ANNUAL REPORT '97

FACULTY OF MATERIALS SCIENCE AND TECHNOLOGY

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 technical university in Slovakia.

In the academic year 1997-1998 the Faculty comprises the following departments:

Department of Information Technology and Automation
Department of Applied Mechanics
Department of Physics
Department of Humane Sciences
Department of Engineering Pedagogy and Psychology
Department of Management and Quality Engineering
Department of Mathematics
Department of Materials Engineering
Department of Machining and Assembly
Department of Languages
Department of Industrial Ecology
Department of Physical Education and Sports
Department of Forming
Department of Foundry
Department of Welding
Detached workplaces in Brezno, Dubnica, Partizánske 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 (B.Sc.), Master's degree courses (M.Sc.), and postgraduate doctoral (Ph.D.) degree courses. In the academic year 1996 - 1997 over 4,000 students studied at the Faculty in various courses.

It is possible to study the following majors within the below mentioned types of courses:

1. Bachelor's degree courses (3 years)

Information Technology and Systems
Industrial Management
Industrial Ecology
Industrial Technologies
Social Sciences and Work Safety (until 1999 only)

Technical Materials
Machine Engineering (until 1998 only)

2. Master of Science degree courses (5 years)

Information Technology and Automation in Industry
Production Quality Engineering
Management of Industrial Plants
Materials Engineering
Technological Devices and Systems
Machine Production Technology
Environmental Engineering

3. Ph.D. doctoral degree courses (4 years)

Automation and Management,
Specialization: control engineering
Production Quality Engineering
Business Management
Material Technology and Limiting Conditions of Materials
Mechanical Engineering Technology and Materials
Theory of Teaching General and Vocational Subjects,
Specialization: theory of teaching technical vocational subject

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 programs of international scientific and research cooperation, research within the framework of entrepreneurial Faculty activities. The basic organizational units promoting the scientific research program at the Faculty are the departments and other workplaces.

In organizing 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 Hochschule Darmstadt Germany, Technische Universität Cottbus Germany, Fachhochschule Koethen Germany, Gosudarstvennyj techničeskij universitet Iževsk Rusia, DELCAM Birmingham Great Britain, Institut für Festkörper-und Werkstofforschung Dresden Germany, NIS USA.

International cooperation programs concentrate especially on cooperation in curriculum development and innovation, professional growth of the Faculty staff and the exchange of students, pedagogic documentation and other information. TEMPUS and CEEPUS programs represent a significant form of the updating of our foreign activities.

February 1998

Milan Turňa, Ph.D., Professor
Dean of the Faculty

Presidium of the Faculty

Dean: Milan Turňa, Ph.D., Prof.
Vice-deans: Jozef Sablik, Ph.D., Assoc. Prof.
Alexander Janáč, Ph.D., Prof.
Alexander Štrpka, Ph.D., Assoc. Prof.
Jozef Mudrik, Ph.D., Assoc. Prof.
Jozef Vaský, Ph.D., Assoc. Prof.

Address: Materialovotechnologicka fakulta STU
Pavlinska 16
917 24 Trnava
Slovak Republic
Tel: ++421/805/511 028
Fax: ++421/805/511 758
E-mail: dekan@mtf.stuba.sk
http: //www.mtf.stuba.sk

Scientific Board

Chairman: Milan Turňa, Ph.D., Prof.

Members:

Alexander Janáč, Ph.D., Prof.
Jozef Sablik, Ph.D., Assoc. Prof.
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Jozef Vaský, Ph.D., Assoc. Prof.
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Ján Korec, Ph.D.,
Peter Kostka, Ph.D., Assoc. Prof.
Peter Polák, Ph.D., Assoc. Prof.
Karol Takáč, Ph.D., Prof.
Koloman Ulrich, Ph.D., Assoc. Prof.
Július Veselko, Ph.D., Assoc. Prof.
Karol Zalai, Ph.D., Prof.

Academic Senate

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Ľubomír Martinec, Ph.D., Assoc. Prof.
Peter Kotras, Ph.D., Assoc. Prof.
Peter Grgač, Ph.D., Assoc. Prof.
Martin Mišút, Ph.D., Assoc. Prof.
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Viktor Bajčík, Ph.D.

Miloš Čambal, Ph.D.

Milan Šimkovič, Ph.D.

Chamber of Students:

Ivan Rapčan
Marcel Köröši
Daniel Nad'

Rastislav Matiaško
Adriana Vrátna
Joachim Herve

DEPARTMENT OF APPLIED MECHANICS

Head of the Department
Jozef Jelemenský, Ph.D., Assoc. Prof.

Tel.: ++421/805/511733
Fax: ++421/805/511733
E-mail: kam@mtf.stuba.sk

I. STAFF

Professors:	0	Research Fellows:	0
Assoc. Professors:	6	Technical and Admin. Staff:	5
Senior Lecturers:	11		
Lectures:	0	Ph.D. Students:	5

II. EQUIPMENT

II.1 Teaching and Research Laboratories

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

II.2 Special Measuring Instruments and Systems

- Equipment for testing of tribological material properties
- SYSTUS, ANSYS DYNAST computational systems
- Equipment for noise measurements
- Equipment for strain gauges measurements

III. TEACHING

III.1 Bachelor Study

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

Name of subject	*Semester*	*H/W L-P*	*Reader's name*
Technical Documentation	1	1-2	Štefančíková
Power Machines	6	2-1	Taraba
Mechanisms and Machine Parts	6	2-2	Muráň
Hydraulic and Pneumatic Mechanisms	6	2-2	Behúlová
Strength of Materials	6	3-3	Jelemenský
Safety Transport and Manipulation	6	10-9	Jánský
Manipulations with Materials	6	2-1	Jánský
Mechanics of Solids	6	3-2	Stareček
Work Safety	1	0-2	Sabo

III.2 Graduate Study

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	Rusnák
Mechanics I	4	2-3	Mudrik, Pekárek, Stareček, Naď
Mechanics of Solids	3	3-3	Mudrik, Stareček, Pekárek, Naď, Sabo , Záhorec
Mechanics II	4	2-2	Taraba, Behúlová
Thermodynamics	5	2-2	Taraba
Hydrotermomechanics	5	14-4	Taraba
Strenght of Materials	6	10-9	Jelemenský
Mechanisms and Machine Parts	5	2-2	Muráň
Computer Aided Design	7	2-2	Muráň
Diagnostics and Maintenance of Technical Systems	8	2-1	Sabo
European Standards and Prescriptions	8	2-1	Sabo
Work Safety	6	2-1	Sabo
Final Project	9	0-5	Sabo
Aspect of Work Safety in Engineering	9	2-2	Sabo
Personal Work Protections	9	2-2	Andrezal
Safety of Systems with High Energies	9	2-2	Skarba
Safety of Technical Systems	9	3-2	Koreň
Safety and Reliability of Constructions	9	2-2	Bílý

IV. RESEARCH TARGETS

- The Analysis of dynamical properties of manufacturing machine frames
- Investigation of tribological properties of new friction materials-plasma spraying materials
- Numerical analysis and simulation of technological processes and engineering structures
- Investigation of mechatronical problems of machinery dynamics
- Investigation in field of theoretical and applied mechanics

V. RESEARCH PROJECTS

- Simulation of Technological processes Control in Conditions of Mechatronic Systems (Grant - Scientific Grant Agency of Ministry of Educations of SR and SAS - 1/4264/97 (754) - Mudrik)
- Analysis of dynamical properties of manufacturing machines frames (Grant - Scientific Grant Agency of Ministry of Educations of SR and SAS - 1/4264/97 (755) - Jelemenský)

Institutional research projects:

- Applications of special FEM codes for analysis and simulation of constructions and technological processes (855)- Behúlová, Taraba
- Analysis of tribological properties of advanced materials(853) - Rusnák
- Analysis of rotationally - normally - translational general body motion in E3(852)- Pekárek

- Summary specification and teaching methods for subjects in study branch "Safety of Technological Systems and Processes".(825)- Sabo
- Application of simulation experiments in conditions of mechatronic systems. (856)- Nad'

VI. COOPERATION

- International scientific-technical program "New generation of motion and power transmission"
  Partners:
  Institute of Mechanics, Izhevsk State Technical University-Russia, Mechanical Engineering Research Institute-Russian Academy of Science, Institute of Mechanics and Biomechanics-Bulgarian Academy of Sciences, Technical University Brno, University Miskolc, Institute of Design of Precise and Optical Instruments, Warsaw Technical University, Institute of Mechanics and Metal-Polymeric Systems, Belorussia Academy of Sciences, Technical University of Cluj-Napoca, Nottingham Trent University, Center for NIS Studies, California State University-Los Angeles

VII. THESES AND DISSERTATIONS

VII.1 Graduate Theses

VII.2 Dissertations (Ph.D.)

Behúlová M.: Prenos tepla pri rýchlom tuhnutí podchladených kvapiek tavenín.
The heat transfer during rapid solidifications of undercooled droplets of liquids.
Bratislava, STU - Strojnicka fakulta 1997.

VII.3 Habilitations (Assoc. Prof.)

VIII. OTHER ACTIVITIES

- International conference - COM - MAT- TECH, 1997, Trnava,(Mudrik - organizer)
- "Basic of Strenght of Materials" (Jelemenský) - Courses for postgraduate students Euro Weld Engineer, Euro Weld Technology 1997
- XXXVII. International Machine Parts Departments Conference1997, Bratislava - Gabčíkovo, (Mudrik - organizer)

IX. PUBLICATIONS

[1] BEHÚLOVÁ , M. - GRGAČ, P. - KABÁT, E.: The heat transfer during rapid solidification of undercooled hypereutectic Fe-C-X alloy droplets. Materials Science and Engineering A, 1997, s. 9-13.

[2] MUDRIK, J. - LABAŠOVÁ, E. - NAĎ, M.: Príspevok k dynamike rotačných mechatronických sústav. (The contribution to the dynamics of rotational mechatronic systems.) In.: Nové trendy v strojárstve na prahu tretieho tisicročia. Zborník vedeckých prác. 2.sekcia. Košice, TU 1997, s. 244-247.

[3] MUDRIK, J. - LIPTÁK, N. - NAĎ, M. - LABAŠOVÁ, E.: Mechatronics Problem in Drive Dynamics. In.: Mechatronics and Robotics 97. International Conference. Brno, VUT 1997, s.159-163.

[4] MUDRIK, J. - LABAŠOVÁ, E. - MICHALČONOK, G.: Charakteristiky motorov a ich prevádzkové stavy. The drive characteristics and their working state. In.: Akademická Dubnica 97. Zborník prednášok z 3. vedeckej konferencie s medzinárodnou účasťou. Bratislava, STU 1997, s.165-168.

[5] MUDRIK, J. - NAĎ, M. - LABAŠOVÁ, E.: Charakteristika niektorých typov elektromotorov. (Characteristics of some types of electric motors.) In.: Akademická Dubnica 97. Zborník prednášok z 3. vedeckej konferencie s medzinárodnou účasťou. Bratislava , STU 1997, s.169-172.

[6] JELEMENSKÝ, J. - NAĎ, M. - ĎURIŠ, R.: Analýza dynamických charakteristik rámov tvárniacich strojov. (Analysis of dynamic characteristics of mechanical working machine frames.) In: Akademická Dubnica 97. Zborník prednášok z 3. vedeckej konferencie s medzinárodnou účasťou. Bratislava , STU 1997, s. 173 - 176.

[7] JELEMENSKÝ, J.: Numerické metódy a návrh konštrukcii. (The numerical methods and construction design.) In: Vedecké práce Materiálovotechnologickej fakulty Slovenskej univerzity v Bratislave so sídlom v Trnave. Zväzok 5. Bratislava, STU 1997, s. 165- 169.

[8] KOSORIN, D. - MUDRIK, J. - LIPTÁK, N.: Simulátor dynamického zaťažovania strojových mechanizmov riadený počítačom. (Computer control simulator for dynamic loading of macine mechanisms.) In.: Vedecké práce Materiálovotechnologickej fakulty v Trnave. Zväzok 5. Bratislava, STU 1997, s. 221-226.

[9] NAĎ, M.: The damping of circular plate vibration by rotational damping at the plate edge. In.: Vedecké práce Materiálovotechnologickej fakulty v Trnave, STU. Zväzok 5. Bratislava, STU 1997, s. 141-145.

[10] PEKÁREK, F.: Výpočet kinematických veličín priestorového mechanizmu. (Computation of kinematic quantities of space mechanisms.) In: Vedecké práce Materiálovotechnologickej fakulty v Trnave, STU. Zväzok 5. Bratislava, STU 1997, str. 147-158.

[11] PEKÁREK, F.: Analýza rotačne normálového - tangenciálneho pohybu telesa T pri jeho pohybe v rovine. (The analysis of rotationally-normally-tangential body motion in plane body motion. In: Akademická Dubnica 97. Zborník prednášok z 3. vedeckej konferencie s medzinárodnou účasťou. Bratislava, STU 1997, s. 251 - 274.

[12] JELEMENSKÝ, J. - KOLLÁR, E. - JÁNSKY, S.: Určenie tuhosti rámu lisu použitím MKP. (The determination of press frame stiffness by FEM.) In:CO-MAT-TECH 97, 5.vedecká konferencia s medzinárodnou účasťou. Sekcia 3. Bratislava, STU 1997, s. 27 - 30.

[13] MUDRIK, J. - MORAVČÍK, O. - VASKÝ, J.: Regulačné subsystémy a ich formačné väzby v strojových agregátoch. Regulation subsystems and their formation constraints in machine aggregates.) In.: CO-MAT-TECH 97. 5.vedecká konferencia s medzinárodnou účasťou. Sekcia 3. Bratislava, STU 1997, s.43-48.

[14] SABO, M.: Úlohy bezpečnostného manažmentu v priemyselnom podniku. (The aims of safety management in industrial enterprise.) In: Nové trendy v strojárstve na prahu tretieho tisícročia. Zborník vedeckých prác. 5. sekcia : Manažovanie pre úspešné podnikanie. Košice, TU 1997, s. 235 - 239.

[15] RUSNÁK, J. - ŠTEFANČIKOVÁ, A.: Nové trendy a prístupy pri výučbe predmetov konštrukčného zamerania na MtF STU. (New trends and accesses of design subjects teaching at MtF STU Trnava.) In: 5. vedecká konferencia s medzinárodnou účasťou CO - MAT- TECH '97. Bratislava, STU 1997, s. 433-435.

[16] ŠTEFANČIKOVÁ, A. - RUSNÁK, J.: Didaktické hľadiská výučby konštrukčných predmetov aplikáciou CAD na MtF STU Trnava. (Didactic point of view of design subject teaching by CAD at MtF STU Trnava.) In: 5. vedecká konferencia s medzinárodnou účasťou CO - MAT - TECH' 97. Bratislava, STU 1997, s. 497-450.

[17] TARABA, B. - PÁLKA, V.: Štúdia tepelného zaťaženia dosky plazmovým oblúkom s použitím chladiaceho vzduchu. (The study of thermal loading of the plate by plasma beam with application of cool air.) In.: Zborník z národného kolokvia s medzinárodnou účasťou Dynamika strojů '97. Praha, Ústav termomechaniky AV ČR 1997, str. 147-154.

[18] LABAŠ, V. - NAĎ, M. - MINÁRIK, S.: Residual stresses in surrounding of fibres in eutectic composites. In.: Proceedings of International Conference FRACTROGRAPHY '97. Košice, IMR SAS 1997, str. 163-168.

[19] MUDRIK, J. - LABAŠOVÁ, E. - NAĎ, M.: Prechodové deje v asynchrónnom motore pri premennom zaťažujúcom momente. Transient proccesses in induction motor by variable loading moment of a couple.) In.: Inženýrská mechanika 97. National Conference with International Particpartion. Volume 2. Dynamics and Vibration. Brno, VUT 1997, s.149-154.

[20] TARABA, B. - PÁLKA, V.: Využitie vzduchu a CO_2 pre chladenie obrobku pri technológii plazmového striekania. (Air and CO_2 application for workpeace cooling in plasma sprayed technology.) In: Engineering Mechanics '97. Svratka, 1997, pp. 175-180.

[21] KOSORIN, D. - MUDRIK, J. - LIPTÁK, N.: Automatické zariadenie pre dynamické zaťažovanie strojových agregátov. (Automatic device for dynamical loading of machine aggregates.) In.: SEKEL 97. Zborník medzinárodnej konferencie. Bratislava, STU 1997, s. 55-61.

[22] BEHÚLOVÁ, M. - GRGAČ, P. : Numerická analýza rýchlosti ochladzovania sférických častíc taveniny v procese rozstrekovania dusíkom. (Numerical analysis of speed cooling of spherical liquid particle in nitrogen sprayed process.) In: Technológia 97. Medzinárodná konferencia. Zborník prednášok.1.diel. Bratislava, STU 1997, s.263 - 266.

[23] GRGAČ, P. - BEHÚLOVÁ, M. - MORAVČÍK, R.: Dendridická a bunečná mikroštruktúra v rýchlo stuhnutom prášku nástrojovej ocele CH12MF4. (Dendritic and cell microstructure in speed solidification of tool steel powder CH12MF4.) In : Technológia 97. Medzinárodná konferencia. Zborník prednášok. 1. diel. Bratislava, STU 1997, s. 308 - 311.

