding of tailored blanks for car industry was investigated. Investigation of the submerged arc pulsed current welding of steels. Occurrence of M-A (martensite-austenite) constituent in high strenght steel welds. Investigation of mecahnism of the M-A formation and its effect on impact properties in various high strenght steels.
- Microstructural evolution in high-alloyed alloys in the process of rapid solidification and consecutive thermo-deformational operations. VEGA 1/7339/20, (Grgač, P.). Investigation of complex microstructural changes during rapid solidification at atomising the liquid metals of high alloy eutectic alloys, and subsequent technological operations. The goal is to describe the evolution of original, rapidly solidified particles during thermo-deformational compacting, and following heat treatment processes.
- Dimension and structural quality of compound copolymer parts prepared by of injection mouldeding technology and their technology and structural conditions of weldability. VEGA 1/8268/01 (Martinec, L.). The analysis of choose properties of compound copolymers, structure and properties of injection moulded parts. The preparation of patterns. The alterantive for experiment. The solution of experiment . Analysis of weldability of the spectimens.

V.3 International Projects

- CEEPUS Project PL 0013-00/01 (Žitňanský, M.)

VI. CO-OPERATION

VI.1 National Co-operation

- AVANTEK Nové Mesto nad Váhom. Laser marking.
- FÚ SAV Bratislava (Academy of Science). Thermal analysis.
- ÚMMS SAV (Academy of Science) Bratislava. Isostatic pressing.
- VÚZ Bratislava. Weldability of steels.
- ZŤS MATEC Dubnica n./Váhom. Advanced cutting.
- Atomic Power Plant Research Institute VUJE a.s. Trnava. Atomic energy materials.
- IMR SAS Košice. Grant project.
- FNE SUT Bratislava. Grant project.
- VUSAPL Nitra. Grant project.
- Orthopedic Clinic FN LF UK Bratislava. Grant project.

VI.2 International Co-operation

- Institute of Solid State and Research Materials IFW Dresden Germany. TEM microscopy.
- Uniplast Brno Czech Republic & TGM Wien Austria. Computer aided and polymer and environmental engineering.
- Military Academy Brno Czech Republic. Nitriding of steels.
- Silesian Technical University in Gliwice Poland. Grant project.
- National Academy of Science Minsk Belarussia. Grant project.
- Research Institute of K.E.Ciolkovski Moskva Russia. Grant project.

VI.3 Contracts with Industry

- SACHS ltd. Trnava - microanalysis of materials
- Slovnaft ltd. Bratislava - material expertise, welding expert opinion
- SLOVALCO ltd. Žiar n. Hronom- microanalysis of materials
- SE a.s., Atomic power plant Mochovce – material analyse
- VSŽ Košice ltd. - laser welding of sheet metal development
- PFS ltd. Brezová - expertise of heat treatment of springs
- HChZ Nováky – material expertise
- Elektrokarbon Topoľčany – material expertise

VII. THESES AND DISSERTATIONS

Supervisors are written in brackets. All theses and dissertations without notice are written in Slovak language.

VII.1 Graduate Theses

BARTEKOVÁLenka: Valuation of carbon brushes attributes (Čaplovič,)
GABRIŠ Jozef: Solidification microstructure analysis of the rapidly solidified powder particles of Ch3F12 alloy (Kusý,)
GUZY Peter: Effect of boronizing medium on microstructural and phase composition of K 190 steel (Sedlická)

HUDEC Peter: Study of the weldability of structural steel 11 503 (Hrivňák, KMI)
KATRÍKOVÁ Jana: Monitoring of the reverse reaction while heating the chosen types maraging steel (Čaplovič)
KRČOVÁ Ľubica: Structural stability of duplex stainless steel 17 381 (Hrivňák)
MANET Ján: Analysis of the mechanical properties of 12 071 tempered sheets-steel (Kadlec)
MINÁRIK Juraj: Microstructural characteristics of directionally solidified Ni-base superalloys (Pinke)
NEMČEK Marek: Study of thermal stability of the metastable austenite in rapidly solidified powder of the tool steel Ch12MF4 (Moravčík)
PAVLÍČKOVÁ Martina: Nickel based high-temperature composites (Martinkovič)
POLÁČKOVÁ Alexandra: Influence of pulse shielded arc welding on structure and properties of welds made of E 700 TS steel (Hudáková)
VÖRÖSOVÁ Silvia: Structural stability of austenitic stainless steel 17 341.4 (Hrivňák)
BABINČÁK Peter: Influence of gas-assist injection molding on the quality of molded parts (Martinec)
BIELIK Stanislav: Application of selected types of steel for active tools parts for working up plastic by injection technology (Martinkovič)
BZDÚŠEK Peter: Electrical and dielectrical properties of some types of rubber (Kubliha, KF)
DANKOVIČOVÁ Monika: Structure of PA6 polymer matrix composite reinforced with glass fibres (Martinkovič)
HLADKÝ Branislav: Conception of injection tool for conical-bearing cages with reinforcing polyamid (Horváth)
JANČÍK Radovan: Thermal properties and thermal resistance of polymers (Martinec)
JANEGA Ján: Effect of tempering welded joint of polymer on changes their mechanical and physical properties (Martinec)
JELÍNKOVÁ Miroslava: The ferrite-plastic materials changes under mechanical waving effect at higher temperatures conditions (Sorentinyová)
MACHÁLKOVÁ Andrea: The ferrite-plastic materials changes under magnetic field influence at higher temperatures (Kozík, KF)
NEDOBOVÁ Andrea: Ageing of plastic (Kozík, KMI)
ROVENSKÁ Marcela: The structural analysis of composite based on polypropylene (Martinkovič)
ŠALING Juraj: The influence of abrasive roughness on the quality of basic material in plasma spraying (Popardovská, ÚMMS SAV Bratislava)
ŠLENCOVÁ Martina: Gas-assist injection molding of polymers (Martinec)

VIII. OTHER ACTIVITIES

VIII.1 Visits of Staff Members to Foreign Institutions

- Sillesian Technical University, Gliwice, Poland – professor two week
- National Academy of Science, Minsk, Belorussia – professor 3 days
- Research Institute of K.E.Ciolkovski, Moskva, Russia – professor 4 days
- VŠB TU Ostrava, Czech Republic – professor one week
- Linn Eschenfelden, Germany – professor one week
- IFW Dresden, Deutchland – two PhD students three month and professor one week
- University of Ljubljana, Slovenika –PhD student one week
- FEI Philips, Eidhoven, Nederland – two PhD students and professor three days
- University Gent, Belgium – PhD student three month

VIII.2 Foreign Visitors to the Department

- Wetzig Klaus, prof. Dr., IFW Dresden Germany – three days
- Polajna, P. Ivan, associate Prof. Dr., University of Ljubljana Slovenia – two days
- Hrubý Vojtech, prof. Dipl. Ing., VA Brno Czech Republic – two days
- Jurči Peter, Ph.D., Ecosond Prague Czech republic – a few times two days

- Stolař Pavel, Ph.D., ecosond Prague Czech republic – one day
- Two graduate students of University of Ljubljana Slovenia – two weeks

VIII.3 Organised Conferences, Seminars and Workshops

- Welding of Structural Steels - seminar
- Microstructure and Heat Treatment of Metals - seminar

IX. PUBLICATIONS

MARTINKOVIČ Maroš – HUDÁKOVÁ Mária – MORAVČÍK Roman: Materials Science II – Practices. Bratislava: STU, 2001. 197 s.

BEHULOVÁ, M. – MORAVČÍK, R. – KUSÝ, M. – ČAPLOVIČ, Ľ. – GRGAČ, P. – STANČEK, L.: Influence of atomisation on solidification microstructures in the rapidly solidified powder of the Cr-Mo-V tool steel. In: *Materials Science and Engineering*, A304-306, 2001, pp. 540 – 543.

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FENDRICH Emil – DUDA Marcel – SIROTA Ján – ČAPLOVIČ Ľubomír:. Catalytic oxidation of waste water by airoxygen. In: *VEDECKÉ PRÁCE Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave*: Research papers Faculty of Materials Science and Technology Slovak University of Technology in Trnava. Bratislava: STU, 2001, zväzok 11, s. 35 – 38.

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MARÔNEK Milan – HUDÁKOVÁ Mária : Pulsed submerged arc welding of high strenght steels. In: Zváranie – Svařování, 50, 2001, č. 11-12, s.253 – 257.

KOLEŇÁK Roman – ŽÚBOR Peter : Study of interface of soldered joint between ceramics and metal. In: Zváranie – Svařování, 50, 2001, č. 11- 12, s. 251 – 253.

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DEPARTMENT OF MATHEMATICS

Head of the Department:
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I. STAFF

Professors:	1	Research Fellows:	0
Assoc. Professors:	5	Technical and Admin. Staff:	0
Senior Lecturers:	19	PhD Students:	5
Lecturers:	0		

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- 2 special teaching rooms

II.2 Special Measuring Instruments and Systems

- 13 computers

III. TEACHING

III.1 Bachelor Study (Bc.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Mathematics I	1	3-2	Šišolák
Mathematics II	2	3-2	Červeňanský

III.2 Graduate Study (Ing.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Fundamentals of Computer Graphics	2	3-2	Zámožík
Mathematical Statistics	5	3-2	Halabrín
Applied Mathematics	5	2-2	Halabrín
Mathematics I	1	5-4	Šišolák
Mathematics II	2	3-4	Červeňanský
Linear algebra	3	2-2	Hlc, Halabrín
Applied Mathematics III	5	2-2	Urbaníková
Applied Mathematics I	5	2-2	Hlc
Insurance and Financial Mathematics	6	2-1	Urbaníková

IV. RESEARCH TARGETS

- Properties of solutions of ordinary differential equations
- Metrics and topological properties of real functions
- Computer graphics - geometry problems
- Fractal and chaos
- Graph theory - special types of graphs
- Geometric interpolation of massifs
- Image processing - algorithms
- Fuzzy sets and systems

V. RESEARCH PROJECTS

- Functional analysis and quantitative theory of ordinary differential equations
- Geometric and related structures used in computer techniques

VI. COOPERATION

Supervisors are written in brackets. All theses and dissertations without notice are written in Slovak language.

VII. THESES

VII.1 Graduate Theses

VII.2 Dissertations (Ph.D.)

VII.3 Habilitations (Assoc. Prof.)

VIII. OTHER ACTIVITIES

- Distance Education Courses
- 2 Courses in Mathematics
- Mathematics for Engineers
- Seminar: Teaching of Mathematics in Bachelors' Courses
- Pre-studies Courses of Mathematics
- Computational Geometry and Related Problems
- International Conference: Mathematics in Technical Education

VIII.1 Members of Department in Aboard

- Jaroslava Trubenová, Edita Vranková

VIII.2 Invited Lectures from Aboard

- Prof. František Bubeník, Czech Technical University in Prague
- Prof. Roman Bek, Czech Technical University in Prague
- Prof. Jaroslav Černý,CSc., KM FSv , Czech Technical University in Prague
- Jiří Dočkal, ÚM FS Technical Univerzity in Brno
- Prof. Zděnek Jankovský, FS Technical Univerzity in Brno
- Prof. Milada Kočandrlová, KM FSv , Czech Technical University in Prague
- Prof. Anežka Wohlmuthová, KM FSv ČVUT, Czech Technical University in Prague.
- Prof. Čeněk Zlatník, Csc. KTM FSI ČVUT, Czech Technical University in Prague

IX. PUBLICATIONS

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MASÁROVÁ Renáta : On statistical convergenve of functions.In: *The 1st International l conference on applied mathematics and informatics at universities'2001. Zborník prednášok z medzinárodnej vedeckej konferencie.* Bratislava: STU, 2001, s. 93 – 97.

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DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS

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I. STAFF

Professors:	1	Research Fellows:	0
Assoc. Professors:	1	Technical and Admin. Staff:	7
Senior Lecturers:	10	Ph.D. Students:	1
Lecturers:	0		

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- Gymnasium
- Fitness Centre
- Swimming Pool
- Track and Fields
- Tennis Courts and Tennis Hall
- Stadium (Baseball, Softball)

II.2 Special Measuring Instruments and Systems

- Dynamometers
- Bicycle-ergometer

III. TEACHING

III.1 Bachelor Study (Bc.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Physical Education and Sports	1-6	2-1	Adamec, Blaškovič, Glesk

III.2 Graduate Study (Ing.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Physical Education and Sports	1-6	2-1	Adamcová, Gálik, Hlavatý L+R , Merica, Rafaj, Morvay, Novotná, Lukačovičová, Zaťovičová
Olympism	1	2-1	Glesk, Merica

IV. RESEARCH TARGETS

- Physical Culture and Fitness of People

V. EDUCATION and RESEARCH PROJECTS

V.1 Institutional Projects

- The evaluation of somatometry and physical fitness of students by the system of EUROFIT. No. 861. (Glesk, P.)
- The evaluation of the level and the changes of physical fitness in selected sports. No. 862. (Merica, M.) – (successfully finished)

V.2 National Grants (VEGA, KEGA)

V.3 International Projects

VI. CO-OPERATION

VI.1 National Co-operation

VI.2 International Co-operation

VI.3 Contracts with Industry

VII. THESES AND DISSERTATIONS

Supervisors are written in brackets. All theses and dissertations without notice are written in Slovak language.

VII.1 Graduate Theses

VII.2 Dissertations (Ph.D.)

VII.3 Habilitations (Assoc. Prof.)

VIII. OTHER ACTIVITIES

VIII.1 Visits of Staff Members to Foreign Institutions

VIII.2 Foreign Visitors to the Department

VIII.3 Organised Conferences, Seminars and Workshops

- Winter training camp for students
- Summer training camp for students
- Seminars:

- „The Management of Physical Education and Sport"
  „The testing of motor abilities by the Eurofit tests and other methods."

IX. PUBLICATIONS

GLESK Pavol: The motor activies and the lifestalye of students of the Faculty of Materials Science and Technology.In: *VEDECKÉ PRÁCE Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave*: Research papers Faculty of Materials Science and Technology Slovak University of Technology in Trnava. Bratislava: STU, 2001, zväzok 10, s. 37 – 42.

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MERICA Marián : The management of the university fit-centre. In: *MANAŽMENT TELESNEJ VÝCHOVY A ŠPORTU*. Bratislava: STU, 2001, s. 76 – 81.

GLESK Pavol: The characteristics of the pattern implemented in physical education and sport. In: *MODELY A FUNKČNOSŤ VÝUČBY SPOLOČENSKOVEDNÝCH DISCIPLÍN NA VYSOKÝCH ŠKOLÁCH. Zborník referátov z 5.vedeckého seminára*. Bratislava: STU, 2001, s. 48 – 54.

MERICA Marián: Why has the interest in condition bodybuilding of the university students growing character ? In: *MODELY A FUNKČNOSŤ VÝUČBY SPOLOČENSKOVEDNÝCH DISCIPLÍN NA VYSOKÝCH ŠKOLÁCH. Zborník referátov z 5.vedeckého seminára*. Bratislava: STU, 2001, s. 55 – 60.

MERICA Marián: How to increase the physical load in condition body building of the university students. In: *OPTIMALIZÁCIA ZAŤAŽENIA V TELESNEJ A ŠPORTOVEJ VÝCHOVE : Zborník referátov z odborného seminára*. Bratislava: STU, 2001, s. 90 – 94.