[24] LABAŠ, V. - MINÁRIK, S. - NAĎ, M.: Microstructural Dependence of Residual Stresses in the Eutectic Floride Composites. In: Technológia 97. Bratislava, STU 1997.

[25] LABAŠ, V. - TRNOVCOVÁ, V. - MINÁRIK, S. - BEHÚLOVÁ, M.: Study of the physical properties and residual stresses of fluoride eutectic composites. In.: proceedings of Symphosium on science and research in the silicate chemistry and technology application. Brno, 1997.

DEPARTMENT OF ENGINEERING PEDAGOGY AND PSYCHOLOGY

Head of the Department:
Viktor Bajčík, Ph.D.

Tel.: ++421/7/5331730
Fax : ++421/7/5331730
E-mail: kipp@mtf.stuba.sk

I. STAFF

Professors:	1	Research Fellows:	0
Assoc. Professors:	2	Technical and Admit. Staff:	3
Senior Lecturers:	10		
Lecturers:	0	Ph.D. Students:	20

II. EQUIPMENT

II.1 Teaching and Research Laboratories

II.2 Special Measuring Instruments and Systems

III. TEACHING

III.1 Bachelor Study

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

Name of subject	*Semester*	*H/W L-P*	*Reader's name*
Psychology	1	0-2	Boroš

III.2 Graduate Study

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

Name of subject	*Semester*	*H/W L-P*	*Reader's name*
Communication in Management	9	0-2	Borošová
Psychology in Management	8	0-2	Kováč
Leadership	9	2-2	Kollárik, Bajčík
Industrial Psychology	7	0-2	Schuller

IV. RESEARCH TARGETS

V. RESEARCH PROJECTS

- Schuller, I. et al: Optimal decision making with respect to personality and codnitive style aspects.
- Kostelník, J. et al: Asserting of Graduates from FMST in Practice.
- Turek, I: System of in Service Education and Training of Teachers in the Slovak Republic.
- Driensky, D. et al: Lifelong Education of Engineers under Conditions of Technological, Economic and Social Changes. Grant task 1996.

VI. COOPERATION

Beloruskij politechničeskij inštitut Minsk, Technische Universität Dresden, Műszaki Egyetem Budapest, Politechnika Slonska, Gliwice, Universität für Bildungswissenschaften Klagenfurt, Technische Universität Wien, Technische Universität Darmstadt, Technische Hochschule Hannover, Technische Hochschule Zürich.

VII. THESES

VII.1 Graduate Theses

VII.2 Dissertations (Ph.D.)

- Mesarošová,A.: Computers at Teaching of Technical Subjects and New Forms of Using. Bratislava, SUT - FMST 1997. 132 p.
- Oujezdsky, D.: Didactic Transformation of Subject's Content „Machine construction". Bratislava, SUT - FMST 1997. 145 p.
- Hrmo, R.: Intensification of Teaching Process at the Secondary Schools by Means of Video Equipment. Bratislava, SUT - FMST 1997. 127 p.
- Vašková, Ľ: Level of Teachers' Knowledges who Very Important Influence Process of Environmentalization at Instruction Process. Bratislava, SUT - FMST 1997. 106 p.
- Strakoš, J.: Basic Aspects of Using Problem Solving in Technical Subjects. Bratislava, SUT - FMST 1997. 114 p.
- Tekelová S.: Project Instruction in Education of Chemistry at the Secondary Schools. Bratislava, SUT - FMST 1997. 99 p.
- Valocký, J.: Teaching Effect of Using Proper Software at the Secondary Machine Schools. Bratislava, SUT - FMST 1997. 133 p.

VII.3 Habilitations (Assoc. Prof.)

Albert, A.: Develepment of Teachin Theory of the Subject „Machine Construction" at the Secondary Schools. Bratislava, SUT - FMST 1997. 100 p.

VIII. OTHER ACTIVITIES

Complementary Teacher Training

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

Name of subject	*Semester*	*H/W L-P*	*Reader's name*
Pedagogy I	1	2-0	Budinec, Kostelník
Psychology I	1	2-0	Borošová, Bustinová
School Youth Biology	1	1,3-0	Broniš
History of Engineering	1	1,3-0	Chyba
Didactics of Special Technical Subjects II	1	2-0	Vašková, Hrmo, Kundrátová, Hambalík,

Name of subject	Semester	H/W L-P	Reader's name
			Tináková, Koláriková
Seminar on Pedagogical Practice	1	0-1,3	Vašková, Hrmo, Kundrátová, Hambalík, Tináková, Koláriková
Adult Education	1	1,3-0	Kostelník
Mental Hygiene	1	1,3-0	Bajčík
Basics of Legal Education	1	1,3-0	Kopšová
Didactic Engineering	1	1,3-0	Hambalík
Pedagogy I	1	2-0	Budinec, Kostelník
Psychology I	1	2-0	Borošová, Bustinová
Didactics of Special Technical Subjects	1	2-0	Vašková, Hrmo, Kundrátová, Hambalík, Tináková, Koláriková
Mental Hygiene	1	1,3-0	Bajčík
Didactic Engineering	1	1,3-0	Hambalík
Pedagogical Practice	1		Vašková, Hrmo, Kundrátová, Hambalík, Tináková, Koláriková
Pedagogy II	2	1,2-0,8	Budinec, Kostelník
Psychology II	2	1,2-0,8	Borošová, Bustinová
Didactics of Special Technical Subjects I	2	1,2-0,8	Vašková, Hrmo, Kundrátová, Hambalík, Tináková, Koláriková
Pedagogical Practice	2		Vašková, Hrmo, Kundrátová, Hambalík, Tináková, Koláriková
Pedagogy II	2	2-0	Budinec, Kostelník
Psychology II	2	2-0	Borošová, Bustinová
Special Technical Subjects	2	2-0	Vašková, Hrmo, Kundrátová, Hambalík, Tináková, Koláriková
School Youth Biology	2	1,3-0	Broniš
Seminar on Pedagogical Practice	2	0-1,3	Vašková, Hrmo, Kundrátová, Hambalík, Tináková, Koláriková, Bajčík

IX. PUBLICATIONS

[1] BAJČÍK, V.: Importance and volition in satisfaction. In: CO-MAT-TECH '97. Bratislava, SUT 1997, pp. 373-380.

[2] BOROŠOVÁ, Z.: Prevention of Drug Abuse and Drug Dependancy. Psychológia a patopsychológia dieťaťa, 32, č. 1, 1997, p. 74-78.

[3] DRIENSKY, D.: Some Questions of Doctoral Studies in Technology of Education. In: MEDACTA '97. Nitra 1997, pp. 1037-1039.

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[5] HAMBALÍK, A. et al: Identification of Factors Influencing Study Development of Students of Faculty of Materials Science and Technology. Research Final Report No. 849, Trnava. 1997, p. 64 .

[6] HAMBALÍK, A.: Some Problems of Planing and Realisation Teaching Process Aided by Computer Technique and Multimedia. In: CO-MAT-TECH '97. Bratislava, SUT 1997, pp. 397-400.

[7] HAMBALÍK, A. - MESÁROŠOVÁ, A.: New Teaching Aims at the Schools. Bratislava, Methodological Center 1997. 65 p.

[8] HAMBALÍK, A.: Experiences from Realisation of Microteaching in Technical Subjects. Teacher Training. In: MEDACTA '97. Nitra, 1997, pp. 1161-1164.

[9] HAMBALÍK, A. - MESAROŠOVÁ, A.: Real Possibilities of Applying New Forms and Methods of Instruction in Information Science and Computer Technique. In: MEDACTA '97. Nitra, 1997, pp. 1112-1116.

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[14] MESÁROŠOVÁ, A.: Teaching of Natural Science by Hypermedia. In: MEDACTA '97. Nitra, 1997, pp. 341-344.

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[16] TINÁKOVÁ, K.: Experiences from Realization of Microteaching in Technical Subjects Teacher Training. In: MEDACTA '97. Nitra, 1997, pp. 1068-1071.

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[18] TUREK, I., ALBERT, A.: Bases of Pedagogical Research for Teachers of Technical Subjects. Košice, TU 1997. 104 p.

DEPARTMENT OF FORMING

Head of the Department:
Jozef Bača, Ph.D. Prof.

Tel.: ++421/805/521105
Fax: ++421/805/521105
E-mail: kt@mtf.stuba.sk

I. STAFF

Professors:	2	Research Fellows:	0
Assoc. Professors:	1	Technical and Admin. Staff:	3
Senior Lecturers:	5		
Lecturers:	0	Ph.D. Students:	6

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- Light Laboratories of Forming
- Laboratories of Computing Machinery
- Laboratories of Measuring

II.2 Special Measuring Instruments and Systems

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

III. TEACHING

III.1. Bachelor Study

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

Name of subject	*Semester*	*H/W L-P*	*Reader's name*
Regulating and Automating	6	2-2	Zachar
Technology Exercises in Machine Technology	6	0-2	Selčan
Final Project	6	0-4	Bílik
Technology of Forming	3	3-3	Kotras

III. 2. Graduate Study

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

Name of subject	*Semester*	*H/W L-P*	*Reader's name*
Technology of Forming	6	2-1	Bača, Kotras, Ulik
Theory of Forming	7	3-2	Polák
Volum Forming	9	2-2	Bača
Flat Forming	9	2-2	Kotras
Projection of Manufacturing Processes and Systems in Forming	9	2-1	Vincze
Machines and Equipment for Forming	9	1-2	Ulík
Final Project	9	0-4	Selčan
Experimental Methods for Forming	8, 9	2-1	Žatkovič
Automation of Forming	9	3-2	Ulík
Technical Preparation of Manufacturing	9	2-2	Polák
Special Methods of Forming	9	2-1	Bača
Safety of Machines and Production Facilities	9	2-1	Selčan
Modelling of Forming Processes	9	2-1	Žatkovič
Flexible Production Lines for Forming Processes	9	2-1	Ulík
High Parametric Forming	8	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

- Optimization of technologic parameters for forming, No. 827 (Ulik)
- Shaping by explosion application, No. 845 (Polák)

VI. COOPERATION

- Bendis and Kierulf v.o.s.
- ZVL Skalica

VII. THESES

Supervisors are written in brackets

VII 1 Graduate Theses

Borguľa, M.: Skužeľovanie hliníkových rúriek STN 424401.Conusing of Aluminium Tubes STN 424401 (doc.Kotras)

Macejka, M.: Konštrukčný návrh univerzálneho nástroja na lis LK 100. Constructional Design of Universal Tool Press LK 100. (Ing.Ulik)

Prokop, J.:Kovotlačenie a jeho aplikácie na báze Al a jeho zliatin. Bulding and its Aplication for Aluminium and its Alloys. (Prof.Polák)

Palkovič, M.: Tvárnenie explóziou v betónových nástrojoch s plastovaným povrchom. Explosion Forming of Concrete Tool with Plastic Surface (Prof.Polák)

Ševečka, I.:Chladené formy pre spracovanie výrobkov z gumy. Cooled Forming dies for Processing of Products from Rubber (prof.Polák)

Virág, P.:Technológia výroby súčiastok technológiou kovotlačenia z mosadzných plechov.

Technology of Part Manufacturing with Technology of Bulding from Brass Plates (Ing.Pataky)

Bobonič, M.: Vplyv strižných parametrov na deformáciu strižnej plochy a jej okolia. Influence of shear Parameters on Deformation of Shear Surface and its surrouhdings (doc.Kotras)

Hasaj, P.: Racionalizácia výroby dutinových nástrojov. Racionalization of Cavity Tools Manufacturing. (Prof.Bača)

Mygyarics, R.: Tvarovanie obalových plechov lodného telesa na lise Sertom PV 500. Forming of Covering Plates for Body of a Ship on Press Sertom PV 500. (Ing.Pászto)

Hrubošová, K.: Tvarová a povrchová presnosť presne kovaných zápustkových výkovkov. Shape and Surface Precision of Precisely Forged dis Forgins. (doc.Vajo)

Halaj, M.: Výroba presných hrubostenných rúr malých priemerov ťahaním za studena. Manufacturing of Precise Thick-Walled Tubes with small Diameter by Cold Drawing. (Prof.Bača)

Dubrovayová, A.: Zisťovanie vplyvu negatívnych faktorov prostredia a práce na pracovníkov pri kovaní zápustkových výkovkov. Determination of Inflence of the Negative Factors of Environment and Work on Workers at die Forging. (Ing.Kapustová)

Czita, A.: Technológia zužovania rúr na lisoch. Technology of Tubes Swaging on Presses. (doc.Vincze)

Chovancová, J.: Tvárniteľnosť ocelí pre objemové tvárnenie za studena. Formability of Steels for Volume Cold Forming. (Prof.Polák)

Lukáč, M.: Predĺženie životnosti dierovadiel pre dierovanie tabúľ a pásov plechu. Increase of Piercing dies Life-Time for Piercing the Plates and Straps of Plates. (doc.Kotras)

Macejka, M.: Rozpracovanie spôsobov vyhodnocania tvárniteľnosti. Developing of Methods for Scoring of Formability. (Ing.Ulik)

Marko, T.: Lisovanie profilov z tenkých oceľových plechov pre ľahké stavby. Pressing of Profiles from thin Gauge Steel Plates for Light Constructions. (prof.Polák)

Masár, M.: Výroba drôtových štrbinových sít s rôznou šírkou štrbiny. Manufacturing of Wire Slotted Sieves with various width of Slot.

VII. 2 Dissertations (Ph.D.)

-

VII.3 Habilitations (Assoc. Prof.)

-

VIII. OTHER ACTIVITIES

- Seminar - Forming 97, Trnava 1997

IX. PUBLICATIONS

[1] BAČA, J.: Možnosti výroby foriem pre sklársky priemysel z bimetalických polotovarov vyrobených zváraním výbuchom. Possibilities of Forming die Manifacturing for Manufacture of Glass from Bimetallic Semi-Products Made by Eplosive Welding.Eurowelding, 1, 1997, No.3.

[2] BAČA, J.: Plastické vlastnosti tvrdonávaru z práškového kovu K40. Plastic Properties of Hard Surfacing from Powder Metal K40.Welding, 46, 1997, No.1.

[3] BÍLIK, J.- BAČA, J.: Možnosti výroby dutinových tvárniacich nástrojov s navarenou povrchovou vrstvou práškového kovu K40 a K55. Possibilities of Manufacturing the Cavity Forming Tools with Surfacing from Powder Metal K40 and K55. Welding, 46, 1997, No.5

[4] BAČA, J.: Možnosti výroby zápustiek z bimetalických materiálov nekonvenčnými metódami tvárnenia. Possibilities of Manufacturing the Drops from Bimetallic Materials by Non-Conventional Methods of Forming. In.: CO-MAT-TECH 97. Bratislava, STU 1997.

[5] BAČA, M. - ŽATKOVIČ, J. - BAČA, J.: Určenie energie rázu prevysokorýchlostný buchar.Determination of Impact Energy for High-Steep Forming Hammer. In.: CO-MAT-TECH 97. Bratislava, STU 1997.

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[7] KAPUSTOVÁ, M. - SABLIK, J. - DUBROVAYOVÁ, A.: Metodika zisťovania pracovného zaťaženia kováča. Procedure of Determination the work Load of Forger. In.: CO-MAT-TECH 97. Bratislava, STU 1997.

[8] POLÁK, K.: Výpočtové sledovanie tvárniacich procesov. Calculation Monitoring of Forming processes. In.: CO-MAT-TECH 97. Bratislava, STU 1997.

[9] ULÍK, A.: Tvárne vlastnosti titanu v hydrostatickom tlakovom prostredí. Deformable Properties of Titan in Hydrostatic Pressure Environment. In.: CO-MAT-TECH 97. Bratislava, STU 1997.

[10] BAČA, J. - ŽATKOVIČ, J. - BAČA, M.: Interpolačné určenie regresnej krivky pretvárnehoodporu v závislosti od logaritmického pretvorenia pre rôzne rýchlosti tvárnenia. Interpolating Determination of Deformation Resistance Regresson Curve in Dependence from Logarithmical Deformation for Various Rates of Forming. In.: FORM 97. Brno, 1997.

[11] BAČA, J.: Možnosti uplatnenia tvárnenia s vysokými parametrami pri hĺbení zápustkových dutín z bimetalických polotovarov. Possibilities of Invocation of Forming with High parameters at Deepening of Drops from Bimetallic Semi-Products. In: Metal 97. Ostrava, 1997.

[12] BÍLIK, J.: Spevňovanie povrchových vrstiev dynamickým guličkovaním Hardening of Surface Coat by Dynamic Ball Burnishing. In: Metal 97. Ostrava, 1997.

[13] ULÍK,A.: Overenie výroby multifilamentov hydrostatickým pretlačovaním. Verification of Multifilaments Manufacturing by Hydrostatic Extrusion. In: Metal 97. Ostrava, 1997.

[14] POKUSA, A. - POLÁK, K.: Electrocontact sinfering of Metal Powders. Paris-La-Defense. Elektromagnetic Processing of Materials. International Congres. Volume 2, 1997

[15] BAČA, J. - ŽATKOVIČ, J.: Príspevok k výberu dĺžky polynómu pre optimálne určenie regresnej krivky pretvárneho odporu contribution for Choice of Polynomial Longitude for optimal Determination of Determation Resistance Regression Curve. In: Technology 97. Bratislava, STU 1997.

[16] KAPUSTOVÁ, M. - ULÍK, A.: Porovnanie separačných mazadiel pre zápustkové kovanie. Comparison of Separation Lubricants for die Forming. In: Technology 97. Bratislava, STU 1997.

[17] KOTRAS,P.: Skužeľovanie Al rúriek. Conusing of Aluminium Tubes. In: Technology 97. Bratislava, STU 1997.

[18] POLÁK,K.: Základy teoretickej technológie. Bases of Theoretical Technology. In: Technology 97. Bratislava, STU 1997.

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[20] POLÁK, K.: Tlakové a úderové účinky tvárniacich strojov. Pressure and Impact Effects of Forming Machines. In: Quality and Reliability of Machines. Nitra, 1997.

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[23] BAČA, J.: Možnosti výroby bimetalických dutinových nástrojov nekonvenčnými metódami tvárnenia. Possibilities of Manufacturing the Bimetallic Cavity Toolswith Non-Convnetional Methods of Forming. In: New Trends in Engineering on the Slip od Third Millenium. Košice, 1997.

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[25] POLÁK, K.: Teória vysokorýchlostného tvárnenia Theory of High - Speed Forming. In: New Trends in Engineering on the Slip of Third Millenium. Košice, 1997.

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[29] ULÍK, A.: Forming characteristics of maraging steels under hydrostatics pressures. In: Metal '97. Ostrava 1997.

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DEPARTMENT OF FOUNDRY

Head of the Department:
Marian Murgaš, Ph.D. Prof.

Tel.: ++421/805/521247
Fax: ++421/805/521247
E-mail: kzl@mtf.stuba.sk

I. STAFF

Professors:	1	Research Officers:	2
Assoc. Professors:	3	Technical and Admin. Staff:	5
Senior Lecturers:	3	Ph.D. Students:	1

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

III. TEACHING

III.1 Bachelor Study

III.1 Graduate Study

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	Makovník
Processes of Heat-Treatment and Sintering	7	2 - 2	Pokusa
Foundry Technology	5	2 - 1	Makovník
Tools and Jigs	7	2 - 2	Makovník

Name of subject	semester	H/W L-P	Reader's name
Selected Technologies of Mechanical Engineering	7	3 - 2	Podhorský
Equipment and Tools in Casting and Heat-Treatment	7	2 - 2	Murgaš
Technology of Casting and Welding	7	4 - 2	Pokusa
Engineering Technologies and Ecology	7	4 - 2	Murgaš
Non-conventional Metalurgical Processes	8	3 - 2	Murgaš
Technical Preparation of Manufacturing	8	2 - 2	Makovník
Foundry Metals and Alloys	8	3 - 2	Murgaš
Technology of Metallic Powder Material Processing	9	3 - 2	Pokusa
Theory of Metallic Powder Material Preparation	9	2 - 2	Pokusa
Preparation and Processing of Ceramic and Friction Materials	9	2 - 1	Makovník
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	Makovník
Automation of Casting Processes	9	2 - 2	Mäsiar
Theory of Foundry	7,8	2 - 2	Mäsiar
Final Project	9	0 - 4	Mäsiar
Selective compulsory subjects: Automatization of Casting Processes	8	3 - 2	Mäsiar
Selective subjects: Programming in Casting	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. RESEARCH PROJECTS

- Project VEGA - Electromagnetic methods of the influence on the solidification process of metal material's molten metal; No. 1/3098/96; Ing. Marcela Pokusová,CSc.
- Project VEGA - Electrolytic-plasma finish of metal surfaces; No. 1/2107/95; Prof.Ing. Marián Murgaš,CSc.
- Application of polyethylenoxide and some other polymers in foundry; No.
- Special sintering methods for the metal powder materials; No. 841, doc.Ing. Anton Pokusa,CSc.
- Magnetohydrodynamics and electromagnetic methods for effecting the solidification of the molten metal materials; No. 842, Ing. Marcela Pokusová,CSc.

VI. COOPERATION

- Fi EKOZAR Nitra, a.s., Nitra - The development of the technology for the production of the turbine blades for the small hydro-electric power plant.
- Fi 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.

VII. THESES

VII. 1 Graduate Theses

- Technology of plasma-electrolytic treatment of metallic surfaces
- Relative density maximization of the sprayed powder WV 200
- Electrocontact sintering and its curiosity in compacting process of metal powders
- Application of magnetic field at solidification of castings from aluminium alloys
- Technology of plasma-electrolytic treatment of metal surfaces - stabilization of electrolyte temperature

VII. 2 PhD Theses

VIII. OTHER ACTIVITIES

IX. PUBLICATIONS

[1] MÄSIAR, H.: Bentonitové syntetické formovacie zmesi a možnosti ich modifikácie polyetylénoxidom (Bentonite synthetic mold mixtures and the possibilities for their modification by polyethylenoxide). In: Vedecké práce Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave. Zväzok 5.Bratislava, STU 1997, s. 95 - 101.

[2] MÄSIAR, H.: Štúdium vplyvu polyetylénoxidu na zlievárenské formovacie zmesi (The investigation of the polyethylenoxide effect for the foundry mold mixture). In: Technológia 97. Medzinárodná konferencia. Zborník prednášok. I. diel. Bratislava, STU 1997, s. 345 - 348.

[3] MOLNÁR, P - ŽIŽKA, T.: Technologické procesy - perspektívna oblasť účinnej aplikácie vybraných metód riadenia kvality (Technological processes - perspective field for effective application of the selected method of the quality controll). In: CO-MAT-TECH 97. 5.vedecká konferencia s medzinárodnou účasťou. Sekcia 2. Bratislava, STU 1997, s. 195 - 204.

[4] MURGAŠ, M.: Dokončovacie operácie opracovania povrchu elektrolyticko-plazmovou technológiou (Surface finishing operation using the electrolytic-plasma technology). In: Nové trendy v strojárstve na prahu tretieho tisícročia. Zborník vedeckých prác. 3. sekcia: Progresívne technológie a materiály. Košice, TU 1997, s. 306 - 308.

[5] MURGAŠ, M. - POKUSOVÁ, M. - ŠUJANOVÁ, J. - POKUSA, A.: The electromagnetic method for the properties improvement of CrNi steel made by the electroslag casting. In: Electromagnetic processing of materials. International Congress. Volume 2, Paris-la-Defense, Centre Francais de l'Electricite 1997, s. 217 - 222.

[6] MURGAŠ, M.: Elektrolyticko-plazmová technológia povrchových úprav (The electrolytic-plasma technology for surface finishing). In: Ekológia a ekonomika povrchových úprav. Zborník. Žilina, DT ZSVTS 1997, s. 79 - 84.

[7] MURGAŠ, M. - PODHORSKÝ, Š. - BERTA, I.: Finálna operácia obrábania ELP postupom (The ELP technology as the final machining operation). In: Technológia 97. Medzinárodná konferencia. Zborník prednášok. 2. diel. Bratislava, STU 1997, s. 545 - 548.

[8] MURGAŠ, M. - POKUSOVÁ, M. - VOZÁR, P. The metod of the influence on the solidification process for the continuous casting. In: Electromagnetic processing of materials. International Congress. Volume 2, Paris-la-Defense, Centre Francais de l'Electricite 1997 s. 343 - 348.

[9] MURGAŠ, M.: Oteruvzdorné chrómové a chrómovanádové liatiny (Abrasion resistant chromium white cast irons and chromium-vanadium ones). In: Kvalita a spoľahlivosť strojov. 2. medzinárodné sympózium pri Medzinárodnom veľtrhu 97 v Nitre. Nitra, SPU 1997, s.176 - 179.

[10] MURGAŠ, M. - POKUSOVÁ, M. - POKUSA, A. - PODHORSKÝ, Š.: Určenie zloženia liatiny s guľôčkovým grafitom (The selection of chemical composion of ductile cast iron). In: Vedecké práce Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave. Zväzok 5.Bratislava, STU 1997, s. 111 - 115.

[11] MURGAŠ, M. - POKUSOVÁ, M. - POKUSA, A. Určenie zloženia tvárnej liatiny v závislosti od hrúbky stien odliatkov (The selection od the chemical composion of ductile iron depending on the casting's wall thickness). In: Technológia 97. Medzinárodná konferencia. Zborník prednášok. I. diel. Bratislava, STU 1997, s. 369 -372.

[12] MURGAŠ, M. - POKUSOVÁ, M.: Voľba chemického zloženia tvárnej liatiny (Ductile cast iron and how to select its chemical composition). In: Kvalita a spoľahlivosť strojov. 2. medzinárodné sympózium pri Medzinárodnom veľtrhu 97 v Nitre. Nitra, SPU 1997, s. 172 - 175.

[13] MURGAŠ, M. - POKUSOVÁ, M. - POKUSA, A. - KOLLÁR, E.: Zariadenie na ovplyvnenie procesu tuhnutia plynule liatej bramy (The unit for effecting on the solidification process of the continuous cast slab). In: CO-MAT-TECH 97. 5.vedecká konferencia s medzinárodnou účasťou. Sekcia I. Bratislava, STU 1997, s. 391 - 396.

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PATENTS:

[1] Patent SK č. 278920: Modifikátor pre liatinu (Modifier for cast iron), Autori: M. Murgaš, I. Wachter, S. N. Lekach, N. Bestušev.

DEPARTMENT OF HUMANE SCIENCES

Head of the Department:
Viliam Končal, Ph.D. Assoc. Prof.

Tel.:++421/805/24207
Fax :
E-mail: khv@mtf.stuba.sk

I. STAFF

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

II. EQUIPMENT

II.1 Teaching and Research Laboratories

II.2 Special Measuring Instruments and Systems

III. TEACHING

III.1 Bachelor Study

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

Name of subject	*Semester*	*H/W L-P*	*Reader's name*
History of Technology	2	0-2	Chyba
Enterpreneurial Law	2	0-2	Indrišek
Design	4	2-2	Dubnička
Psychology of Work	5	2-1	Sawicki
Business and Civil Law	5	2-2	Indrišek
Laws, Regulations and Organization of State Administration	5	2-1	Tomana
Recruitment, Training and Requalification of Staff	5	2-2	Holkovič
Methods of Sociological Research	5	2-2	Csampai
Education and Diagnostics of Adults	6	2-2	Kačáni
Evaluation and Renumeration of Staff	6	2-2	Šimo
Solving the Work Conflicts	6	2-2	Sawicki
Planning the Personnel and	6	2-2	Šíma
Social Development Social Roles Training	6	0-2	Kozoň
Thesis	6	0-1	Holkovič
Industrial Sociology	5	2-1	Csampai
Social Pedagogy	5	2-1	Končál
General Economic Theory	6	2-1	Mrvová
Management	6	2-1	Šíma

III.2 Graduate Study

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

Name of subject	*Semester*	*H/W L-P*	*Reader's name*
History of Technology	1	0-2	Chyba
History of Philosophy	1	0-2	Kusin
Philosophy of Technology	2	0-2	Skalský
Rhetoric	2	0-2	Odlerová
Sociology	3	2-1	Csampai
General Economic Theory	3	2-1	Mrvová
Politology	4	0-2	Končál
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	Kusin
Industrial Sociology	6	0-2	Csampai
Rhetoric	6	0-2	Odlerová
Social Work II	5	2-1	Šima
Psychology of Personality	6	0-2	Kačáni
Extra-Work Social Environment and Conditions for Staff	6	0-2	Kačáni
Introduction into Research Work	8	1-1	Skalský
Fundamentals of Law for Managers	7	2-1	Indrišek
Prognostics	7	1-2	Dubnička
Introduction into Law for Engineers	7	2-1	Indrišek
Design	7	2-1	Dubnička
Synergetic	8	0-2	Dubnička
Industrial Sociology	8	0-2	Csampai
Methods of Sociological Research	8	2-2	Csampai
Social Politics	8	3-1	Kusin
Business and Civil Law	7	2-1	Indrišek
Criminal and Family Law	8	0-2	Indrišek
Introduction into Research Work	9	0-2	Skalský

IV. RESEARCH TARGETS

- Human Sciences
- Social Sciences
- Philosophy
- Cosmology
- Physics

V. RESEARCH PROJECTS

- Proportion of Social Sciences on formation of FMST STU graduate. Nr. 833 (doc. PhDr. Vladimír Skalský, CSc., Department of humane sciences, FMST SUT)
- Education process on the university from the aspets of the human law. Nr. 860 (PaedDr. Ľubomir Holkovič, CSc., Department of humane sciences, FMST SUT)

VI. COOPERATION

VII. THESES AND DISSERTATIONS

VII.1 Graduate Theses

VII.2 Dissertations (Ph.D.)

VII.3 Habilitations (Assoc. Prof.)

VIII. OTHER ACTIVITIES

- Special lectures for postgraduate students in „Philosophy of Technology"

IX. PUBLICATIONS

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[4] SKALSKÝ, V.: Dynamika vesmíru v dôslednej a rozlíšenej relativistickej, klasicko-mechanickej a kvantovomechanickej analýze. Dynamics of Universe in the Consistent and Distinguished Relativistic, Classically-Mechanical and Quantum-Mechanical Analyses. Bratislava, SUT 1997. 117 p.

[5] SKALSKÝ, V.: Niektoré newtonovské vzťahy a modelové vlastnosti vesmíru, Some Newtonian relations and model properies of universe, In: Vedecké prácc Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave, zv. 5. Scientific Works of FMST. Bratislava, SUT 1997, pp. 349-354.

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[11] CHYBA, J.: Aurell Stodola - vedec, inžinier, pedagóg, ale tiež humanista. Auerel Stodola - scientist, engineeur, pedagoge and too humanist. In: CO-MAT-TECH '97. Bratislava, SUT 1997, pp. 405-408.

[12] KONČAL, V. - KUSIN, V.: Demokratizacija upravlenija i organizacija vospytanija I obrazovanija v kontekste obščestvennoj tranformaciji, Problemy gumanitarnogo obrazovanija v vyššej profesionaľnoj škole, (Materijaly naučno-metodičeskoj konferenciji 25. - 26. apreľa 1997), Iževskij gosudarstvennyj institut, Ruskaja federacija 1997, s. 10-12.

[13] KUSIN, V.: K problematike globalizácie výchovy. On the problematics glabalisation of education. In: CO-MAT-TECH '97. Bratislava, SUT 1997, pp. 417-419.

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DEPARTMENT OF INDUSTRIAL ECOLOGY

Head of the Department:
Karol Balog, Ph.D. Assoc. Prof.

Tel.: ++421/805/511 242
Fax:
E-mail: kpe@mtf.stuba.sk

I. STAFF

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

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- Teaching laboratory for chemistry, basic equipment for metal analysis, BOD, COD, equipment for N -analysis, organic compounds, water analysis (pH-meter, thermostat, kieldhal, conductometer, spectrophotometer)

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

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

Name of subject	*Semester*	*H/W L-P*	*Reader's name*
Introduction into Environmental Studies	1	2-1	Tureková
Chemistry I.	3	2-3	Forsthoffer
Ecology of Working Environment	3	3-1	Wittlinger
Physics of Nuclear Reactors	3	2-2	Kováč
Sanitation Technology and Equipment	3	2-2	Polívka
Basics of Biological Systems	3	2-2	Polívka
Chemistry II	4	2-3	Forsthoffer
Industrial Technologies and Environment	4	4-4	Murgaš, Šilhár
Dosimetry and Protection of Radiation	4	2-2	Morávek
Quality Control	4	2-1	Polívka
Monitoring of Emissions	4	2-2	Ďuran

III.2 Graduate Study

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

Name of subject	*Semester*	*H/W L-P*	*Reader's name*
General Ecology	6	2-2	Tureková
Dosimetry and Radiation Protection	6	4	Morávek
Technology and Environment	5		Wittlinger, Tureková
Basics of Biological Systems	5	2-2	Maliarová
Ecology	7	1-1	Forsthoffer
Chemical Technologies and Environment	7	6	Šilhár
Engineering and Environment	7	2-1	Murgaš
Environmental Aspects of Quality Management	7	3	Polívka
Industrial Toxicology	7	2-2	Balog
Ecology of Working Environment	7	2-2	Wittlinger
Power Engineering and Environment	7,8	1-2	Wittlinger
Food Technology, Biotechnology and Environment	6	3	Polívka
Structure of Date and Database Systems	8	2-2	Moravčik
Hazard Minimization in Environment	8	2-2	Hutta
Monitoring of Emissions	8	6	Ďuran
Software for Ecology	7	1-2	Moravčik
Physics of Nuclear Reactors	8	3	Kováč

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 sludges and utilization of metal parts
- Engineering analysis of industrial fire hazard, dangerous wastes, hazardous substances
- Halons alternatives

V. RESEARCH PROJECTS

- Present situation in manipulation of wastes from special engineering technologies and alternative methods for their liquidation
- Influence of design and material of recuperator heat exchanger on intensity of heat transmission.