GLESK Pavol: The measuring of physical load of physical education lesson of SUT students and TU students from the level of the anaerobic thresholdIn: *OPTIMALIZÁCIA ZAŤAŽENIA V TELESNEJ A ŠPORTOVEJ VÝCHOVE : Zborník referátov z odborného seminára*. Bratislava: STU, 2001, s. 55 – 57.

GLESK Pavol – HLAVATÝ Rastislav: The content structure of physical education and sport at the faculty of Materials Science and Technology SUT in Trnava.In: *TELESNÁ VÝCHOVA A ŠPORT NA VYSOKÝCH ŠKOLÁCH V SLOVENSKEJ REPUBLIKE : Zborník vedeckých prác.* Nitra: STU. 2001, s. 37 – 41.

MERICA Marián – GLESK Pavol: Chosen parameters of swimming abilities of the SUT students and TU students. In: *TEORETICKÉ A DIDAKTICKÉ PROBLÉMY PLÁVANIA A PLAVECKÝCH ŠPORTOV. Zborník referátov prednesených na VII.vedeckom seminári s medzinárodnou účasťou.* Bratislava: UK, 2001, s. 18 – 21.

HLAVATÝ Rastislav – HLAVATÝ Ladislav: The importance and the use of technique and swimming drills in swimming. In: *TEORETICKÉ A DIDAKTICKÉ PROBLÉMY PLÁVANIA A PLAVECKÝCH ŠPORTOV. Zborník referátov prednesených na VII.vedeckom seminári s medzinárodnou účasťou.* Bratislava: UK, 2001, s.40 – 43.

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DEPARTMENT OF PHYSICS

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I. STAFF

Professors:	2	Research Fellows:	2
Assoc. Professors:	2	Technical and Admin. Staff:	5
Senior Lecturers:	14	PhD Students:	4
Lecturers:	0		

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- Laboratory of Physics I-II; teaching of the mechanics, thermodynamics, and electromagnetism
- Laboratory of Physics III; teaching of the quantum mechanics and the nuclear physics
- Laboratories of Electrotechnics; teaching of the elementary electrotechnics
- Laboratory of Interferometry techniques, applications of interferometry to elastic and elastic - plastic properties investigations
- Laboratory of electron beam; processing specific system and unique techniques enabling the welding of large samples by the electron beam in the high vacuum
- Laboratory of advanced materials; effects of the process technology on microstructure, conductivity, dielectric response, mechanical, dilatation properties and optical properties of ceramics, glasses, nano-composites and superionic fluoride eutectic composites may be investigated

II.2 Special Measuring Instruments and Systems

- Impedance spectroscopy in the temperature range 20-600 °C
- Modular spectroscopy in the frequency range 1 - 106 Hz , up to 300 °C
- Flow Sorb, fy. Micrometrics, determination of the surface of the powder systems, accuracy 0.5 - 3%
- Electron beam welding apparatus FL 7.5 (high vacuum 10-5 Pa, power required 7.5 kW)

III. TEACHING

The objective of teaching physics is to train engineers who should be competent to solve problems concerning a wide range of industry including materials engineering, industrial technologies, management and ecology, information technology, etc. The study involves a necessary theoretical introduction into subjects that provides general engineering education followed by specialised courses. The topics of lectures, laboratory and seminar exercises were choosen to provide students with useful knowledges from the field of physics. At the some time students obtain fundamentals for creative work in engineering practice.

III.1 Bachelor Study (Bc.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Physics I	2	3-3	Ožvoldová

III.2 Graduate Study (Ing.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Physics II	3	3-2	Kalužný, Garaj
Laboratory experiments of Physics	3	0-2	Labaš
Physics III	4	3-3	Ožvoldová
Electrotechnics	4	3-3	Kosorín
Solid State Physics	6	2-2	Mináŕik
Ceramics Materials	9	2-2	Kozík

IV. RESEARCH TARGETS

In the Year 2001 the Department of Physics has continued research activities . Projects of the Department follows up with previous research work, focused on investigation of relations between preparatory conditions, microstructure and physical properties of ceramics (based on ZrO_2 and basalt), ceramic composites, superionic fluoride composites and glasses (system TeO_2 - ZnO, TeO_2 - ZnO - $ZnCl_2$, TeO_2 - $PbCl_2$ etc.), rubber and ferrite - plastic composites are the main research topics . The aim of this research area is to contribute to the fundamental understanding of materials. This is carried-out by investigation of materials structure, modelling and simulation.

V. EDUCATION and RESEARCH PROJECTS

V.1 Institutional Projects

- Experimental measurement and computer modeling of physical properties of progressive materials. No. 816 (Labaš, V.)
- Physical properties of optical, dosimetric, ferroelectric and superionic materials based on oxides, chalcogenides and halogenides of heavy metals. No 818, (Ožvoldová M.)

V.2 National Grants (VEGA, KEGA)

- Electrical, dielectrical, optical and mechanical properties of inhomogeneous and modulated materials. No 1/8309/01, (Trnovcová, V.)

V.3 International Projects

- TASUM - Training and Advanced Study of University Management (Kalužný, J.)

  The project prepare the study materials for theoretical preparation of the high school management workers in the all areas of management. The purpose of the project is

education of the chiefs of the academic institutions with theoretical knowledge of the management, which will be able to lead the institutions on the all levels.

- IDEP - Internet Distance Education Program, No G-582/2000 (Ožvoldová, M.)

  The project prepare the on-line study materials for education of Physics of the high school. This is an experimental program in course delivery using the World Wide Web.

VI. CO-OPERATION

VI.1 National Co-operation

- Institute of Physics of the Slovak Academy of Sciences.
- Model and numerical simulation of technology, structure and properties of advanced materials, in co-operation with the Department of Applied Mechanics.
- Investigation of the luminescence properties of zirconia ceramics and glasses in co-operation with the Department of Solid State Physics, Comenius University in Bratislava.
- Faculty of Mechanical Engineering ŽU Žilina
- Faculty of Mechanical Engineering STU Bratislava
- Faculty of Chemical Engineering STU Bratislava
- Faculty of Industrial Technologies, University of Trenčín

VI.2 International Co-operation

- The preparation of the experimental materials (glass, ceramics) in cooperation with the Laboratory of Inorganic Materials, common working-place of Institute of Inorganic Chemistry, Academy of Sciences and Institute of Chemical Technology, Prague, Czech Republic
- Centre d'Etude des Matériaux Avances, University of Rennes, France
- Institute of Crystallography, Russian Academy of Sciences, Russia
- Institute of Solid State Physics, Russian Academy of Sciences , Russia
- Institute of Physics, Faculty of Electrical Engineering and Computer Science, Brno University of Technology

VI.3 Contracts with Industry

- Sony Slovakia, Trnava
- Slovak Power, Jaslovské Bohunice Nuclear Power Plant
- Research Institute of Plastic Materials in Nitra

VII. THESES AND DISSERTATIONS

Supervisors are written in brackets. All theses and dissertations without notice are written in Slovak language.

VII.1 Graduate Theses

PÍPA, J.: Interactive testing by Internet (Labaš, V.)

BZDUŠEK, D.: Electrical and dielectrical properties of some types rubber (Kubliha, M.)

VII.2 Dissertations (PhD)

- Jančuška, I.: Methods and principles of navigation by physical fields. Trnava, 2001.

VII.3 Habilitations (Assoc. Prof.)