VI. COOPERATION

- VUJE (Nuclear power station research institute) Trnava: training the experts in industrial ecology, research development, development of information system
- Technical University Košice
- Technical University Zvolen
- Fire Research Institute Bratislava

- Ministry of the Enironment of Slovak Republic
- Slovak Environment Agency, Centre of Waste Management, Bratislava
- Regional Training Centre for Implementation of the Basel Convention, Bratislava
- VŠB - Technical University of Ostrava, Department of Fire Protection Engineering and Industrial Safety

VII. THESES AND DISSERTATIONS

VII.1 Graduate Theses

VII.2 Dissertations (Ph.D.)

VII.3 Habilitations (Assoc. Prof.)

VIII. OTHER ACTIVITIES

- Environmental management in food industry in connection with HACCP application (Žilina 1996 - Polivka)
- Concept of manipulation nuclear wastes management in Middle and East European Countries (Trnava - Húščava)
- Energy and sustainable development (Trnava - Wittlinger)
- Association of Industrial Ecology in Slovakia Bratislava - education and projects
- Food Research Institute Modra; cooperation in the field of microbial analysis of cooling fluids
- VW Bratislava; in the field of organization of environmental training of employees and managerial staff.
- Cooperation in organizing the Slovak Halons Bank with Appollonia Ltd. Piešťany
- Hazard and risk assessment of mechanical substances
- Fire hazard analysis

IX. PUBLICATIONS

[1] POLÍVKA, Ľ. - TUREKOVÁ, I. - ŠKARKA, B.: Bioremedation of soils contaminantes with PCB and crude oil of species contaminant - Degradin 6 Bacterias from the collection of microorganizms. In: CO-MA-TECH '97. Bratislava, SUT 1997, pp. 259-266.

[2] WITTLINGER, V.: Evaluating the influence of power engineering on environment. In: CO-MA-TECH '97. Bratislava, SUT 1997, pp. 271-276.

[3] HALČINOVÁ, E. - SAKÁL, P.: Methodology of the Plant Development Strategy in the Conditions of Market Economy. In: Scientific Works of FMST SUT. Vol. 5. Bratislava, SUT 1997, pp. 273-239.

[4] SAKÁL, P. - HALČINOVÁ, E. - OŠUSTOVÁ, E.: The Development Strategy of on Environment - Friendly Industrial Plant in the Conditions of Market Economy. In: CO-MAT-TECH '97. Bratislava, SUT 1997, pp. 237-240.

[5] SAKÁL, P. - HALČINOVÁ, E. - OŠUSTOVÁ, E.: Selected Aspects of an Environment. Friendly Industrial Plant Development Strategy. In: Academic Dubnica. Bratislava, SUT 1997, pp. 33-35.

[6] POLÍVKA, Ľ. - KOVÁČ, J.: Microbial contamination of metal working cooling fluids. In: Ekological trends in cutting fluids and industrial lubricants. Zvolen, TU 1997, pp 45-50.

[7] POLÍVKA, Ľ. - ŠILHÁR, S. - KOVÁČ, M.: The perspective and prerequisite of food biotechnology. In: The possibility of aplication of biotechnology in agriculture of the day and prospects. International symposium. Košice, ÚEUM 1997, pp. 68-71.

[8] KOVÁČ, J.: Environmental aspects of utilization of cutting and cooling fluids in mechanical engineering technologics. In: Ecology and economic of the superficial preparations. Žilina, TU 1997, pp.128-133.

[9] KOVÁČ, J.: Cooling fluids and lubricants from the environmental and tribologic view of points. In: CO-MAT-TECH 97. 5- th International Scientific conference. Bratislava, SUT 1997. pp. 241-244.

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[11] KAPUSTOVÁ, M. - SABLIK, J. - DUBROVAYOVÁ, A.: Method of investigation of the working load of the smith. CO-MAT-TECH 97. In: CO-MAT-TECH 97. 5-th International Scientific conference. Bratislava, SUT 1997, pp. 271-275.

DEPARTMENT OF INFORMATION TECHNOLOGY AND AUTOMATION

Head of the Department:
Oliver Moravčík, Ph.D., Assoc. Prof.

Tel.: ++421/805/27455
Fax: ++421/805/27454
E-mail: kaia@mtf.stuba.sk

I. STAFF

Professors:	1	Research Fellows:	0
Assoc. Professors:	5	Technical and Admin. Staff:	3
Senior Lecturers:	9		
Lecturers:	8	Ph.D. Students:	15

II. EQUIPMENT

II.1 Teaching and Research Laboratories

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

II.2 Special Measuring Instruments and Systems

- PCL system

III. TEACHING

III.1 Bachelor Study

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

Name of subject	*Semester*	*H/W L-P*	*Reader's name*
Theory of Automatic Control	3	3-2	Vrban
Data Models	3	2-2	Mišút
Information Technology Basics	3	2-2	Schreiber
Software Technologies I,II	3,4	0-3	Baranovič
Software Engineering	4	3-3	Moravčík
Computer Architecture	4	2-2	Pohlmüller
Operation Systems	4	2-2	Velicsányi
Computer Graphics	5	3-3	Tanuška
Database Systems	5	3-3	Mišút
System Programming	5	2-2	Velicsányi
Computer Networks	5	2-2	Petrík
Automation in Industry	6	3-3	Božek
Information Systems	6	3-3	Mišút

III.2 Graduate Study

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,III,IV	1,2,3,4	1-2	Doskočil, Schreiber
Automatic Control Theory	5,6,7,9	2-2	Vrban, Pecko, Pohlmüller
Software Engineering	5	2-2	Moravčík
Computer Graphics	6,7	2-2	Tanuška
Computer Architecture	6	2-2	Pohlmüller
System Programming I,II	7,8	2-2	Velicsányi, Baranovič
Artificial Intelligence	7	2-3	Schreiber
Graphical Systems I, II	7,8	2-3	Vaský
Means of Automatic Control	8	3-3	Michalčonok
Database Systems	8	3-3	Mišút
Modelling and System Simulation	8	2-2	Važan
CIM	7	3-3	Važan
NC Programming	7	3-3	Božek
Production Systems Planning	8	3-2	Mišút
Information Systems	9	2-4	Mišút
Computer Networks	9	3-3	Velicsányi
Production Systems Design	9	2-3	Doskočil
Production Systems Control	9	3-3	Važan
CAD/CAM	9	3-3	Vaský

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
- Modeling and simulation of systems (Discrete-event Simulation, Petri-Nets, Queuing Theory)
- Computer networks
- Computer graphics and CAD/CAM

V. RESEARCH PROJECTS

- Analysis and design of Project-Management Systems
- Automation of administration of department
- Development of object-oriented client-server applications
- Exemplary design documentation for laboratory exercise of automation.
- Design and implementation of control algorithm of mechatronic system by using computer graphics methods

VI. COOPERATION

- IFW e.V. Dresden
- TEMPUS JEP 7413: Short Cycle Degree in Environmental Science, Safety and Waste Management (High-schools fromBelgium, Ireland, Germany)
- TEMPUS JEP 12290: Continuing Education System for Academic Staff in Trnava (High-school from Belgium, Germany, Portugal)
- VUJE Trnava

VII. THESES AND DISSERTATIONS

(Supervisors are written in brackets)

VII.1 Graduate Theses

ADLER Peter: Analýza interface systému SAP R/3 vo väzbe na CAD systémy v podmienkach SLK INFORMA a.s. Komárno. Interface system SAP R/3 analyse in accouplement at CAD systems at SLK INFORMA Komárno. (Peter Ončák)

BEDEČ Peter: Riešenie informačného systému pre podporu rozhodovania technológa. Information system design of decision support system for methods engineer. (Marián Klačo)

BELÁS Jaroslav: Web technológie v informačných systémoch. Web technologies in information systems. (Daniel Petrík)

BUC Martin: Informačný systém katedry - správa knižnice. Department information system – library control. (Martin Mišút)

ČERNIČKA Ján: Zber a spracovanie neutrónfyzikálnych veličín v aktívnej zóne jadrovej elektrárne. Neutron-physical data collection and processing in activ area of nuclear plant. (Eduard Pecko)

DIEŠKA Michal: Study and installation of a Profibus network for PCD PLCs. (Philipe Saey)

DOBROTKA Branislav: Animáca a simulácia technických procesov pomocou systému 3D Studio. Animation and simulation of technical processes by 3D Studio system. (Jozef Vaský)

DRAGULA Miroslav: Riadenie pružných výrobných systémov s využitím simulátora SIMFACTORYII.5. FMS control by using simulator SIMFACTORYII.5. (Pavol Važan)

ĎUROVCOVÁ Dana: Verifikácia spôsobov riadenia pružnej výrobnej bunky s využitím simulátora SIMFACTORY II.5. FMS control verification by using simulator SIMFACTORY II.5. (Pavol Važan)

FERENC Ľuboš:Verifikácia plánu výrobných úloh pre vybraný typ pružného výrobného systému s využitím simulátora SIMFACTORY II.5. Verification production plan for chosen type of FMS by using simulator SIMFACTORY II.5. (Pavol Važan)

GAVLÁK Roman: Návrh informačného systému pre Mestskú políciu Stará Turá. Information system design for City Police Stará Turá. (Pavol Tanuška)

HALENÁR Igor: Prenos audiosignálu po počítačovej sieti. Real-time audio data streaming via Intranet. (Ladislav Velicsányi)

HANIC Eduard: Návrh skúšobného systému v architektúre klient/server. Examinational system design at client /server architecture. (Tibor Baranovič)

HATALČÍK Erik: Informačný systém katedry - modul Katedrové grémiá. Department information system – Department panel module. (Oliver Moravčík)

HLAVÁČEK Martin: Návrh informačného systému firmy Mineta. Information system design for Mineta firm. (Milan Šomrák)

HLAVATÝ Jozef: Informačný systém katedry - správa majetku. Department information system - Property administration (Martin Mišút)

HRČKA Ľuboš: Návrh a vývoj MDL aplikácie pre grafický CAD systém MicroStation v5. MDL applications design and development for graphic CAD system MicroStation v5. (Roman Fulek)

CHYLÝ Miroslav: Bezdrôtový prenos informácií - aplikácia v PC. Cordless information transmission - application at PC. (Juraj Halama)

NABIZADA Ghulam Jawid: Grafické užívateľské rozhranie systému pre stanovenie zdrojového člena pri havárii JE Dukovany. Gpaphic user interface of system for source accident allocation at DUKOVANY nuclear power plant. (Pavol Božek)

KABINA Róbert: Partikulárne riešenia pri počítačovej podpore optimalizácie návrhu súčiastok hriadeľového typu. Partial solution of optimalization design computer support for arbor parts . (Pavol Tanuška)

KALUŽA Tibor: Návrh informačného systému pre riadenie evidencie bytového podniku. Information system design for account control of residential concern. (Zdenko Doskočil)

KOMLÓŠI Radoslav: Informačný systém výroby malej až strednej firmy. Production information system for small firm. (Zdenko Doskočil)

LALKA Peter: Analýza, design a realizácia vybraného modulu informačného systému katedry - vedecko-výskumná činnosť. Analyse, design and implementation of department information system selected module - academic-research activity. (Oliver Moravčík)

MEDVEĎ Erich: Využitie umelej inteligencie pri návrhu hriadeľových súčiastok. Application of artificial intelligence at arbor part design. (Pavol Tanuška)

MIŠOVIČOVÁ Jana: Verifikácia spôsobov riadenia pružných výrobných systémov s využitím simulátora SIMFACTORY II.5. FMS control verification by using simulator SIMFACTORY II.5 (Pavol Važan)

MITTER Maroš: Study and the definition of the parametric way for the design of gear on I-DEAS system. (Dirk Bonami, Belgium)

MRÁZ Martin: Návrh informačného systému pre správu majetku. Information system design for property administration. (Bohuslava Husárová)

NÁDASKÝ Ľubomír: Informačný systém katedry. Department information system. (Roman Fulek)

NAGY Roman: Archivácia a vyhodnocovanie neutrónfyzikálnych veličín v aktívnej zóne jadrovej elektrárne. . Neutron-physical data archivation and evaluation in activ area of nuclear plant. (Peter Schreiber)

PUSZTAI Miroslav: Projektovanie systému číslicového riadenia jednosmerného motora. Digital control system design of one-way engine. (German Michalčonok)

POKORACZKI Maroš: Riešenie grafického modulu informačného systému pre podporu rozhodovania technológa. Graphic module design of information system for methods engineer decision support. (Marián Klačo)

ŠIMON Marek: Fakultná počítačová sieť. Faculty computer network. (Ing. Daniel Petrík)

ŠIROKÝ Bystrík: Návrh smerníc pre tvorbu GUI aplikácií pracujúcich v prostredí Windows95/Windows NT. Directions design for creation of GUI applications working at WINDOWS95 /WindowsNT environment. (Tibor Baranovič)

ŠKVARENINA Ján: Hlasová elektronická pošta. Vote E-mail. (Ladislav Velicsányi)

VII.2 Dissertations (Ph.D.)

VII.3 Habilitations (Assoc. Prof.)

VIII. OTHER ACTIVITIES

- 5 study stay about 3 months in Ireland, Belgium
- 3 visiting professors from EU
- Commercial cooperation with Research Institute of Nuclear Power Supply Trnava

IX. PUBLICATIONS

[1] MIŠÚT, M. - MORAVČÍK, O.: Decision Support Systems in Manufacturing Systems Management. In: Computer – Assisted Management and Control of Manufacturing System. Berlin, Springer Verlag 1997, s. 57 - 82.

[2] MORAVČÍK, O - MIŠÚT, M. – VASKÝ, J.: Softvérová technika. Skriptum. Software Engineering. Textbook, Bratislava, STU 1997.

[3] VRBAN, A.: Metóda na určenie tolerancií koeficientov LDS pre optimálny priebeh časovej odozvy. Method to determine safety margin of LDS coefficients for optimal continuance of temporal response. AT&P Journal, 4, 1997, č.11, s. 43 - 48.

[4] VRBAN, A. – MORAVČÍK, O.: Význam informatiky a informatizácie vo vzdelaní a v spoločnosti. Informatics and data importance in educational and in society. AT&P Journal, 4, 1997, č.16, s. 3 - 6.

[5] FULEK, R.: Automatické rozvrhovanie a fuzzy constraint logické programovanie. Automatic scheduling and fuzzy Constraint Logical programming. In: Akademická Dubnica 97. Zborník prednášok z 3. vedeckej konferencie s medzinárodnou účasťou. Bratislava, STU 1997, s. 65 – 68.

[6] FULEK, R.: Fuzzy logické programovanie obmedzení. Fuzzy logical progamming of constraints. In: CO-MAT-TECH '97. 5. vedecká konferencia s medzinárodnou účasťou Sekcia 3. Bratislava, STU 1997, s. 179 – 182.

[7] HALAMA, J.: Jednočipové počítače v automatizovanom riadení. Computer on-a-chip computer's in automated control. In: CO-MAT-TECH '97. 5. vedecká konferencia s medzinárodnou účasťou Sekcia 3. Bratislava, STU 1997, s. 183 – 188.

[8] HRENÁK, J. – KLAČO, M. – HUSÁROVÁ, B. – NEMLAHA, E.: Implementácia ditribuovaných databáz v prostredí MS SQL Server. Implementation of distributed database in environment MS SQL Server. In: CO-MAT-TECH '97. 5. vedecká

konferencia s medzinárodnou účasťou Sekcia 3. Bratislava, STU 1997, s. 195 – 200.

[9] IRINGOVÁ, M.: Jednočipové počítače v automatizovanom riadení. Computer on-a-chip computer's in automated control. In: CO-MAT-TECH '97. 5. vedecká konferencia s medzinárodnou účasťou Sekcia 3. Bratislava, STU 1997, s. 189 – 194.

[10] MICHALČONOK, G.: Optimalizácia konfigurácie SQL Servera. The Optimalization of SQL SERVERA configuration. In: CO-MAT-TECH '97. 5. vedecká konferencia s medzinárodnou účasťou Sekcia 3. Bratislava, STU 1997, s. 201 – 204.

[11] MIŠÚT, M.: Informačný systém katedry. Department Information System. In: CO-MAT-TECH '97. 5. vedecká konferencia s medzinárodnou účasťou Sekcia 3. Bratislava, STU 1997, s. 205 – 208.

[12] MUDRIK, J. - MORAVČÍK, O. – VASKÝ, J.: Regulačné subsystémy a informačné väzby v strojových agregátoch. Regulating subsystems and information links in machine aggregate. In: CO-MAT-TECH '97. 5. vedecká konferencia s medzinárodnou účasťou Sekcia 3. Bratislava, STU 1997, s. 43 – 48.

[13] SCHREIBER, P. – TANUŠKA, P.: Údaje v relačnej databáze ako báza dát expertného systému. Data in relational database as database of the expert system. In: CO-MAT-TECH '97. 5. vedecká konferencia s medzinárodnou účasťou Sekcia 3. Bratislava, STU 1997, s. 215 – 220.

[14] SCHREIBER, P. – MORAVČÍK, O. – TANUŠKA, P.: Procedurálna reprezentácia poznatkov v pravidlových systémoch. Procedural knowledge representation in rule-based systems. In: CO-MAT-TECH '97. 5. vedecká konferencia s medzinárodnou účasťou Sekcia 3. Bratislava, STU 1997, s. 209 – 214.

[15] VÁŽAN, P.: Simulátor SIMFACTORY II.5 v riadení pružných výrobných systémoch. Simulator SIMFACTORY II.5 in control system of flexible manufacturing system. In: CO-MAT-TECH '97. 5. vedecká konferencia s medzinárodnou účasťou Sekcia 3. Bratislava, STU 1997, s. 221 – 226.