VIII. OTHER ACTIVITIES

VIII.1 Visits of Staff Members to Foreign Institutions

- Institute of Materials research and Engineering (IMRE), Singapore
- University of Algarve, Faro, Portugal
- University of Aveiro, Portugal
- Centre d'Etude des Matériaux Avances, University of Rennes, France
- Institute of Crystallography, Russian Acade,my of Sciences, Moscow, Russia
- Stanislav Staszic University of Mining and Metallurgy, Faculty of Material Science and Ceramics, Poland
- Institute of Physica, Academy of Sciences, Prague, Czech republic
- University of Pardubice, Faculty of Chemical Technology, Czech Republic
- Laboratory of Inorganic Materials, common working-place of Institute of Inorganic Chemistry, Academy of Sciences and Institute of Chemical Technology, Prague, Czech Republic

VIII.2 Foreign Visitors to the Department

- Ph.D. , Assoc.Prof. Petr Dub – VUT Brno, Czech Republic
- Ph.D., Assoc. Prof. Stanislav Bartoň – MZLU Brno, Czech Republic

VIII.3 Organised Conferences, Seminars and Workshops

- Co-operation in organising the regional Physics Olympiad
- Seminars:
- Program HTML (Ballo,P.)
- Physical properties and application of superionic conductors (Trnovcová,V.)
- Contents and mission of Physics for Bachelor Study at technical Universities and new educative Technologies
- Optical properties of chalcogenide glasses (Kašáková,V.)

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DEPARTMENT OF TECHNOLOGICAL DEVICES AND SYSTEMS

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I. STAFF

Professors:		Research Fellows:	1
Assoc. Professors:	1	Technical and Admin. Staff:	1
Senior Lecturers:	1	PhD Students:	2
Lecturers:	2		

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- CAD Laboratory

II.2 Special Measuring Instruments and Systems

- Modular education system for simulation and analysis of controlling of production systems
-

III. TEACHING

III.1 Bachelor Study (Bc.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Machinery Technologies and Equipment	1	3-2	Lipa, Velíšek,Bača,Balog

III.2 Technological Devices and Systems Graduate Study (Ing.)

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Cuttings Tools	5	2-1	Pecháček
Designing of Production Processes and Systems	8	2-3	Baránek
Cutting Machines and Equipment	8	2-2	Velíšek
Final Project	9	0-5	
Design for Manufacture	8	2-1	Hrubec
NC Machine Programming	7	0-4	Gorog, Košťál
Machine tools	7	2-2	Velíšek
Assembly machines and equipment	7	2-2	Štefánek
Industrial robots and manipulators	8	2-2	Velíšek, Krsek
Fixture and machine tools technological equipment	8	2-2	Baránek

Name of subject	Semester	H/W L-P	Reader's name
Theory of automata	8	2-2	Kolláth
Theory of systems	8	2-2	Vrban
Reliability of production machines and systems	8	2-2	Vrban
Machines and equipment for special technologies	8	2-2	Baránek
Production systems I.	9	2-2	Velíšek
Operation of production systems	9	2-2	Baránek
Prediploma praxis	10		
Diploma project	10		
Machine and tools for plastics processing	8	2-2	Horváth
Forming tools	7	2-2	Ulík
Forming machines	7	2-2	Ulík
Welding and foundry machines	7	3-3	Murgaš
Production systems II	9	2-2	Ulík
Technological devices mechanics	9	2-2	Mudrik

IV. RESEARCH TARGETS

- The Structure of machinery production objects and processes
- Aplication of Ultrasound into Grinding
- Clamping of nonrotary workpieces
- Thematic Network on Manufacturing Technologies

V. EDUCATION and RESEARCH PROJECTS

V.1 Institutional Projects

- Clamping of nonrotary workpieces No.810 (Velíšek,K.)

V.2 National Grants (VEGA, KEGA)

- Structures of machinery production objects and processes VEGA 1/6188/99 MŠ SR, (Janáč, A., Velíšek, K.). Research of structures of machinery production objects and processes is not till now systematic developed. New solutions were created accidentally, method experiment- mistake; experiment-success was used. It influenced prosperity of machinery production. The project is targeted for debugging of this deficiency. Solvers intend, that systematic research will lead to new scientific method of creative proposing of new production structures of processes, machines and equipment and will contribute to development of national economy.

V.3 International Projects

- CEEPUS A-104 2000/2001 Asembly Automation in Manufacturing Engineering (Velíšek, K.)
- CEEPUS A-104 2001/2002 Asembly Automation in Manufacturing Engineering (Velíšek, K.)
- Thematic Network on Manufacturing Technologies, Part B, Specific Programme Promoting Competitive and Sustainable GROWTH

VI. CO-OPERATION

VI.1 National Co-operation

- Faculty of Mechanical Engineering, Slovak University of Technology, Bratislava
- Faculty of Special Technique, University of Trenčin, Trenčín
- Department of Enviromental Studies and Process Control, Technical University of Košice
- Technical University of Žilina, Žilina

VI.2 International Co-operation

- Faculty of Mechanical Engineering, University of Technology, Vienna, Austria
- Faculty of Mechanical Technology, Silesian University of Technology, Gliwice, Poland
- University of Technology and Economics, Budapest, Hungary
- Department of Manufacturing Engineering, Technical univerity of Cluj-Napoca, Romania
- Department of Robotics and Manufacturing System Automation, University of Zagreb, Croatia
- Institute of Production Engineering, University of Maribor, Slovenia
- Faculty of Mechanical Engineering, University of Technology, Brno, Czech Republik

VI.3 Contracts with Industry

- VUNAR Nové Zámky,
- SKLOPLAST Trnava,
- SACHS Slovensko Trnava,
- ŽOS Trnava,
- TOMA Trnava,
- TRENS Trenčín,
- ZTS Dubnica nad Váhom
- VOJUS Považská Bystrica

VII. THESIS AND DISSERTATIONS

Supervisors are written in brackets. All theses and dissertations without notice are written in Slovak language.

VII.1 Graduate Thesis

ČÍŽ Branislav: Control data bank for computer support desing press-room. (Assoc. Prof. Ing. Anton Ulík, PhD.)
DRITOMSKÝ Radovan: Structure of machine tools. (Assoc. Prof. Ing. Karol Velíšek, PhD.)
GRZNÁR Pavol: Modular system of dedicated machines. (Assoc. Prof. Ing. Karol Velíšek, PhD.)
HABERLOVÁ Marcela: Aplication of ultra sound in machine tools. (Ing. František Pecháček)
KRAJNÍKOVÁ Eva: Using, classification and design of assembly transporters. (Ing. Michal Štefánek, PhD.)
KURACINA Marek: 3D parts library of dedicated machines. (Ing. Peter Košťál)
KUSY Milan: Creating of the data bank production machines, for projecting of the pressing room (Assoc. Prof. Ing. Anton Ulík, PhD.)
PÁCHNIKOVÁ Katarína: Structures of modular clamping systems. (Ing. Peter Košťál)

PASTIEROVIČ Miloš: Step-by-step mechanisms for automatic exchange of tools. (Ing. Ernest Valentovič, PhD.)
PONGRÁCZ Koloman: Clamping units for nonrotary workpieces. (Ing. František Pecháček)
ŠIKO Marián: Selection of forming machine with computer support. (Assoc. Prof. Ing. Anton Ulik, PhD.)
ŠRANKO Milan: Assembly by using of forming. (Ing. Michal Štefánek, PhD.)

VII.2 Dissertations (Ph.D.)

VII.3 Habilitations (Assoc. Prof.)

VIII. OTHER ACTIVITIES

VIII.1 Visits of Staff Members to Foreign Institutions

- TU Vienna,
- TU Budapest,
- TU Cluj – Napoca,
- TU Zagreb,
- TU Brno

VIII.2 Foreign Visitors to the Department

- Assoc.Prof. Ferenc Alpek, TU Budapest
- PhD. st. Gizella Keresztesi, TU Budapest
- Prof. Gyenge Csaba, TU Cluj-Napoca
- Assoc. Prof. Gheorghe Gligor, TU Cluj-Napoca
- PhD. st. Stefan Sucuturdean, TU Cluj-Napoca
- Assoc.Prof. Zdenek Kolibal, TU Brno

VIII.3 Organised Conferences, Seminars and Workshops

IX. PUBLICATIONS

VELÍŠEK Karol: Machining tools. Bratislava: STU, 2001. 207 s.