[16] VRBAN, A.: Metóda na určenie tolerancií koeficientov LDS pre optimálny priebeh časovej odozvy. Method to determine safety margin of coefficient LDS for optimal continuance of temporal response. In: CO-MAT-TECH '97. 5. vedecká konferencia s medzinárodnou účasťou Sekcia 3. Bratislava, STU 1997, s. 227 – 234.

[17] VAŽAN, P. - MIŠÚT, M.: Simulácia stratégie riadenia pružných výrobných systémov Simulation in control system of flexible manufacturing system. In.: MOSIS 97. Modelling and Simulation of System Proceeding of the Conference. Volume 3. Ostrava, VŠB TU 1997, s. 106 – 111.

[18] SCHREIBER, P. – TANUŠKA, P.: Archivierungssystem des Umweltministerium der Slowakischen Republik. Archiver system for Slovak ministery of environment. In: Proceeding. International Colloquium on European Cooperation in the International Projects, Information Technologies and Environmental Sciences. Granted by Tempus JEP-07413-94 „Short cycle Degree in Environmental Sciences„. Germany/Köthen 1997, pp. 123 – 127.

[19] FULEK, R. - BERGHE, G. VANDEN: Using for nursery timetabling. In: Proceeding. International Colloquium on European Cooperation in the International Projects, Information Technologies and Environmental Sciences. Granted by Tempus JEP-07413-94 „Short cycle Degree in Environmental Sciences„. Germany/Köthen 1997, pp. 117 – 122.

[20] FULEK, R.-MIŠÚT, M.: Experiences with the Management of TEMPUS Projects. In: Proceedings of International Colloquium on European Cooperation in the International Projects, Information Technologies and Enviromental Sciences. Granted by Tempus JEP-

07413-94 „Short cycle Degree in Environmental Sciences„. Germany/Köthen 1997, pp. 1 - 6.

[21] HALAMA, J. - IRINGOVÁ, M.: Universal modular system for applications development of monolithic microcomputers. In: Proceedings of International Colloquium on European Cooperation in the International Projects, Information Technologies and Enviromental Sciences. Granted by Tempus JEP-07413-94 „Short cycle Degree in Environmental Sciences„. Germany/Köthen 1997, pp. 154 - 156.

[22] HRENÁK, J. – KLAČO, M. – HUSÁROVÁ, B. – NEMLAHA, E.: Implementation of the distributed database in ORACLE and SQL server. In: Proceedings of International Colloquium on European Cooperation in the International Projects, Information Technologies and Enviromental Sciences. Granted by Tempus JEP-07413-94 „Short cycle Degree in Environmental Sciences„. Germany/Köthen 1997, pp. 139 - 144.

[23] MICHALČONOK, G. – BARANOVIČ, T.: Optimalization and configuration of SQL server In: Proceedings of International Colloquium on European Cooperation in the International Projects, Information Technologies and Enviromental Sciences. Granted by Tempus JEP-07413-94 „Short cycle Degree in Environmental Sciences„. Germany/Köthen 1997, pp. 135 - 138.

[24] BOŽEK, P.: Methode der Zuverlässigkeitsprüfungen. Quality control methods. In: Proceedings of International Colloquium on European Cooperation in the International Projects, Information Technologies and Enviromental Sciences. Granted by Tempus JEP-07413-94 „Short cycle Degree in Environmental Sciences„. Germany/Köthen 1997, pp. 154 - 156.

[25] SCHREIBER, P. – TANUŠKA, P.: Anwendung der künstlichen Intelligenz in der Ingenieurpraxis. Artificial intelligence application in engineering. In: Proceeding. International Colloquium on European Cooperation in the International Projects, Information Technologies and Environmental Sciences. Granted by Tempus JEP-07413-94 „Short cycle Degree in Environmental Sciences„. Germany/Köthen 1997, pp. 161 – 164.

[26] VASKÝ,J.: Fertigungstechnische CAD/CAP Integration. Manufacturing based CAD/CAP integration. In: Proceeding International Colloquium on European Cooperation in the International Projects, Information Technologies and Environmental Sciences. Granted by Tempus JEP-07413-94 Short cycle Degree in Environmental Sciences, Germany/Köthen 1997, pp. 36 – 39.

[27] VÁŽAN, P. - MIŠÚT, M. - HUSÁROVÁ, B.: Case Study - Verification of a Control Strategy of FMS by Simulation. In: Proceeding International Colloquium on European Cooperation in the International Projects, Information Technologies and Environmental Sciences. Granted by Tempus JEP-07413-94 „Short cycle Degree in Environmental Sciences„. Germany/Köthen 1997, pp. 105 – 111.

[28] VELICSÁNYI, L.: Real-time data streaming into environment of the Internet. In: Proceeding International Colloquium on European Cooperation in the International Projects, Information Technologies and Environmental Sciences. Granted by Tempus JEP-07413-94 „Short cycle Degree in Environmental Sciences„. Germany/Köthen 1997, pp. 150 – 152.

[29] VRBAN, A. – MORAVČÍK, O.: Ein Beitrag zur Bestimmung der Toleranz der Parameter eines dynamischen System im stabilitätsberiech. Accession to safety margin appropriation of dynamic system parameters in stability extent. In: Proceeding International Colloquium on European Cooperation in the International Projects, Information Technologies and Environmental Sciences. Granted by Tempus JEP-07413-94 „Short cycle Degree in Environmental Sciences„. Germany/Köthen 1997, pp. 112 – 116.

[30] JOEHNK, P. - MORAVČÍK, O. - MICHALČONOK, G. - MIŠÚT, M.: Konfiguration und Optimierung der SW-Anwendungsentwicklung vom Typ Klient-Server für das Management von (Drittmittel-). Projekten. Configuration and optimalization development of software application of client server type for design management. In: 42. Internationales Wissenschaftliches Kolloqium. Informatik und Automatisierung im Zeitalter der Infomationsgesellschaft. Ilmenau, Fakultät, für Informatik und Automatiesierung 1997, s. 78 - 83.

[31] MORAVČÍK, O. - MIŠÚT, M. – VÁŽAN, P. – PETRÍK, D. – SCHREIBER, P.: Analyse und Vergleich von Umgebungen für OO-SW – Anwendungen in Klient-Server-architektur. Analyse and comparasion of object-oriented software application in client-server architecture. In: 42. Internationales Wissenschaftliches Kolloqium. Informatik und Automatisierung im Zeitalter der Infomationsgesellschaft. Ilmenau, Fakultät, für Informatik und Automatiesierung 1997, s. 78 - 83.

[32] VASKÝ, J.: Anwendung von CAD-Datenaustauschformaten für die fertigungstechnische CAD/CAP Integration. Application of CAD data exchange formats for manufacturing CAD/CAP integration. In: 42. Internationales Wissenschaftliches Kolloqium. Informatik und Automatisierung im Zeitalter der Infomationsgesellschaft. Ilmenau, Fakultät, für Informatik und Automatiesierung 1997, s. 78 - 83.

[33] JOEHNK, P. - MORAVČÍK, O. - MICHALČONOK, G. - MIŠÚT, M.: SW-Anwendungsentwicklung vom Typ Klient-Server für das Management von Projekten. Software development application of client server type for projects management. In: Vedecké práce MtF v Bratislave so sídlom v Trnave. Zväzok 5. Bratislava, STU 1997, s. 171 – 177.

[34] VASKÝ, J.: Fertigungstechnische CAD/CAP Integration. Manufacturing based CAD/CAP integration. In: Vedecké práce MtF v Bratislave so sídlom v Trnave. Zväzok 5. Bratislava, STU 1997, s. 179 – 183.

[35] VÁŽAN, P. - MIŠÚT, M.: Výsledky simulačnej štúdie riadenia výrobného systému. Simulation study results of control manufacturing system.In: Vedecké práce MtF v Bratislave so sídlom v Trnave. Zväzok 5. Bratislava, STU 1997, s. 171 – 177.

DEPARTMENT OF LANGUAGES

Head of the Department:
Eleonóra Bujnová, Ph.D.

Tel.: ++421/805/511 500
Fax: ++421/805/511 758
E-mail: kojp@mtf.stuba.sk

I. STAFF

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

II. EQUIPMENT

II.1 Teaching Language Laboratories

- Audio/Video Workshop

II.2 Special Measuring Instruments and Systems

III. TEACHING

III.1 Bachelor Study

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

Name of subject	*Semester*	*H/W L-P*	*Reader's name*
English	1,2,3,4	0-2	Mironovová, Cagaňová, Miština, Rusková
German	1,2,3,4	0-2	Reháková, Tandlmajerová
Russian	1,2,3,4	0-2	Bujnová

III. 2 Graduate Study

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

Name of subject	*Semester*	*H/W L-P*	*Reader's name*
English	1 - 4	0-2	Cagaňová, Mironovová, Miština, Rusková
German	1 - 4	0-2	Reháková, Tandlmajerová
Russian	1 - 4	0-2	Bujnová

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
German		0-2	Reháková
Russian		0-2	Bujnová

IV. RESEARCH TARGETS

- Analysis of the current state of teaching LSP at FMST
- ESP syllabus design and course design
- New phenomena in Russian vocabulary implemented in teaching

V. RESEARCH PROJECTS

- Institutional project No 857
  Analysis of the Present State of Foreign Languages Teaching at the Faculty and Designing a New Model

VI. COOPERATION

- The British Council in Bratislava
- The Pushkin Institute in Moscow
- The Goethe Institute in Bratislava

VII. THESES AND DISSERTATIONS

VII. 1 Graduate Theses

VII. 2 Dissertations (Ph.D.)

VII. 3 Habilitations (Assoc. Prof.)

VIII. OTHER ACTIVITIES

Conferences, seminars and workshops

January 1997
- Workshop for the British Council in Bratislava,
  Mironovová, E. - Rusková, D.
- Workshop for TU in Košice,
  Cagáňová, D. - Rusková, D.
- Seminar for Methodology Centre in Bratislava,
  Bujnová, E.

February 1997
- International Conference at the University of Agriculture in Nitra,
  Mironovová, E. - Miština, J.
- Workshop for German teachers at SUT,
  Reháková, A. - Tandlmajerová, A.

April 1997
- Workshops in Turčianske Teplice
  Bujnová, E.
- ESP Connections Conference in Piešťany,
  Cagáňová, D. - Mironovová, E. - Miština, J. - Rusková, D.
- Miniconference in Prešov,
  Miština, J.

July 1997
- Business Russian International Certificate Exams in Trnava,
  Bujnová, E

August 1997
- IATEFL SIG symposium in Bratislava
  Cagáňová, D. - Rusková, D.
- Teacher - training in Modra,
  Miština, J.

September 1997
- International Conference in Kroměříž,
  Miština, J.

October 1997
- CO-MAT-TECH International Conference in Trnava,
  Bujnová, E. - Cagáňová, D. - Rusková, D.
- Workshop for the British Council in Bratislava,
  Miština, J.

Book displays of English and German textbooks and dictionaries in March and December 1997.

IX. PUBLICATIONS

[1] CAGÁŇOVÁ, D. - RUSKOVÁ, D.: Projektová metóda vo vyučovaní anglického jazyka. (Project in ESP Teaching). Cizí jazyky, roč. 41, 1997, No 1-2, pp. 16 - 17.

[2] RUSKOVÁ, D. - TIMKOVÁ, R.: ESP International Networking Session. ESP Spectrum, No 13, 1997, pp. 20 - 21.

[3] BUJNOVÁ, E.: Pohyb v slovenskej zásobe súčasného ruského jazyka. (Changes in Current Russian Vocabulary). In proc. from Scientific Works of School of Economics M. Bella, Banská Bystrica.

[4] CAGÁŇOVÁ, D. - RUSKOVÁ, D.: Needs Analysis in ESP Syllabus Design. In proc. from International Symposium „Teacher Training in a Climate of Change", Bratislava, pp. 87 - 94.

[5] CAGÁŇOVÁ, D. - RUSKOVÁ, D.: Zefektívnenie vyučovania odbornej angličtiny prostredníctvom projektovej metódy. (Effective ESP Teaching via Projects), In proc. from CO-MAT-TECH '97. Bratislava, STU 1997, pp. 471 - 476.

[6] MIRONOVOVÁ, E. - MIŠTINA, J.: Process of Planning and Building - Up an ESP Syllabus. In proc. from International Conference „Application of Theoretical and Practical

Knowledge in Teaching FL. Nitra, SPU 1997, pp. 131 - 134.
[7] MIRONOVOVÁ, E. - MIŠTINA, J.: Several Remarks on the Process of Planning and Building - Up an ESP Syllabus. In proc. from CO-MAT-TECH. Bratislava, STU 1997, pp. 509 - 511.
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[9] MIRONOVOVÁ, E.: Authentic Video and Self - Developed Exercises in the Classroom. In proc. from „2 Slovak ESP Conference", Košice, TU 1997, pp. 128 - 129.
[10]BUJNOVÁ, E.: Russko - slovackij slovar. Som podnikateľ (rusko-slovenská jazyková príručka). Russian - Slovak Dictionary. I am an entrepreneur. Banská Bystrica, Methodological Centre 1997. 65 p.

DEPARTMENT OF MACHINING AND ASSEMBLY

Head of the Department
Karol Velíšek, Ph.D., Assoc. Prof.

Tel/Fax: ++421/805/521061
E-mail: kom@mtf.stuba.sk

I. STAFF

Professors:	1	Research Fellows:	2
Assoc. Professors:	5	Technical and Admin. Staff:	3
Senior Lecturers:	5		
Lecturers:	0	Ph.D. Students:	7

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 coordinate 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

Supervisors are written in brackets

III.1 Bachelor Study

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

Name of subject	*Semester*	*H/W L-P*	*Reader's name*
Industrial Technologies and Equipment	1	3-2	Velíšek, Lipa
Practical Metrology	2	0-2	Görög
Industrial Technology I	3	3-2	Baránek
Industrial Technology II	5	2-2	Baránek
Production Machines	4	3-2	Velíšek
Tools and Fixtures	4	3-2	Charbula
Final Work	6	0-2	Janáč
Machinery Metrology	7	2-2	Borovička

III.2 Graduate Study

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, Kicko
Metrology	6	2-2	Maduda, Krsek, Borovička
Fundamentals of Assembly	6	2-1	Valentovič
Tools and Fixtures	6	2-1	Javorčík
Cuttings Tools	6	2-1	Charbula
Machining Theory	7	3-2	Peterka, Békés
Designing of Production Processes and Systems	8	2-3	Baránek
Machines and Equipment for Production	8	2-2	Velišek
Assembly Technology	7	2-1	Valentovič
NC Machine Programming	8	1-2	Peterka
Exercise in Metrology	7	0-4	Maduda
Progressive Machining Methods	9	3-2	Hrubec,Lipa
Production Planning	7	2-2	Békés
Mechanization and Automation	7	3-2	Potocký
Final Project	7	0-5	Janáč, Slanina
Finishing Machining Methods	7	2-1	Lipa
Computer Controlled Production	7	2-1	Peterka
Experimental Machining Methods	7	2-1	Lipa
CAD/CAM Systems	7	1-2	Peterka
Introduction into Machinery Technologies	7	2-1	Lipa
Design for Manufacture	7	2-1	Hrubec, Kicko
Design of Production Systems	7	2-4	Valentovič
NC Machining II	7	0-4	Šugár

IV. RESEARCH TARGETS

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

V. RESEARCH PROJECTS

- National Grant: Theory of parts production. 1/3036/96 MŠ SR (Prof. Ing. Alexander Janáč,CSc.)
- Faculty project: Machining of metal and ceramics depositions created by fire- splutter plasma and by other techniques. 804 (Doc. Ing. Zdenko Lipa, CSc.)
- Copernicus Tash SP4: Analysis of vibration and internal sources of friction in grinding of internal front surfaces of tapered roller bearings. SP4 (Prof. Ing. Alexander Janáč,CSc.)

- International USA - Slovak project: Research Program of Development and Production of Platinum Resistance Thermometer by Directed Crystallization. 93 016 (Doc. Ing. Milan Borovička, CSc.)
- International Poland - Slovak project: Computer Integrated Manufacturing (Doc. Ing. Karol Velíšek, CSc.)

VI. COOPERATION

- Copernicus Tash SP4
  Faculty of Mechanical Engineering, Slovak University of Technology, Bratislava, Slovakia
- Faculty Project
  Slovak Academie of Science
  Analysis of vibration and internal sources of friction in grinding of internal front surfaces of tapered roller bearings.
- International USA - Slovak project
  National Institute of Standard and Technology, Gaithersburg, USA
  Research Program of Development and Production of Platinum Resistance Thermometer by Directional Crystallization. (93 016)
- International Austria - Slovak project
  Faculty of Mechanical Engineering, Technical University of Vienna, Austria.
  Problem of Uncertainty at High accuracy Measurement of Complex Part.
- International Poland - Slovak project
  Faculty of Mechanical Technology, Technical University of Gliwice, Poland.
  Computer Integrated Manufacturing

VII. THESES AND DISSERTATIONS

(Supervisors are written in brackets.)