KOŠŤÁL Peter – MATÚŠOVÁ Miriam: Theoretical questions of clamping and fixturing. In: *VEDECKÉ PRÁCE Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave*: Research papers Faculty of Materials Science and Technology Slovak University of Technology in Trnava. Bratislava: STU, 2001, zväzok 10, s. 53 – 56.

PECHÁČEK František: Der Drehbankmesser als das technologische System. In: *VEDECKÉ PRÁCE Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave*: Research papers Faculty of Materials Science and Technology Slovak University of Technology in Trnava. Bratislava: STU, 2001, zväzok 10, s. 81 – 84.

VELÍŠEK Karol – HRUŠKOVÁ Erika : The multispindle operational head design. In: *VEDECKÉ PRÁCE Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave*: Research papers Faculty of Materials Science and Technology Slovak University of Technology in Trnava. Bratislava: STU, 2001, zväzok 11, s. 193 – 196.

KOŠŤÁL, P. – KATALINIC, B. – MATÚŠOVÁ, M.: Analysisng of positioning and clamping cases.In: *Annals of DAAAM 2001.* Vienna: Vienna University, 2001, s. 247 – 248.

VELÍŠEK, K. – KOŠŤÁL, P. – HRUŠKOVÁ, E.: Structural analysis of multispindle heads.In: *Annals of DAAAM 2001.* Vienna: Vienna University, 2001, s. 501 – 502.

HRUŠKOVÁ Erika: The multispindle head design algorithm.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 1.* Bratislava: STU, 2001, s. 218 – 221.

KOŠŤÁL Peter: Determination of cutting parameters for dedicated machines.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 1.* Bratislava: STU, 2001, s. 265 – 270.
PECHÁČEK František : Das Werkzeug als technologische System.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 1.* Bratislava: STU, 2001, s. 314 – 318.

VELÍŠEK Karol – MATÚŠOVÁ Miriam: Analysing of positioning and clamping cases.In: *CO-MAT-TECH 2001: 9.medzinárodná vedecká konferencia: Časť 1.* Bratislava: STU, 2001, s. 402 – 406.

VELÍŠEK Karol – PECHÁČEK František – MIHALČÁK Pavol: Application of power ultrasound by grinding.In: *COMPUTER INTEGRATED MANUFACTURING: Proceedings of the Inaternational Conference CIM 2001.* Zakopane: Wydawnictwo Naukowo-Techniczne, 2001, s. 277 – 283.

VELÍŠEK Karol – KOŠŤÁL Peter: Relations between dedicated machine structure and workpieces.In: *COMPUTER INTEGRATED MANUFACTURING: Proceedings of the Inaternational Conference CIM 2001.* Zakopane: Wydawnictwo Naukowo-Techniczne, 2001, s. 272 – 276.

PECHÁČEK František: Der Fraser als das technologische System. In: *INFORMACIONNYJE TECHNOLOGII V INNOVACIONNYCH PROJEKTACH: Trudy III meždunarodnoj naučno-techničeskoj konferencii.Časť 1.* Iževsk: Izdateľstvo Iževskogo radiozavoda, 2001, s. 113 – 115.

KOŠŤÁL P.: The structure of multispindle operational heads and the generation of its variant design.In: *INFORMACIONNYJE TECIINOLOGII V INNOVACIONNYCH PROJEKTACH: Trudy III meždunarodnoj naučno-techničeskoj konferencii.Časť 1.* Iževsk: Izdateľstvo Iževskogo radiozavoda, 2001, s. 106 – 108.

VELÍŠEK Karol – MATÚŠOVÁ, M.: Algorithm of fixture design.In: *INFORMACIONNYJE TECHNOLOGII V INNOVACIONNYCH PROJEKTACH: Trudy III meždunarodnoj naučno-techničeskoj konferencii.Časť 1.* Iževsk: Izdateľstvo Iževskogo radiozavoda, 2001, s. 158 – 160.

VELÍŠEK Karol – HRUŠKOVÁ, E.: Structures of machine tools.In: *INFORMACIONNYJE TECHNOLOGII V INNOVACIONNYCH PROJEKTACH: Trudy III meždunarodnoj naučno-techničeskoj konferencii.Časť 1.* Iževsk: Izdateľstvo Iževskogo radiozavoda, 2001, s. 87 – 88.

VELÍŠEK Karol – KOŠŤÁL Peter – HRUŠKOVÁ Erika: The structural of multispindle operational heads.In: *7.medzinárodná konferencia. 7th international conference TECHNOLÓGIA 2001. Zborník prednášok,* 2. diel. Bratislava: STU, 2001, s. 462 – 464.

VELÍŠEK Karol – MATÚŠOVÁ Miriam: Algorithm of fixture design.In: *7.medzinárodná konferencia. 7th international conference TECHNOLÓGIA 2001. Zborník prednášok.* 2. diel. Bratislava: STU, 2001, s. 465 – 467.

KOŠTIAL, P. – KALUŽNÝ, J. – KALUŽNÁ, M. – KUBLIHA, M. – MARIANI, E.: Investigation of the changes in ordering of rubber by physical methods utilization.In: *The sixth international Conference on THEORETICAL AND EXPERIMENTAL PROBLEMS OF MATERIALS ENGINEERING.* Púchov: FPT, 2001, s. 23.

DEPARTMENT OF WELDING

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I. STAFF

Professors:	4	Research Fellows:	0
Assoc. Professors:	2	Technical and Admin. Staff:	3
Senior Lecturers:	5	PhD Students:	24
Lecturers:	0		

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- Welding school for gas welding, welding with covered electrode and GMAW
- Resistant welding laboratory
- Plasma welding laboratory

II.2 Special Measuring Instruments and Systems

- Krautkrämer USK 7D Ultrasonic testing equipment
- Welding current detector for resistant welding
- Friction and Wear Tester TE97A

III. TEACHING

III.1 Bachelor Study

III.2 Graduate Study

H/W: Hours per Week
L-P: Lectures-Practices

Name of subject	Semester	H/W L-P	Reader's name
Welding Technology	5	2-2	Marônek
Theory of Welding	8	3-2	Magula,Bošanský
Special Welding Methods	9	3-2	Turňa
Weldment Design and Production	9	2-2	Ulrich
Projecting of Manufacturing Processes and Systems in Welding	11	16-6	Monček
Control and Computer Technology in Welding	9	2-1	Marônek
Final Project	9	0-4	Monček
Welding Machines and Equipments	9	2-2	Kozma
Assembly of Welded Units	9	2-2	Kozma
Tribology, Surface Engineering	7	2-1	Blaškovitš
Automation of Welding Processes	9	2-2	Jajcay
Technical Preparation of Production	9	2-1	Polák
Non-destructive Weld Joint Testing	9	2-1	Hudák
Adhesive Bonding	7	2-1	Marônek

Name of subject	Semester	HAV - L-P	Reader's name
Theory of Technological Processes	7	3-2	Blaškovitš
Industrial technologies and production equipments	8	2-1	Monček
Welding Certification	8	2-1	Polák
Repairs and renovation	8	2-1	Blaškovitš
Specification of assembly units in welding	8	2-1	Kozma

IV. RESEARCH TARGETS

- Explosive welding
- Ultrasonic testing
- Weldability of steels
- Welding of plastic materials
- Surfacing and Tribology

V. EDUCATION AND RESEARCH PROJECTS

V.1 Institutional Projects

V.2 National Grants (VEGA, KEGA)

- Diffusion welding and similar processes. VEGA 1/4452/97

V.3 International Projects

VI. COOPERATION

VI.1 National Co-operation

- SES -Tlmače
- SL - Komárno
- MATEC Dubnica n/V.
- Faculty of Mechanical Engineering, University of Transport and Communication in Žilina
- Faculty of Mechanical Engineering , Slovak University of Technology, Bratislava
- Thermosolar - Žiar n/ H.
- STROJAL - Žiar n/H.
- MFF-UK, Department of Solid State Physics , Bratislava
- AE - Jaslovské Bohunice
- VÚJE - Trnava
- SKLOPLAST - Trnava
- VÚZ - Bratislava
- VSŽ, a. s. oceľ
- VÚSTAP, Považská Bystrica

VI.2 International Co-operation

- Materials Research Corp., New York
- Faculty of Mechanical Engineering, Ljubljana
- Welding Institute, Ljubljana
- LINDE a.s., Brno

VI.3 Contracts with Industry

- SES Tlmače
- SPP, a.s.

VII. THESES AND DISSERTATIONS

Supervisors are written in brackets. All theses and dissertations without notice are written in Slovak language.

VII.1 Graduate Theses

BACMAŇÁKOVÁ, K.: Comparison of Properties the Coachworked Components by Different Parameters in VW-BA, Ing. Monček, Miroslav
BALOGH, K.: Austenitic Heat-resistant Steels Welding with Low-alloed Steels, Ing. Pecha Jozef, CsC.
BELAN, A.: Aplication of Ni Facing to Forming Maschines, Ing. Pavlovič Ladislav
BENKOVIČ, P.: High-pressured Tubed Leg Welding for Ammonia Manufacture, Prof. Ing. Hrivňák Ivan, DrSc.
BOHUŠOVÁ, J.: Austenitic Cr-Ni Steel Brazing with Indium and Tin Based Solder, Ing. Koleňák Roman.
BRUCHATÝ, R.: Interface Analysis of Ceramic – Metal Brazed Joint, Ing. Žúbor Peter
ČERNÁKOVÁ, R.: Quality Increases of Large Diameter Welded Tubes, Dr. Kovačócy Pavol
DUFEK, D.: Technical Parameters Corelation Specifed by Computing and Experiment for GMAW, Dr. Kovačócy Pavol
FANČOVIČ, R.: Low-alloy Steel Pulse Welding by Flux-cored Wire Metal-arc Welding, Doc. Ing. Marônek Milan
FORGÁCS, A.: δ - ferit Determination by Non-destuctives Methods in Filler Metal of Cr-Ni Austenitic Stainless steel, Ing. Pavlovič Ladislav
GALLO, I.: Brazing Possibilities of Brittle Non-Metalic materials, Ing. Koleňák Roman
GATIAL, I.: Welding of Hermetic Ducting Bushing which is the Element of Hermetic Zone jE V-1 Bohunice, Ing. Csekey Ľudovít, Csc.
HODÚLOVÁ, E.: The Design of Welding Procedure of Bearing Frame and Ram for Brake, Ing. Monček Miroslav.
HOLONKA, M.: Impact Comparison of Gas-shield CO_2 – CORGON 18 to the Structural and Mechanical Properties GMAW Welded Joints, Ing. Púčik Vladimír
HRIBIK, R.: Investigation of Hydraulic Crane Arm Welding Technology, Ing. Hano Ondrej
HRUBJAKOVÁ, S.: Controlled Process GMAW Welding of Aluminium Sheets and Al Alloys, Ing. Kozma Ladislav
HUTTA, J.: The Design of Weld Reparation Technology and Attest for Pipeline JE Mochovce., Ing. Oltman Jozef
IŠTOKOVÁ, M.: Polyuretan Adhesives for Renovation Aplications, Ing. Novák Igor
JANÁČEK, M.: Properties of Composite Polyepoxids by Selected Hardeners, Ing. Novák Igor
JANÍKOVÁ, I.: Parameters Impact GMAW Brazing at Joint Quality of Coachworked Sheets Hardness Orientation in VW – BA, Ing. Monček Miroslav
JANTO, T.: Impact Comparison of Gas-shield CO_2 – MISON 18 to the Structural and Mechanical Properties GMAW Welded Joints, Ing. Púčik Vladimír
KADLEC, M.: Renovation by Using Reactive Adhesives on Repairing of the Large-dimensioned Tubes, Ing. Novák Igor
KEDER, T.: Materials Brazing for Electrotechnics with Unleaded Solders, Ing. Koleno Anton
KELECSÉNYI, Š.: Analysis of Temperature Fields for GMAW, Dr. Kovačócy Pavol
KNOŠKO, P.: Slaged Pans Repairing by Welding (cast-iron), Prof. Ing. Pavel Blaškovitš, DrSc.

KOKAVEC, R.: Friction Welding of Components from Rolled Head for Bringing up Alcoholic and Non-alcoholic Drink Bottles from Stainless Steel, Ing. Frindt Milan
KONDRLA, P.: The Design of Repairing of Seal Plane Getting in of Mechanical Filter ŠOV 5 by Suitable Facing Method, Ing. Vaško Ľuboš
KONTRA, R.: Possibilities of Joint Releability Increase Steel- Bronze, Ing. Jančárik Miroslav
KOREŇ, P.: Surfacing Technology Exploitation of Bronze Face to the Axle Pieces Made by Tatra-SIPOX a.s., Ing. Tomášik Ján
KORFANTA, R.: The Design of Glued Joints for Steaded Cross-tie in Railway Transport, Ing. Novák Igor
KRAMÁR, J.: Welding Mechanization Design of Al Floor-case for TEŽ, Ing. Michalec Milan
KRCHNÁR, V.: The Manufacture Optimalization of Heterogenously Welds to Pipelines PG JE VVER 440, Ing. Drobný Peter
KRONKOVÁ, J.: Welding and Heat-treatment Conditions to Weldability the Checking of Close-grained Steels, Doc. Ing. Kálna Karol, DrSc.
KUCEJ, M.: Residural Stresses of Brazed Joint Ceramic – Metal, Ing. Koleňák Roman
KUNKOVÁ, E.: Electrically Conductive Composit Epoxid Adhesives Stufed by Carbon, Doc. Ing. Marônek Milan
KVASNA, Ľ.: The Design of the Working- place for Dedicated to Technological Processing of Materials by Explosions, Prof. Ing. Turňa Milan
LACZKÓ, S.: The Design of Electroconductive Adhesives for Using in Electrical Engineering, Ing. Jasenák Jozef
LEHOCKÝ, J.: Welding of Collecting Chamber tr. 12 and 15 by Wire-pipe, Ing. Stano Daniel
MEDVEĎ, M.: Oxigenic Nozzle Repairing by Welding, Ing. Kilvády Ernest
MERAŠICKÁ, M.: Analysis of Spatter Formation for GMAW for Electrical Engineering and Eliminatio Possibilities, Doc. Ing. Marônek Milan
MILOTA, P.: The Design of Mechanical Laboratory Workplace, Ing. Kozma Ladislav
MINÁRIKOVÁ, L.: Gas-shield Impact to Productivity for Pulse TIG Welding, Ing. Kozma Ladislav
MLÁDEK, R.: The Adhesives Design for Al Glueing, Ing. Jasenák Jozef
ONDRUŠEK, J.: The Design of Joining Technology of Thin-walled Shaped Frames, Ing. Novák Milan
PAULÍČEK, R.: The Design of Joining Technology of Combinated Metal Materials, Prof. Ing. Turňa Milan, CSc.
PIKUS, B.: GMAW Pulse Welding of WELDOX Steel by Wire-pipe, Doc. Ing. Marônek Milan
PÔBIŠOVÁ, D.: The Design of Progresive Welding Method of Yoke for Fy KOHAG from Materials Required Preheating, Ing. Výboh Jozef
PROSZCUK, I.: The Design of Exemplary Welding Workplace for Small and Middle Enterprises, Ing. Jozef Jasenák
RAKYTA, E.: Tensile Parameters Evoluation and comparison of Laser Beam Welding with Resistance Spot Welding to Coachworked Sheets in VW-BA, Ing. Monček Miroslav
RAŠMANOVÁ, J.: The Design of Joining Technology of Exchanger Parts, Ing. Kozma Ladislav
REHÁKOVÁ, Z.: Gas-shield Impact to Temperature Fields and Structure of Heat Impacted Field for GMAW, Dr. Ing. Kovačócy Pavol
REMEŇOVÁ, P.: Analysis of the Large-plate Weld Joint Al- CrNi Austenitic Steel, Prof. Ing. Turňa Milan
ŠEFČÍK, J.: The Analysis of Mechanism Adhesive Wear of Selected Hardface, Prof. Ing. Blaškovitš Pavel
ŠEVČÍK, N.: Al Welding by Various GMAW Methods in Gas-shield, Ing. Púčik Vladimír
ŠIMONOVIČ, R.: Brazing of Ceramic Materials with Cr-Ni Austenitic Steel, RNDr. Šebo Pavel, CSc.
ŠKULEC, M.: Non-destructive Checking of Brazing Joints Ceramic-Metal, Ing. Koleňák Roman
URBAN, R.: The Sources Evoluation of GMAW Moderated Process of Selected Types, Ing. Kozma Ladislav
VARGA, P.: Impact Comparison of Gas-shield CORGON 18 – MISON 18 to the Structural and Mechanical Properties GMAW Welded Joints, Ing. Púčik Vladimír
VESTENICKÝ, R.: The Adhesives Choice for Using in Bus Selection, Ing. Jasenák Jozef
VOZÁR, V.: The Technology and Parameters Welding Impact to the Mechanical Properties of Welded Joints, Prof. Ing. Blaškovitš Pavel
ZAJACOVÁ, L.: The Welding of Building Maschine Booms and Possibilities of Precision Increase, Ing. Výboh Jozef
ZELENAYOVá, M.: Pulse TIG Welding by AC/DC Process of Al and Al-alloys,
Ing. Kozma Ladislav
ZIFČÁK, P.: Fractografic and Metalografic Observation Locality of Claverage Fission, Prof. Ing. Bošanský Ján, CSc.
ŽIAK, J.: The Analysis of Abrasive Wear Mechanism of Selected Hardfacing, Prof. Ing. Blaškovitš Pavel