VII.1 Graduate Theses

Vidlář Ľubomír: Návrh doporučených parametrov obrábania wolfrámových zliatin. Proposal of recommended mashining parameters for tungsten alloys machining. (Ing. Marián Perďoch)

Danek Martin: Navrhovanie technologických postupov. Proposing of process planning documents. (Dr. Ing. Jozef Peterka)

Herc Július: Technologickosť konštrukcie polovýrobkov (výkovky, odliatky, zvarky, vývalky, výlisky,...) z hľadiska požiadaviek obrábania. Design of semiproduct for machining (forgings, castings, welded products, rolled pieces, pressworks,...) from machinig requirements aspect. (Prof.Ing. Ján Hrubec, DrSc-)

Dubec Jaroslav: Návrh technológie obrábania vnútorných tvarov hriadeľa turbíny, obrábaním. Proposal of turbine shaft internal shapes machining technology. (Ing. Ivan Stanik)

Motl Dalibor:Prípava riadiacich programov pre NC - elektroerozívne obrábacie stroje. Preparing of control programs for NC - electroerrosive machine tools. (Ing. Peter Šugár)

Vojtek Rastislav: Návrh optimálnej metódy merania valcovitosti vo výrobnom procese. Proposal of cylindricity measurement optimal method, for using in production process. (Doc.Ing. Miroslav Maduda, CSc.)

Reya Richard: Vyhodnocovanie odchýlky kruhovitosti výberovou metódou. Evaluation of roundness deviation by selection method. (Ing. Augustín Görög)

Moravec Marek: Návrh výukového programu pre kurz programovania CNC strojov v systéme DIALOG 11. Proposal of education programm for CNC machines programming course in system DIALOG 11. (Ing. Augustín Görög)

Matejíček Ján: Výroba formy sedačky frézovaním. Production of seat forming die by milling. (Ing. Luboš Smolka)

Slabý Pavol: Vŕtanie hlbokých otvorov do sklárskych foriem. Drilling of deep holes into glass mould. (Ing. František Liška)

Zongor Milan: Renovácia piestnice tlmiča z hlavného podvozku lietadla SU-25. Renovation of aircraft SU-25 main undecarriage shock absorber piston rod. (Ing. Ivan Matejka)

Uváčiková Jana: Simulácia nepresnosti - sústruženie. Simulation of inaccuracy - turning. (Doc.Ing. Juraj Kicko, CSc.)

Vlkolenská Anna: Počítačová podpora pre NC obrábania krivkových plôch. Computer aid for curriform surfaces NC machining. (Ing. Štefan Blaho)

Batková Zdenka: Vznik rozmerov súčiastky. Origin of part dimensions. (Prof.Ing. Ján Békés, DrSc.)

Blaško Pavol: Banka technologických údajov pre rezné nástroje. Bank of technological data for cutting tools. (Doc.Ing. Karol Velíšek, CSc.)

Lužný Pavol: Automatizácia konštruovania špeciálnych rezných nástrojov. Design automation of special cutting tools. (Doc.Ing. Karol Velíšek, CSc.)

Javorek Martin: Aplikácia vymeniteľných rezných platničiek CERMET v praxi. Application of changeable cutting tips CERMET in practice. (Ing. Dušan Pecka)

Budke Ľuboš: Využitie CAD v technologickom projektovaní montáže. Utilization of CAD in technological assemly proposing. (Ing. Ernest Valentovič)

Zovčák Rastislav: Využitie CA - gravírovacej technológie pri výrobe medaily. Utilization of CA - engraving technology in medal production. (Dr.Ing. Jozef Peterka)

Hrabovský Peter: Smery zvýšenia technologickej úrovne výroby kuželíkových ložísk. Tendencies how to increase technological level of taper bearings. (Ing. Ernest Valentovič)

Evinic Andrej: Aplikácia CAD/CAM systému DUCT pre výrobu vyfukovacej formy. Application of CAD/CAM system DUCT for blow mould production. (Dr.Ing. Jozef Peterka)

Štefanka Marián: Technológia opracovania a čistenia závitových hniezd a svorníkov stabilných tlakových nádob. Technology of machining and cleaning of stable pressure vessels threaded nests and bolts. (Prof.Ing. Alexander Janáč, CSc.)

Adaška Juraj: Technológia sústružníckeho frézovania. Lathe milling technology. (Ing. Jozef Šandora)

VII.2 Dissertations (Ph.D.)

Ing. Mária Mastihubová: Implantácia metód dimenzionálnej a energetickej analýzy do analytickej teórie rezania. Application methods dimensional and energetical analysis to analytical theory of cutting. (Doc. Ing. Zdenko Lipa, CSc.)

VII.3 Habilitations (Assoc. Prof.)

Ing. Jozef Peterka: Computer Aided Manufacturing of 3D schopes surfaces by milling.

VIII. OTHER ACTIVITIES

- Seminar Tools for progressive machining.

IX. PUBLICATIONS

[1] BÉKÉS, J.: Navrhovanie technológií súčasnosť a budúcnosť. Proposing of technologies - the present times and future. In: International DAAAM Workshop. CA systémy a technológie. Žilina, TU 1997, str. 8-10.

[2] BÉKÉS, J. - JANÁČ, A.: Teória výroby súčiastok - teória strojárskej výroby. Theory of part production - theory of machinery production. In: Zborník IV. odb. sem. Materiály a technologie ve výrobě speciální techniky. IDET '97. Brno, VA 1997.

[3] BÉKÉS, J - VALENTOVIČ, E. - VELÍŠEK , K.: Konkurentné inžinierstvo a hodnotové konštruovanie. Concurrent engineering and value design. In: Zborník - NOVÉ SMERY V OBLASTI KONŠTRUKCIÍ VÝROBNEJ TECHNIKY. Trenčín, SOaPK 1997, s. 28-31.

[4] BOROVIČKA, M. - OSANA, P. H. - JANÁČ, A.: The uncertainty of Temperature Measurements in Medical and Biological Sphere In: 4th International Colloquium, Mikro- und Nanotechnologie. Wien, TU 1997, s. 25-28.

[5] BOROVIČKA, M. - JANÁČ, A. - PROSTREDNIK, D.: The uncertainty of Temperature Measurements in Medical and Biological Sphere.In: 4th International Colloquium, Mikro- und Nanotechnologie. Wien, TU 1997, s. 21-24.

[6] BOROVIČKA, M. - VELÍŠEK, K. - MADUDA, M.: The High Temperature Resistance Thermometer and Increase His Stability In: TEMPBEIJING '97 Internationa Conference of Temperature and Thermal Measurement October 6-10. 1997.

[7] BOROVIČKA, M.: The development of micro and macrotechnological equipment with high-precision measurement. In: The 2nd International Economic Conferencie „Slovakia in the Forcehields of Europa and the World October 8th - October 10th 1997.

[8] HAZLINGER, M. - GÖRÖG, A.: Analýza poškodených preťahovacích tŕňov a možnosti zvýšenia ich životnosti. Analysis of broken broaching tools and possibilities of their life time increasing. Materiálové inžinierstvo, 1997, č. 10, s. 21-26.

[9] GÖRÖG, A - VELÍŠEK , K.: Evaluation of a Non-Flatness Superimposed Plane on PC. In: Zbornik - DAAAM '97. Wien 1997, s. 091-092.

[10] JANÁČ, A. - KURIC, I.: Technological model of part for CAPP system In: DAAAM '97, Wien 1997, s.139-140.

[11] LIPA, Z. - VELÍŠEK, K. - ŠTEFÁNEK, M.: COURSE IN TIME OF MATERIAL REMOVAL BY SUPERFINISHING. In: Zbornik - Mikro- und Nanotechnologie. Wien, TU 1997, s. 65-67.

[12]LIPA, Z. - JANÁČ, A. - VELÍŠEK, K.: Príspevok k hodnoteniu brúsnych a superfinišovacích nástrojov. Contribution to evalvation of grinding and superfinishing tools. In: Zborník - NÁRADIE '97. Trenčín 1997, s. 13-18.

[13]MADUDA, M.: Eigenschaften der Mesgeräte und Automatisierung der Kontrole.In: Metrologia w technikach wytwarzania naszyn. Properties of measuring instrument and Automation of testing. VII. vedecko-technická konferencia. Zborník prednášok 1. diel. Kielce, Politechnika Swietokrzyska 1997, s. 141-147.

[14]MADUDA, M.: Beurteilung der Entstehung und Messung der Formabweichungen der Rundheits - und Geradheitswerkstücken mit methematischer Modellierung. Cause of origin and measurement of deviations in the shape of round and planar parts by using of mathematic modelling. In: Metrologia w technikach wytwarzania maszyn. VII. vedecko-technická konferencia. Zborník prednášok 2. diel. Kielce, Politechnika Swietokrzyska 1997, s. 139-145.

[15]MADUDA, M. - BOROVIČKA, M.: Modeling the formation and measurement of deviations in the shape of rotary and planar parts.In: „Mikro- und Nanotechnologie". 4. medzinárodné Colloquium. Zborník prednášok. Wien, TU 1997, s. 77-81.

[16]PETERKA, J.: CAD/CAM systémy. In: International DAAAM Workshop „CA Systems and Technologies". Žilina, TU 1997, s. 51-54.

[17]PETERKA, J. - KURIC, I.: Vytypovanie upnutia pre rotačné súčiastky. Determination of clamping for rotary parts. In: International DAAAM Workshop „CA Systems and Technologies". Žilina, TU 1997, s.29-32.

[18]PETERKA, J - JANÁČ, A.: Some Specialities of 3D Milling Process. In: 6th Int. Con. MMA'97 on Flexible Technologies. Novi Sad, TU 1997.

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[21]VELÍŠEK, K - KUCHÁRIKOVÁ, E.: USING THE MODELING OF TRANSFORMATION SYSTEMS IN ASSEMBLY. In: Zborník - ICIT '97 Volume II, Maribor 1997, s. 445-450.

[22]VELÍŠEK, K. - KATALINIČ, B.: Data Bank of Technological Data for Cutting Tools. In: Zborník - DAAAM '97. Wien, TU 1997.

DEPARTMENT OF MANAGEMENT AND QUALITY ENGINEERING

Head of the Department
Alexander Linczényi, Ph.D. Prof.

Tel.: ++42-805/511 263
Fax: ++42-805/242 72
E-mail: kmak@mtf.stuba.sk

I. STAFF

Professors	1	Research Officers	2
Assoc. Professors	8	Senior Lecturers	18
PhD Students	15	Technical Officers	3

II. EQUIPMENT

II. 1 Teaching and Research Laboratory

- Computer Laboratory

II. 2 Special Measuring Instruments and Systems

-

III. TEACHING

III. 1 Bachelor Study

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	Burcl
Statistical Methods	1	2 - 2	Kučerová
Enterprise Management	1	2 - 2	Ščepka
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	Velišek
Production Management	2	2 - 2	Čambal
Personnel and Social Programme	3	3 - 1	Sablik
Computer Aided Management	3	1 - 3	Šrubařová
Logistics	3	2 - 2	Červeňan
Economical Analysis	3	3 - 3	Doubková
Investment Development	3	3 - 3	Sablik
Ergonomy	4	2 - 2	Sablik
Information Systems Automation	4	2 - 4	Dobrotka

Name of subject	Semester	H/W L-P	Reader's name
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

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	Muliková
Information Systems Automation	7	2 - 3	Dobrotka
Operational 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	
Final Project		0 - 5	
Accounting in Enterprise Activities		0 - 3	
Economical Analysis	9	2 - 2	Doubková
Finances and Banking	9	2 - 2	Červeňan
Quality Management	9	3 - 2	Linczényi
Final Project		0 - 5	
Operational Research	7	3 - 3	Štrpka
Management of Enteprise Development	7	3 - 2	Molnár
Quality Management	7	3 - 2	Linczényi
Tools and Techniques of Quality Management	7	2 - 2	
Logistics in Quality Assurance	8	2 - 2	
Marketing in Quality Management	8	3 - 2	Jedlička
Production Management	8	3 - 3	Čambál
Statistical Methods of Quality Inspection	8	2 - 3	Kučerová
Final Project	8	0 - 5	
Information Systems	7	2 - 2	
Computer Operating	8	0 - 2	
Taxation	8	2 - 1	
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

- quality control in industrial enterprises
- quality control in service enterprises
- value management application
- advanced information technologies implementation

V. RESEARCH PROJECTS

- Quality Assurance in Public Services Oriented on Power and Gas Industry
- Value Management Application in Designing the Programmes for Engineering Companies Conversion
- Research into Theory and Practice of Designing the Model for Quality Control Organisation in Medium-size Enterprises
- Managerial Training in the Conditions of Economics Transformation
- Implementation of Information Technologies into Management Training/ Teaching and into Organisations
- Evaluating the Value Management in Companies Quality Control

VI. COOPERATION

Agreement on cooperation between the Department of Work Science, Brandenburg Technical University, Cottbus and the Department of Management and Quality, FMST SUT.

VII. THESES

VII. 1 Graduate Theses

- field of quality control systems
- costs analysis
- value analysis application
- company organisational models
- enterprises marketing management
- operational research application
- controlling application

VII. 2 PhD Theses

- Quality Assurance in Software Design, Supply and Maintenance (Linczényi, A.)
- Application of Statistical Methods in Quality Assurance (Linczényi, A.)
- Quality Costs (Linczényi, A.)
- Verifying Products Quality in Quality System (Linczényi, A.)
- Quality Control in Nuclear Power Supply (Linczényi, A.)
- Marketing and Quality Control (Linczényi, A.)
- Designing a Model for Organisation of Quality Control System in an industrial Enterprise (Jedlička, M.)
- Organisation of Quality Control in Medium-size Enterprises (Jedlička, M.)
- A Contribution to the Methodology of Evaluating the Quality of Products in Pre-Production Stage (Šalgovičová, J.)
- Human Element in Quality Management (Molnár, P.)

- Tools and Techniques of Quality Management in Pre-Production Stages (Molnár, P.)
- Supplier-Customer Relations in Quality System (Molnár, P.)
- System of Quality Management in Jaslovské Bohunice Nuclear Power Plant (Molnár, P.)
- CAQ Systems (Zabojnik, J.)

VIII. OTHER ACTIVITIES

- specialized course in the field of work rationalization

IX. PUBLICATIONS

[1] SABLIK, J.: Motivačný program ako nástroj manažmentu podnikového vzdelávania. Motivation programme as a tool of management training. Žilina, MASM 1997, 51 s.

[2] BREZNÍK, J.: Marketing. Marketing. Bratislava, STU 1997, 292 s.

[3] HOLKOVÁ, A. - PAULOVÁ, I.: Efektívna komunikácia - významný faktor v presadzovaní myšlienok TQM v organizáciách. Evaluating the staff - a tool of quality improvement. Kvalita, 5, 1997, č. 5, s. 23 - 25.

[4] JEDLIČKA, M.: Marketing jako komunikačný základ při zvyšovaní kvality. Marketing - a communication basic for quality improvement. Kvalita a marketing, 1997, č. 6, s. 30 - 31.

[5] BURCL, R.: Stratégia rozvoja manažmentu starostlivosti o stroje a zariadenia. Development strategy in management of care of machine tools and equipment. In: Akademická Dubnica '97. Bratislava, STU 1997, s. 141 - 146.

[6] ČAMBAL, M. - HOLKOVÁ, A.: Význam identifikácie a analýzy vzdelávacích tréningových potrieb v procese kontinuálneho vzdelávania pracovníkov smerujúceho k zvyšovaniu kvality. The importance of identification and analysis of the training needs in the process of continual staff training aimed at quality increase. In: Akademická Dubnica 97. Bratislava, STU 1997, s. 157 - 160.

[7] KAPOUN, Ľ. - HORŇÁK, F.: Vzdelávanie stredného manažmentu v oblasti riadenia kvality v podnikovej praxi. Middle management training in the field of quality management. In: Akademická Dubnica '97. Bratislava, STU 1997, s. 149 - 150.

[8] SAKAL, P. - HALČINOVÁ, E. - OŠUSTOVÁ, E.: Stratégia rozvoja ekologicky orientovaného priemyselného podniku v trhových podmienkach. Development strategy of an environment-friendly industrial plant in market conditions. In: CO-MAT-TECH '97. Bratislava, STU 1997, s. 237 - 240.

[9] ŠALGOVIČOVÁ, J.: Značka jako znak kvality. Trade mark as a quality indicator. In: CO-MAT-TECH '97. Bratislava, STU 1997, s. 255 - 258.

[10] ČERVEŇAN, Š.: Delegovanie pracovných úloh v manažmente. Delegating the assignments in management. In: CO-MAT-TECH '97. Bratislava, STU 1997, s. 59 - 64.

[11] LINCZÉNYI, A.: Riadenie kvality v podnikoch verejnoprospešných služieb. Quality management in enterprises of public services. In: CO-MAT-TECH '97. Bratislava, STU 1997, s. 163 - 166.

[12] MULÍKOVÁ, D.: Význam sledovania nákladov na kvalitu pre vyjadrenie skutočného hospodárskeho výsledky firmy. Monitoring the quality cost and its importance in calculating the real economic results of the company. In: Akademická Dubnica '97. Bratislava, STU 1997, s. 193 - 196.