VII.2 Dissertations (Ph.D.)

VII.3 Habilitations (Assoc. Prof.)

VIII. OTHER ACTIVITES

VIII.1 Visits of Staff Members to Foreign Institutions

- Materials Research Corp., New York
- Faculty of Mechanical Engineering, TU Brno
- Faculty of Mechanical Engineering, ČVUT Praha
- Technical university Esslingen

VIII.2 Foreign Visitors to the Department

- Materials Research Corp. New York
- Faculty of Mechanical Eng. Technical University of Ostrava
- Faculty of Mechanical Eng. Technical University of Brno
- THUNDERSPRAY Co. Ltd. Ljubljana
- Institute for Solid State and Materials Research Dresden
- Krško Nuclear Power Plant KRŠKO, Slovenia
- University of Ljubljana, Faculty of Mechanical Eng. Ljubljana

VIII.3 Organised Conferences, Seminars and Workshops

- All forms of basic welding classes
- Postgraduate class for European welding engineers according EWE
- Member of Slovak Welding Society Board
- Certification board directorship
- Welding Normalization Committee Member
- Member of IIW
- Workshop "Welding in Energetic Industry"
- Exposition at International Engineering Fair in Nitra

IX. PUBLICATIONS

HUDÁKOVÁ Mária – MARÔNEK Milan – PIKUS Branislav : Influence puls-welding on quality of weld joints of microalloyed high strenght steels. In: *VEDECKÉ PRÁCE Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave*; Research papers Faculty of Materials Science and Technology Slovak University of Technology in Trnava. Bratislava: STU, 2001, zväzok 11, s.59 – 63.

Novák, I. – JASENÁK, J.: The adhesive joining of Al and Al alloys. In: Strojárstvo-Strojírenství, 5, 2001, č. 11, s. 51.

NOVÁK, I. – POLLÁK, V. – JASENÁK, J.: The adhesive joining in energetic. In: Strojárstvo-Strojírenství, 5, 2001, č. 12, s. 64 - 65.

KOLEŇÁK Roman – TURŇA Milan : The ceramics amterial brazing with active soldiers. In: Zváranie – Svařování, 50, 2001, č. 3 – 4, s. 75 – 78.

RUŽA Viliam – JASENÁK Jozef – KOLEŇÁK Roman : The choice of brazing or welding from economic and technic opinion. In: Zváranie-Svařování, 50, 2001, č. 3-4, s. 71 – 74.

MARÔNEK Milan – HUDÁKOVÁ Mária : Pulsed submerged arc welding of high strenght steels. In: Zváranie – Svařování, 50, 2001, č. 11-12, s.253 – 257.

KOLEŇÁK Roman – TURŇA Milan: Alternative leadless solders. In: Zváranie – Svařování, 50, 2001, č. 11- 12, s. 261 – 264.

BLAŠKOVITŠ Pavel – SUKUBOVÁ Ingrid – FARKAŠ Tomáš – DURCOVÁ Jana – KASALA Marián – SUCHÁNEK Jan – GRINBERGOVÁ Ninel Arkadijevna – REISOVÁ Monika:. Surfacing materials for abrasive and erosive wear. In: Zváranie – Svařování, 50, 2001, č. 11- 12, s. 258 – 261.

KOLEŇÁK Roman – ŽÚBOR Peter : Study of interface of soldered joint between ceramics and metal. In: Zváranie – Svařování, 50, 2001, č. 11- 12, s. 251 – 253.

TARABA Bohumil – KOLEŇÁK Roman – TURŇA Milan : Power analysis of soldered joints between ceramics and metal (computer assisted simulation). In: Zváranie – Svařování, 50, 2001, č. 11- 12, s. 245 – 250.

KRAVÁRIKOVÁ Helena – KOVAČÓCY Pavel: Verification of numerical simulation of the HAZ by experiment. In: Zváranie – Svařování, 50, 2001, č. 11- 12, s. 240 – 244.

PAVLOVIČ Ladislav – KOZMA Ladislav – KASALA Marián:. The renovation of shapeble tools made by coated electrode.In: *TRANSFER 2001: Využívanie nových poznatkov v strojárskej praxi: Zborník prednášok medzinárodnej vedeckej konferencie*. Trenčín: FŠT, 2001, s. 287 – 291.

TURŇA Milan – GATIAL Martin – KOLEN9O, A.: Special welding methods of Al by other metal materials.In: *Zborník prednášok z konferncie SPOJOVANIE HLINÍKA A ZLIATIN HLINÍKA V TECHNICKEJ PRAXI : Al*. Žilina: DT ZSVTS, 2001, s. 12 – 19.

KOZMA Ladislav – PAVLOVIČ Ladislav: The technological possibilities of GMAW of Al nd Al alloys.In: *Zborník prednášok z konferncie SPOJOVANIE HLINÍKA A ZLIATIN HLINÍKA V TECHNICKEJ PRAXI : Al*. Žilina: DT ZSVTS, 2001, s. 26 – 31.

TURŇA Milan – GATIAL Martin – KOLENO, A.: Special welding methods of Al or other metal materials..In: *Zborník prednášok z konferncie SPOJOVANIE HLINÍKA A ZLIATIN HLINÍKA V TECHNICKEJ PRAXI : Al*. Žilina: DT ZSVTS, 2001, s. 33 – 38.

NOVÁK, I. – JASENÁK Jozef : Joining of Al by glueing – using the construction adhesives.In: *Zborník prednášok z konferncie SPOJOVANIE HLINÍKA A ZLIATIN HLINÍKA V TECHNICKEJ PRAXI : Al*. Žilina: DT ZSVTS, 2001, s. 47 – 48.

NOVÁK, I. – JASENÁK Jozef : Al joining by melted adhesives using.In: *Zborník prednášok z konferncie SPOJOVANIE HLINÍKA A ZLIATIN HLINÍKA V TECHNICKEJ PRAXI : Al*. Žilina: DT ZSVTS, 2001, s. 49 – 50.

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APPENDIX A LIST OF FACULTY DEPARTMENTS

Slovenská technická univerzita	STU	Slovak University of Technology	Slowakische Technische Universität
Materiálovotechnologická fakulta	MtF	Faculty of Materials Science and Technology	Fakultät für Materialwissenschaft und Technologie

Zoznam katedier		List of Faculty Departments	Liste der Fakultätslehrstühle
No.	**Slovak Name of Department**	**Abbrevation**	**English Name of Department**	**German Name of Department**
1	Katedra aplikovanej informatiky a automatizácie	KAIA	Department of Applied Informatics and Automation	Lehrstuhl für angewandte Informatik und Automatisierung
2	Katedra aplikovanej mechaniky	KAM	Department of Applied Mechanics	Lehrstuhl für angewandte Mechanik
3	Katedra environmentálneho a bezpečnostného inžinierstva	KEBI	Department of Environmental and Safety Engineering	Lehrstuhl für Umwelt und Sicherheitsingenieurwesen
4	Katedra fyziky	KF	Department of Physics	Lehrstuhl für Physik
5	Katedra humanitných vied	KHV	Department of Humane Sciences	Lehrstuhl für Humanwissenschaften
6	Katedra inžinierskej pedagogiky a psychológie	KIPP	Department of Engineering Pedagogy and Psychology	Lehrstuhl für Ingenieurpädagogik und Psychologie
7	Katedra manažmentu a kvality	KMaK	Department of Management and Quality Engineering	Lehrstuhl für Management und Qualitätsicherung
8	Katedra matematiky	KM	Department of Mathematics	Lehrstuhl für Mathematik
9	Katedra materiálového inžiniestva	KMI	Department of Materials Engineering	Lehrstuhl für Werkstofftechnik
10	Katedra obrábania a montáže	KOM	Department of Machining and Assembly	Lehrstuhl für spanende Fertigung und Montage
11	Katedra odbornej jazykovej prípravy	KOJP	Department of Languages	Lehrstuhl für Fremdsprachen
12	Katedra technologických zariadeni a systémov	KTZŠ	Department of Technological Devices	Lehrstuhl für technologische Anlagen und Systeme
13	Katedra telesnej výchovy a športu	KTVS	Department of Physical Education and Sports	Lehrstuhl für Körperkultur und Sport
14	Katedra tvárnenia	KT	Department of Forming	Lehrstuhl für Umformen
15	Katedra zlievárenstva	KZI	Department of Foundry	Lehrstuhl für Gießen
16	Katedra zvárania	KZv	Department of Welding	Lehrstuhl für Schweißen
16	Detašované pracovisko (Brezno, Dubnica, Komárno, Nitra)	DP	Detached workplace in ...	Außenarbeitsstelle in ...

APPENDIX B LIST OF ACCREDITED STUDY PROGRAMMES

No.	Name of Study Programme	Abrevation	English Name of Study Programme	German Name of Study Programme
	Bakalárske štúdium (Bc.)		**Bachelor Study (B.S.)**	**Bachelor-Studium**
1	Aplikovaná informatika a informačné systémy	BAIIS	Information Technology and Systems	Angewandte Informatik und Informationssysteme
2	Priemyselná ekológia	BPE	Industrial Ecology	Industrielle Ökologie
3	Priemyselné technológie	BPT	Industrial Technologies	Industrietechnologien
4	Priemyselný manažment	BPM	Industrial Management	Betriebswirtschaft
5	Technické materiály	BTM	Technical Materials	Technische Werkstoffe
6	Materiálové inžinierstvo	BMI	Materials Engineering	Werkstofftechnik
7	Technológie strojárskej výroby	BTSV	Machine Production Technology	Technologie der Maschinenbauproduktion
8	Technologické zariadenia a systémy	BTZS	Technological Devices and Systems	Technologische Anlagen und Systeme
9	Aplikovaná informatika a automatizácia v priemysle	BAIAP	Information Technology and Automation in Industry	Angewandte Informatik und Industrieautomatisierung
10	Inžinierstvo životného prostredia	BIŽP	Environmental Engineering	Umwelttechnik
11	Priemyselné inžinierstvo a manažment	BPIM	Industrial Engineering and Management	Industrielle Ingenieurwessen und Management
12	Inžinierstvo kvality produkcie	BIKP	Production Quality Engineering	Qualitätsicherung
13	Zabezpečovacia technika	BZT	Safety Technology	Sicherheitstechnik
	Inžinierske štúdium (Ing.)		**Master Study (M.S.)**	**Ingenieurstudium (Dipl.-Ing.)**
1	Aplikovaná informatika a automatizácia v priemysle	AIAP	Information Technology and Automation in Industry	Angewandte Informatik und Industrieautomatisierung
2	Inžinierstvo kvality produkcie	IKP	Production Quality Engineering	Qualitätsicherung
3	Inžinierstvo životného prostredia	IŽP	Environmental Engineering	Umwelttechnik
4	Priemyselné inžinierstvo a manažment	PIM	Industrial Engineering and Management	Industrielle Ingenieurwessen und Management
5	Materiálové inžinierstvo	MI	Materials Engineering	Werkstofftechnik
6	Technologické zariadenia a systémy	TZS	Technological Devices and Systems	Technologische Anlagen und Systeme
7	Technológie strojárskej výroby	TSV	Machine Production Technology	Technologie der Maschinenbauproduktion
8	Zabezpečovacia technika	ZT	Safety Technology	Sicherheitstechnik
	Doktorandské štúdium (PhD.)		**Ph.D. Study**	**Doktorandenstudium (Dr.)**
1	Automatizácia a riadenie,špec.riadenie procesov	DAR	Automation and Control, Spec.: control engineering	Automatisierung und Steuerung,Sp.: Steuerungstechnik
2	Inžinierstvo kvality produkcie	DIKP	Production Quality Engineering	Qualitätsicherung
3	Materiálové inžinierstvo a medzné stavy materiálov	DMI	Material Technology and Limiting States of Materials	Werkstofftechnik und Grenzzustände der Werkstoffe
4	Podnikový manažment	DPM	Plant Management	Betriebswirtschaft
5	Strojárske technológie a materiály	DSTM	Machine Technologies and Materials	Maschinenbautechnologien und Werkstoffe
6	Teória vyučovania predmetov všeobecno-vzdelávacej a odb. povahy,špec. teória vyučovania techn. odb predmetov	DTVP	Theory of Technical Subjects Training Spec.: theory of teaching technical vocational subject	Teorie des Unterrichts der technischen Fächer. Spez.: Teorie des Unterrichts der technischen Fächer
	Doplňujúce pedagogické štúdium		**Complementary Teacher Training**	**Pädagogische Ergänzungsstudium**
1	Učiteľstvo technických odborných predmetov	PUTOP	Teaching the Technical Subjects	Lehrer für technische Fächer

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FACULTY OF MATERIALS SCIENCE AND TECHNOLOGY
SLOVAK UNIVERSITY OF TECHNOLOGY BRATISLAVA
Authorised contributions from departments
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