[13] NOVÁKOVÁ, R. - SKUBÁKOVÁ, K.: Možnosti riešenia porúch v medzipodnikových platobných vzťahoch. The options of solving the failures in intercompany payment realtionship. In: Akademická Dubnica '97. Bratislava, STU 1997, s. 137 - 138.

[14] ONČÁK, P.: Projektové riadenie v reštrukturalizácii strojárenských organizácií. Project management in restructuralisation of engineering organizations. In: Akademická Dubnica'97. Bratislava, STU 1997, s. 139 - 140.

[15] ŠTRPKA, A.: Použitie exaktného prístupu při zabezpečovaní kvality a efektívnosti služieb. An exact approach in assuring quality and effectivity of the services. In: Akademická Dubnica. Bratislava STU 1997, s. 57 - 60.

[16] MOLNÁR, P.: Metódy a nástroje riadenia kvality a ich aplikačný priestor. The quality management methods and tools and their application space. In: Jakost '97. Ostrava, DT 1997, s. 158 - 165.

DEPARTMENT OF MATERIALS ENGINEERING

Head of the Department
Ľubomír Martinec, Ph.D., Assoc. Prof.

Tel.: ++421/805/521 119
Fax: ++421/805/521 119
E-mail: kmi@mtf.stuba.sk

I. STAFF

Professors:	3	Research Fellows:	3
Assoc. Professors:	3	Technical and Admin. Staff:	10
Senior Lecturers:	10		
Lecturers:	0	Ph.D. Students:	1

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- X-ray Diffraction Laboratory
- Electron Microscopy Laboratory
- Light Microscopy Laboratory
- Laboratory of Physical Measurement
- Vacuum Annealing and Sintering
- Applications for Heat Treatment under Vacuum
- Chamber Furnaces

II.2 Special Measuring Instruments and Systems

- Transmission Electron Microscope
- Scanning Electron Microscope
- X-ray Diffractometer
- Light Microscope
- Induction Magnetometer
- Image Analyzer
- FPZ 100/1 Direct stress testing machine
- EDZ 40 dyn direct stress Lasting machine
- HPO 3000 Hardness tester
- HPO 250 Hardness tester
- Wilson Hardness tester
- Sharpie 300 J Pendulum impact testing machine

III. TEACHING

III.1 Bachelor study

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

Name of subject	*Semester*	*H/W L-P*	*Reader's name*
Materials I	1	3-2	Martinkovič
Materials II	3	2-2	Grgač
Surface Preparation and Corrosion of Materials	5	2-2	Opravil

III.2 Graduate study

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

Name of subject	*Semester*	*H/W L-P*	*Reader's name*
Materials and Technology	2	2-3	Martinkovič ,Lipa, Makovník
Materials Science	3	3-2	Martinec, Šimkovič, Martinkovič, Grgač
Engineering Materials	6	3-2	Šimkovič
Methods of Material Structure and Properties Research	6	2-2	Čaplovič
Vacuum Technology	8	3-2	Žitňanský
Technology Materials	6	3-2	Šimkovič
Experimental Methods of Material Research I	8	1-2	Čaplovič
Plastics and Plastics Technology	8	2-2	Martinec
Corrosion, Tribolgy and Surface Preparation	8	2-2	Opravil
Technology of Heat Treatment and Surface Preparation	7	2-2	Grgač
Processes of Heat Treatment and Sintering	7	2-2	Grgač
Theory of Phase Transformation	7	2-1	Hrivňáková
Physical Chemistry	7	2-2	Pinkavová
Vacuum Technology	7	3-2	Žitňanský
Plasma and Vacuum Metallurgy	7	1-1	Žitňanský
Ceramic Materials	9	2-2	Kozík
Composite Materials	9	2-2	Šebo
Experimental Methods of Material Research II	9	1-3	Čaplovič
Physical Metallurgy	5	3-2	Hrivňáková
Degradation Processes and Time Life Prediction	9	2-2	Puškár
Mechanical Testing of Materials	8	2-2	Kadlec
Utility Properties and Choise of Materials	8	3-2	Hrivňák
Recyklic Technology	8	2-1	Hlavačka
Plastics	8	0-2	Horváth
Metallography	9	2-1	Čaplovič
Theory of Technology Processes	7	3-2	
Fractography	9	2-1	Bošanský
Radiation Degradation of Materials	9	2-1	Hrivňák
Vacuum Technology in Heat Treatment	9	1-2	Žitňanský
Theory and Technology of Industrial Heating	9	2-2	Behúlová
Advanced Methods of Heat Treatment	9	3-2	Hazlinger
Choise of Materials and Advanced Material Technologies	9	2-1	Hrivňák
Theory of Material Degradation and	9	2-1	Hrivňák
Corrosion Protection	9	2-1	Hrivňák

IV. RESEARCH TARGETS

- Vacuum metallurgy, metal rafination, crystallization of metals, materials science
- Tool materials of ledeburitic type
- Powder metallurgy
- Diffusion chroming
- Structure of Polymers
- Weldability of Steels

V. RESEARCH PROJECTS

prof.Ing. Ivan Hrivňák, DrSc.
Research of o High Strength Steels Weldability.95/5195/387
Pulsed Submerged Arc Welding. 95-513-II-06E
EUREKA 133 PULZWELDSTRUCK cooperation with TU WIEN
prof.Dr. Ing.Marcel Žitňanský, DrSc.
The Preparation of the Supermaterials with Higher Creep and Heat Resistance on the Base of Intermetalloids and Composite Intermetalloids. 1/1769/94
Research of the Metal Materials for Exquinite Anentments Human Joints. 1/4451/97
Preparation of Coposites with Higher Creep and Heat Resistance. No 838
prof.Ing.Dáša Hrivňáková,DrSc.
Optimalization of Structure and Properties of Uniaxial Feromagnetics by Technology Parameters. 1/41189/97
doc.Ing.Peter Grgač,CSc.
Study and Modeling of Nonequilibrium Micrometallurgy Processes. 1/4263/97
Primary and Secondary Structure of Rapidly Solidified Powders. No 831
doc.Ing.Ľubomír Martinec,CSc.
Weldability of Particle Reinforced Homopolymers. No 807

VI. COOPERATION

- Within PROJECT: There are the following cooperation partners universities:
  - Slovak University of Technology in Bratislava,
  - Faculty of Electrical Engineering and Information Technology,
  - Technical University Košice,
  - Faculty of Mining,
- Study and development of tool materials on the base of Fe-C-Cr-V system prepared by rapid solidification of atomized melt (SVUM Praha).
- Laser marking on bearing steel (AVANTEK Nové Mesto nad Váhom).

VII. THESES AND DISSERTATIONS

(Supervisors are written in brackets)

VII.I Graduate Theses

Buchelová Ivona: Štúdium nadmolekulovej štruktúry polymérov. Research of Hypermolocular Structure of Polymers. (Ing. Ľ. Pinkavová)

Mečiar Marek: Súvislosť materiál. aspektov, technol.výroby a úžitkových vlastností strižníkov pre strihanie otvorov náboja lamely spojky. Shear Tools Damage and Lifetime Short age anlysis. (doc. Ing. M. Hazlinger, CSc.)

Moncmanová Anna: Metalografická analýza kovových materiálov typu Co-Cr-Mo a typu Ti-Al-V Metallography Analysis of Co-Cr-Mo and Ti-Al-V Materials. (prof. Dr. Ing. M. Žitňanský, DrSc.)

Synak Dušan: Difúzne chrómovanie vybraných nástrojov a ich vlastnosti. Diffusion Chroming of any Tools and their Properties (doc. Ing. P. Grgač, CSc.)

Šarmír Alexander: Vplyv prerušenia zváracieho cyklu pri zváraní rúr elektrotvarovkami na kvalitu zvarového spoja Dependence of Welding Connection Quality on Welding Cycle Break. (doc. Ing. Ľ. Martinec, CSc.)

Štefanovič Peter: Prešetrenie základnej štruktúry modelových biokompatibilných zliatin na báze Co a Ti Basic Structure of Co and Ti base Biocompatibility Materials (prof. Dr. Ing. M. Žitňanský, DrSc.)

Lengyel Tomáš: Štúdium vplyvu vysokoteplotnej austenitizácie na štrukt. ocele 38CHN3MFA Influence of High Temperature Austenitization on 38CHN3MFA Steel Structure (doc. Ing. P. Grgač, CSc.)

VII.2 Dissertations (Ph.D.)

Ing.Maroš Martinkovič: Možnosti zlepšenia vlastnosti Ni ŽPZ CMSX-3
The improvement of nickel base supperalloys CMSX-3

VIII. OTHER ACTIVITIES

- CEEPUS Project PL 13/97

IX. PUBLICATIONS

[1]BEHÚLOVÁ, M. - GRGAČ, P. - KABÁT, E.: The heat transfer during rapid solidification of undercooled hypereutectic Fe-C-X alloy droplets. Materials Science and Engineering A 1997, s. 9 - 13.

[2]ŽITŇANSKÝ, M, - ZRNÍK, J. - MARTINKOVIČ, M. - HAZLINGER, M.: Metoda odlewania kompozytów na osnowie metalowej umocniony ciaglym wlóknem grafitu. Casting of Carbon Fibre Reinforced Composites. Inžinieria Materialowa, 5, 1997, č. 5, s. 182 - 185.

[3]HRIVŇÁK, I.: Nové materiály a ich zvariteľnosť. Wedability of Advanced Materials. Acta Metallurgica Slovaca, 1997, s. 40 - 53.

[4]HRIVŇÁK, I. - ČECH, J. - JANÁK, G. - LONGAUEROVÁ, M. - MAKROCZY, P. - SRNKA, M.: Výskum praskania plynulo odlievaných sochorov. Research of Cracking Continuos Casting Slaps. Hutnícke listy, 52, 1997, č. 6, s. 12 - 15.

[5]HRIVŇÁK, I.: Zváranie mikrolegovaných ocelí. Welding of Microalloied Steels. Eurowelding revue, 1, 1997, č. 3, s. 51 - 56.

[6]HAZLINGER, M. - HRIVŇÁK, I.: Analýza poškodenej ojnice z automobilu Peugeot. Damage Analysis of Broken Conrod of Peugeot Automobil. Materiálové inžinierstvo, 4, 1997, č. 8, s. 23 - 28.

[7]HAZLINGER, M. - GÖRÖG, A.: Analýza poškodených preťahovacích tŕňov a možnosti zvýšenia ich životnosti. Analysis of amaged Broaches and Possible Enhancement of Their Life-Cycle. Materiálové inžinierstvo, 4, 1997, č. 10, s. 21 - 26.

[8]MARTINKOVIČ, M. - HAZLINGER, M. - ŽITŇANSKÝ, M.: Kvantitatívna analýza procesu a štruktúry žiarupevnej zliatiny pripravenej riadenou kryštalizáciou. Kvantitative analysis of process and structure directionally solidified superalloy. Materiálové inžinierstvo, 4, 1997, č.8, s. 47.

[9]MARTINKOVIČ, M.: Možnosti zlepšenia vlastností žiarupevných zliatin na báze niklu. . Improvement of Ni base superalloy properties. Správy Vedeckej spoločnosti pre náuku o kovoch, 1997, č. 2.

[10]HRIVŇÁK, I. - JANÁK, G.: Výskum zvariteľnosti vysokopevných ocelí. Research of o High Strength Steels Weldability. Zváranie, 46, 1997, č. 1, s. 3 - 9.

[11]HRIVŇÁK, I, - JANÁK, G.- AKOSSI, A. - PECHA, J.: Materiálové problémy zvárania feritických a austenitických ocelí. Material Aspects of feritc and austenitic steels welding. Zváranie, 46, 1997, č. 12, s. 270 - 274.

[12]HUDÁK, P. - ČAPLOVIČ, Ľ. - GRGAČ, P,: Mikroštruktúra a fázové zloženie povrchových vrstiev na nástrojových oceliach po difúznom chrómovaní. Microstructure and phase composition of surface layers on diffusion chromium tool steels. Zváranie, 46, 1997, č. 4, s. 73 - 76.

[13]PINKAVOVÁ, Ľ. - MARTINEC, Ľ.: Nadmolekulová štruktúra zvarových spojov polyamidu. Hypermolocular Structure of welding conected polyamids. Zváranie, 46, 1997, č. 1, s. 18 - 20.

[14]ŽITŇANSKÝ, M.: How to produced very pure Copper. In: AMTECH 97. Science Conference in Advanced Mechanical Engineering Technologies. Gabrovo, TU 1997, s. 117 - 120.

[15]MARTINKOVIČ, M. - ŽITŇANSKÝ, M.: Tungsten fibre reinforced superalloy composites prepared by liquid phase method. In: CCME 97. Challenges to civil and machanical engineering in 2000 and beyond.Vol. III. Proceedings of the International Conference. Wroclaw 1997, s. 231 - 235.

[16]DEMIAN, S.: Technológia výroby polotovarov z práškového hliníka a hliníkových zliatin izostatickým lisovaním. Production technology of aluminium powder raw parts by izostatic pressure. In: CO-MAT-TECH '97. Bratislava, STU 1997, s. 13 - 16.

[17]GÖRÖG, A. - HAZLINGER, M.: Analýza príčin poškodenia preťahovacích tŕňov a možnosti zvýšenia ich životnosti. Analysis of Damaged Broaches and Possible Enhancement of Their Life-Cycle. In: CO-MAT-TECH '97. Bratislava, STU 1997, s. 23 - 28.

[18]HORVÁTH, J.: Aktuálne trendy rozvoja plastov. New ways of plastics development. In: CO-MAT-TECH '97. Bratislava, STU 1997, s. 41 - 46.

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[23]HRIVŇÁK, I.: The local brittle zone (LBZ) and its fracture behaviour in welds. In: Fractography 97. Košice, TU 1997, s. 24 - 31.

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[25]BEHÚLOVÁ, M. - GRGAČ, P.: Numerická analýza rýchlostí ochladzovania sférických častíc taveniny v procese rozstrekovania dusíkom. Numeric analysis of cooling speed of nitrogen spraied melt globular particles. In: Technológia ' 97. Bratislava, STU 1997, s. 263 - 266.

[26]GRGAČ, P. - BEHÚLOVÁ, M. - MORAVČÍK, R.: Dendritická a bunečná mikroštruktúra v rýchlo stuhnutom prášku nástrojovej ocele CH12MF4. Dendritic and cellular microstructure of rapidly CH12MF4 tool steel solidified powder. In: Technológia '97. Bratislava, STU 1997, s. 308 - 311.

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[33]MARTINEC, Ľ. - SEČANSKÝ, J. - ŠARMÍR, A.: Vplyv prerušenia zváracieho cyklu pri zváraní elektrotvarovkami na kvalitu zvarového spoja. Dependence of Welding Connection Quality on Welding Cycle Break. In: Využitie plastov v slovenskom plynárenstve. Poprad, Naftaprojekt 1997, s. 1 - 11.

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[36]MARTINKOVIČ, M. - ČAPLOVIČ, Ľ.: Príprava zloženého materiálu s kovovou matricou spevneného kontinuálnym volfrámovým vláknom. Tungsten fibre reinforced metal matrix composite fabrication. In: Vedecké práce MtF STU. Bratislava, STU 1997, s. 13 - 17.

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[38]KARASZ, R. - HORVÁTH JOZEF - VÁGÓ, K.: Nové smery v uplatnení rámov a stavebnicových elementov. New ways of frame and meccano elements utilization. In: FORMY 97. 7. Brno, Uniplast 1997, s. 136 - 143.

[39]HRIVŇÁKOVÁ, D,- ČAPLOVIČOVÁ, M. - HRNČIAR, V. - DEMIAN, S.: Permanentné magnety na báze NdFeB. NdFeB base permanent magnets. In: Konštrukčné materiály 97. Bratislava, Vedecká spoločnosť pre náuku o kovoch - ÚMaMS SAV 1997, s. 81 - 88.

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[43]ČAPLOVIČ, Ľ.: Investigation of phase transformation in maraging steels by hermomagnetometric method. In: DMS-RE 97. The seventh joint seminar Development of materials science in research and education. Book of Abstracts. Kočovce 1997, s. 37.

[44]HRIVŇÁKOVÁ, D. - HRNČIAR,.V. - ČAPLOVIČOVÁ,.M.- DOMÁNKOVÁ,.M.: Dislocations in uniaxial ferromagnetics. In: DMS-RE 97. The seventh joint seminar Development of materials science in research and education. Book of Abstracts. Kočovce 1997, s. 23.

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[49]HRIVŇÁKOVÁ, D. - ČAPLOVIČOVÁ, M. - HRNČIAR, V. - DEMIAN S.: Zlepšenia v oblasti permanentných magnetov na báze NbBFe. Improvements of NdFeB base permanent magnets. In: TECHNOLÓGIA '97, Bratislava, 1997, s. 63.

[50]DEMIAN, S.: Technológia výroby polotovarov z práškového hliníka a hliníkových zliatin izostatickým lisovaním. Production technology of aluminium powder raw parts by izostatic pressure. In: CO-MA- TECH'97, Bratislva, STU 1997, s. 13.

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[54] HORVÁTH, J.: Plasty ako faktor energetických úspor . Plastics - elment of energy saving. Konferencia „ Horizonty prosperity' 97", Trenčianske Teplice, 1997.

DEPARTMENT OF MATHEMATICS

Head of the Department:
Marián Halabrín, Ph.D., Assoc. Prof.

Tel.: ++421/805/511 417
Fax: ++421/805/511 758
E-mail : km@mtf.stuba.sk

I. STAFF

Professors:	1	Research Fellows:	0
Assoc. Professors:	7	Technical and Admin. Staff:	0
Senior Lecturers:	18		
Lecturers:	0	Ph.D. Students:	6

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

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	Ďurikovič
Mathematics II	2	3-2	Ďurikovič

III. 1 Graduate Study

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	Halabrín, Hic
Mathematics II	2	3-4	Halabrín, Hic
Mathematics III	3	3-3	Červeňanský, Dillingerová
Applied Mathematics III	5	2-2	Palumbíny, Urbaníková
Applied Mathematics I	5	2-2	Hic
Fundamentals of Computer Graphics	5	2-2	Zámožík

Name of subject	*Semester*	*H/W L-P*	*Reader's name*
Introduction into Engineering Mathematics	5	1-2	Trubenová
Numerical Mathematics	5	2-2	Dillingerová
Partial Differential Equations	5	2-1	Ďurikovič
Discrete Mathematics	5	2-1	Híc
Mathematics on PC	5	1-2	Trubenová
Theory of Experiment	6	2-1	Halabrín
Complex Function Theory	6	2-1	Palumbíny
Theory of Planned Experiment	6	2-1	Halabrín
Statistical Analysis	6	2-2	Tóthová
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 massives
- 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

VII. THESES

(Supervisors are written in brackets)

VII. 1 Graduate Theses

VII. 2 Dissertations (Ph.D.)

- Bare classification of real functions (Kostyrko, Ph.D., Assoc. Prof.)
- Dense allocation of objects (Božek, Ph.D., Assoc. Prof.)

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

IX. PUBLICATIONS

[1] HALABRÍN, M. - ČERVEŇANSKÝ, J.: Mathematics I, II, III - textbook for distance education. Bratislava, STU 1997.

DEPARTMENT OF PHYSICS

Head of the Department:
Miroslava Ožvoldová, Ph.D., Assoc. Prof.

Tel.: ++421/805/511243
Fax: ++421/805 /511758
E-mail: kf@mtf.stuba.sk

I. STAFF

Professors:	1	Research Fellows:	1
Assoc. Professors:	3	Technical and Admin. Staff:	5
Senior Lecturers:	10		
Lecturers:	1	Ph.D. Students:	1

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- Laboratory of Physics I-II, teaching of the mechanics, termodynamies, 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, where effect 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 ^{o}C
- Modular spectroscopy in the frequency range 1 - 10^{6} Hz , up to 300 ^{o}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 the physics brauch of study is to educate engineers who should be competent to solve problems concerning the wide spectrum of the industry and also extenting to the field technology informatics, ecology, etc... The study involves the necessary theoretical introduction into subjects that provide general education for an engineer which is followed by specialized courses. The topics of lectures, laboratory and seminar exercises have been selected so that a student could in the proctical way. Thus, he obtains also a a basic for creative work in engineers practice.

III.1 Bachelor Study

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

Name of subject	*Semester*	*H/W L-P*	*Reader's name*
Physics I	2	4-2	Kozík
Physics II	3	3-2	Garaj

III. 2 Graduate Study

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

Name of subject	*Semester*	*H/W L-P*	*Reader's name*
Phsics I	2	3-3	Kozík, Garaj
Physics II	3	4-2	Kalužný, Garaj
Physics III	4	2-3	Ožvoldová, Čerňanský
Electrotechnics	4	3-2	Kosorin
Introduction to Engineering Physics	1	1-2	Ožvoldová
Electronics	5	2-2	Kosorin
Solid State Physics	6	2-2	Čerňanský

IV. RESEARCH TARGETS

In 1997 the Department of Physics has contined research activities throuhg grants. The grants have included those ones from Grant Agency of the Slovak Republic (2 grants), and MtF SUT (1 grant). In respect of research contracts, so - operation with Slovak Academy of Science (1 grant), Department of Applied Mechanics MtS SUT (1 grant) has contined to play a dominant role. The projects of the Department are in continuation of our previous work, focused on the investigation of the relations between preparation conditions, microstructure and physical properties of ceramics (based on ZrO_2,YBaCuO, basalt and kaolin), ceramic composites, superionic fluoride composites and glasses (system As-S, As-Ge-S, As-Ga - S, etc.) are the main topics in research area. The aim of this research area is to contribute to the fundamental understanding of materials. This is realized by the investigation of materials structure, modeling and simulations, and finally by the development of characterization methods with the main topics improved quantification and in situ materials manipulations.

V. RESEARCH PROJECTS

- Relationship of physical and mechanical properties of ceramic materials and superconducting systems to their process technologies (grant VEGA, no. 1/4338/97, Ass. Prof. J. Kalužný)
- Constructing of the holographic apparatus for the investigation of selected materials properties (grant MtF SUT, no. 803, Prof. J. Garaj)
- Mass, charge and energy transport in superionic conductors (grant VEGA, no. 2/4184/97, asist. prof. Labaš)

- DECHEM - Distance Education Course for Higher Education Management (PHARE, DE 97/ 154 ass. prof. J. Kalužný)
- EQATU - Education Quality Assessment at Technical University (TEMPUS, 115-96, ass. prof. J. Kalužný)

VI. COOPERATION

- The impact of the technological texture, the defect microstructure and the mixed effect on the physical properties of the technical importante solid electrobytes, (grant VEGA no. 95/5305/588) in cooperation with Institute of Physics of the Slovak Academy of Sciences.
- Model and numerical simulation of technology, structure and properties of advanced materials, in cooperation with the Department of Applied Mechanics MtF SUT, (grant MtF SUT no. 855).
- Investigation of the luminiscence properties of zirconia ceramics and glasses in cooperation with the Department of Solid State Physics, MFF UK in Bratislava.

VII. THESES AND DISSERTATIONS

VII.1 Graduate Theses

VII.2 Dissertations (Ph.D.)

VII.3 Habilitations (Assoc. Prof.)

VIII. OTHER ACTIVITIES

- Physics, 24 hours/semester, Postgraduate study lectures
- Electrotechnics in welding, Postgraduate study lectures
- Cooperation in organizing the regional Physics Olympiad
- Seminars:
  1. The registration of the currents with the fast time changes (prof. Dúbravec)
  2. The pozition determination of the object by the measurement of the geophysical fields (RNDr. Jančuška)
  3. Cosmos around us - I. (Mgr. Petrík)
  4. Cosmos around us - II. (Prof. Andropov)
  5. Cosmos around us - III. (Prof. Krempaský)

IX. PUBLICATIONS

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[8] LABAŠ, V. - TRNOVCOVÁ, V. - MINÁRIK, S.: The toughening mechanisms in the eutectic fluoride composites. In: Vedecké práce Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave. Zväzok 5. Bratislava, STU 1997, 233-240.

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[16] MINÁRIK, S. - LABAŠ, V.: Elektrónovo-fotónova interakcia v oxidových keramických supravodičoch s heterogénnou štruktúrou. (Electron-phonon interaction in oxide ceramics with heterogeneous structure). In: Vedecké práce Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave. Zväzok 5. Bratislava, STU 1997, s. 241-249.

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DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS

Head of the Department:
Pavol Glesk, Ph.D., Prof.

Tel.: ++421/805/521205
Fax:
E-mail: ktvs@mtf.stuba.sk

I. STAFF

Professors:	1	Research Fellows:	0
Assoc. Professors:	0	Technical and Admin. Staff:	7
Senior Lecturers:	11		
Lecturers:	0	Ph.D. Students:	1

II. EQUIPMENT

II. 1 Teaching and Research Laboratories

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

II. 2 Special Measuring Instruments and Systems

- Dynamometers
- Bicycle-ergometer

III. TEACHING

III.1 Bachelor Study

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, Mikuláš

III.2 Graduate Study

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 - 8	2 - 1	Adamcová,Gálik, Hlavatý, L.,Hlavatý, R., Merica, Rafaj, Morvay, Lukačovičová, Zaťovičová
Olympism	1	2 - 1	Glesk, Merica

IV. RESEARCH TARGETS

- Physical Culture and Fitness of People

V. RESEARCH PROJECTS

- The evaluation of somatometry and physical fitness of students by the system of EUROFIT. 861. Pavol Glesk, Ph.D., Prof.
- The evaluation of the level and the changes of physical fitness in selected sports. 862. PaedDr. Marián Merica, CSc.

VI. COOPERATION

VII. THESES AND DISSERTATIONS

(Supervisors are written in brackets)

VII.1 Graduate Theses

- The Olympic Education

VII.2 Dissertations (Ph.D.)

VII.3 Habilitations (Assoc. Prof.)

VIII. OTHER ACTIVITIES

- Winter training camp for students
- Summer training camp for students
- seminars: 27.5.1997 - "The adapted Physical Education and the training of physically handicapped athlets"
  17.6.1997 - "The growth of performance and success in competitive games"
  16.9.1997 – "Rationalizing elements in teaching and training of swimming"

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DEPARTMENT OF WELDING

Head of the Department
Pavel Blaškovitš, Ph.D., Assoc. Prof.

Tel.: ++421/805/ 521 195
Fax: ++421/805/521 060
E-mail:kz@mtf.stuba.sk

I. STAFF

Professors:	1	Research Fellows:	0
Assoc. Professors:	2	Technical and Admin. Staff:	5
Senior Lecturers:	5		
Lecturers:	0	Ph.D. Students:	5

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

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*
Basic machine technology	1	1-2	Monček, Púčik
Welding Technology	5	2-2	Hudák, Benko, Marônek
Theory of Welding	8	3-2	Ryban
Welding and Casting Technology	7	4-2	Adamka, Hudák
Special Welding Methods	9	3-2	Turňa
Weldment Design and Production	9	2-2	Jasenák
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	Marônek
Welding Machines and Equipments	9	2-2	Kozma
Assembly of Welded Units	9	2-2	Kozma

Name of subject	Semester	H/W L-P	Reader's name
Quality Control of Welded Joints I	7	2-1	Hudák
Computer Technology in Welding	7	1-2	Hudák
Management in Welding	7	2-1	Marônek
Tribology, Surface Engineering	7	2-1	Blaškovič
Automation of Welding Processes	9	2-2	Jajcay
Technical Preparation of Production	9	2-1	Kozma
Non-destructive Weld Joint Testing	9	2-1	Hudák
Tools and Fixtures	9	10-8	Monček
Weldability of Metals and Alloys	11	10-3	Ryban
Theory of Technological Processes	7	3-2	Ryban
Quality Control of Welded Joints II	8	1-2	Hudák
Metalography and Fractography of Welded Joints	8	2-3	Bernasovský, Bošanský

IV. RESEARCH TARGETS

- Explosive welding
- Ultrasonic testing
- Weldability of steels
- Welding of plastic materials

V. RESEARCH PROJECTS

- Software for design and control of explosion welding parameters
- Solid state welding
- Joining of dissimilar materials

VI. COOPERATION

- NOVOP Lučenec
- Design of bus chassis
- Bus chassis welding fixture design

VII. THESES AND DISSERTATIONS

(Supervisors are written in brackets)

VII.1 Graduate Theses

Cesnek Roman: Zváranie mechanizmov riadenia v ochrannej atmosfére CO_2 (Welding of stearing mechanisms in carbon dioxide protective atmosphere).

Dulanský Stanislav: Vplyv anorganických a kovových plnidiel na adhezívne vlastnosti polymérnych kompozitov ku keramike.(Influence of anorganic and organic fillings on ahesive properties of polymer compostites to ceramics). (Ing. Igor Novák, CSc).

Gajdošík Peter: Renovácia tangenciálnych nožov banských kombajnov. (Mine combine tangential knife renovation). (Ing. Miroslav Jančarík).

Hyža Rastislav: Možnosti využitia ultrazvuku na predikciu pevnostnýchcharakteristik bimetalov Al - oceľ zhotovených zváraním explóziou.(Possibilities of ultrasound usage for strength characteristic of bimetals Al-steel fabricated by explosion welding). (Ing. Július Hudák, CSc.).

Izsák Attila: Naváranie kovacích nástrojov rúrkovými drôtmi. (Flux cored wire surfacing of forging dies). (Ing. Jozef Jasenák).

Kanderka Peter: Návrh technológie zvárania odvíjacích bubnov. (Welding technology design of reel drums). (Ing. Ľubomír Huliaček).

Köröši Marcel: Aplikácia difúzneho zvárania v praxi. (Application of diffusion welding in praxis). (Prof. Ing. Milan Turňa, CSc.).

Kozmová Gabriela: Aplikácia CNC rezacích strojov. (Application of CNC cutting machines). (Ing. Tibor Jambor).

Kudoláni Andrej: Mechanizácia zvárania hrdiel dvojplášťových nádrží. (Mechanization of neck welding of double shell tanks). (Ing. Eduard Horváth).

Liška Jaroslav: Lepenie častí autobusu. (Adhesive bonding of bus parts). (Ing. Igor Novák, CSc.).

Slanina Marek: Numerická analýza napäťového stavu zvarovaného uzla. (Numerical analysis of weld node tension condition). (Ing. Bohumil Taraba, CSc).

Zapletal Michal: Optimalizácia parametrov žiarového nástreku elektrickým oblúkom na prvky hydrauliky. (Optimisation of arc spray parameters on hydraulic members). (Ing. Ján Filipenský).

Zuščík František: Hodnotenie pevnostných charakteristík bimetalov Al - oceľ zhotovených zváraním explóziou. (Strength characteristic evaluation of Al-steel bimetals fabricated by explosion welding). (Ing. Július Hudák, CSc).

VII. 2 Dissertations (Ph.D.)

KOVAČÓCY, P.: Zváranie kombinovaných materiálov laserovým lúčom. (Welding of combined materials by laser). Bratislava, SUT - FMST 1997.

VII.3 Habilitations (Assoc. Prof.)

MARÔNEK, M.: Využitie energie výbuchu na zváranie kovových materiálov. (Explosion energy utilisation for welding of metals). Bratislava, SUT - FMST 1997.

VIII. OTHER ACTIVITES

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

IX. PUBLICATIONS

[1] MARÔNEK M.: Využitie zvárania explóziou pri konštrukcii ostrihovacieho nástroja. (Use of explosion welding for trimming tool design). Zváranie, 46, 1997, č. 1, s. 9 - 12.

[2] PÚČIK, V. , KOVAČÓCY, P.: Porovnanie delenia CrNi ocelí vzduchovou a Ar/H_2 plazmou. (Comparision of cutting of CrNi steels by air and Ar/H_2 plasma). Zváranie, 46, 1997, č. 3, s. 59 - 62.

[3] RYBAN D.: Výber materiálu na výrobu sálavého rekuperatóra. (Material choice for radiate recuperator production).Zváranie, 46, 1997, č. 8, s. 175 - 178.

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[5] TURŇA, M., HUDÁK, J.: Overenie možnosti zvýšenia štruktúrnej stability kombinovaných spojov Al-oceľ využitím medzivrstiev. (Verification of possible increasing of Al-steel bimetal structural stability by interlayers usage). Zváranie, 46, 1997, č. 1, s. 12 - 15.

[6] HUDÁK, J.: Špecializované postgraduálne štúdium zvárania. (Specialised post-graduate study of welding). Zváranie, 46, 1997, č. 6, s. 140.

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[11] TURŇA, M., KOVAČÓCY, P.:Difúzne zváranie kombinovaných ocelí. (Diffusion welding of combined steels). In: Technológia 97. Medzinárodná konferencia. Zborník prednášok. 2. diel. Bratislava, STU 1997, s. 724 - 727.

[12] MARÔNEK, M.: Bimetaly nikel - oceľ pre sklársky priemysel. (Nickel-steel bimetals for glass industry). In: Nové trendy v strojárstve na prahu tretieho tisícročia. Zborník vedeckých prác. 3. sekcia: progresívne technológie a materiály. Košice, TU 1997, s. 289 - 291.

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[16] MARÔNEK, M.: Stanovenie plochy rozhrania explóziou zvareného spoja. (Interface area determination of explosion welded joint). In: Vedecké práce Materiálovotechnologickej fakulty Slovenskej technickej univerzity v Bratislave so sídlom v Trnave. Zväzok 5.Bratislava, STU 1997, s. 89 - 93.

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[19] RYBAN, D., KOVAČÓCY, P.: Nové materiály používané v letectve a kozmonautike. (New materilas used in aviation and astronautics). In: Konštrukčné materiály 97. Konferencia s medzinárodnou účasťou. Bratislava, Vedecká spoločnosť pre náuku o kovoch - ÚMaMS SAV 1997, s. 43 - 50.

[20] RYBAN, D. : Výchova zváračských odborníkov na Materiálovotechnologickej fakulte Slovenskej technickej univerzity Trnava. (Education of welding specialists at Faculty of Materials Science and Technology of Slovak Technical University in Trnava). In: Zváranie 97. Bratislava, Weldtech 1997, s. 82 - 86.

CONTENTS

ANNUAL REPORT 1997
FACULTY OF MATERIALS SCIENCE AND TECHNOLOGY TRNAVA
SLOVAK UNIVERSITY OF TECHNOLOGY BRATISLAVA
Authoreized contributions from Departments
Edited by J. Vaský
Typeset DTP FMST
1998