

RESEARCH AND INTERNATIONAL RELATIONS

Research Awards in 2013:

Best habilitation thesis

Ing. Roman Čička, PhD.

Habilitation thesis: “Experimentálna a výpočtová termodynamika materiálových systémov”
(Experimental and computational thermodynamics of material systems).

Best publication

Palcut, Marián - Priputen, Pavol - Kusý, Martin - Janovec, Jozef: Corrosion behaviour of Al-29 at % Co alloy in aqueous NaCl. – registered in: Web of Science, Master Journal List, Scopus. In: Corrosion Science. - ISSN 0010-938X. - Vol. 75 (2013), pp. 461-466

Impact Factor of Corrosion Science Journal is 3.615.

Best project team

Research team of Mattaba , a common workplace of the Institute of Materials and Machine Mechanics of the Slovak Academy of Sciences and STU MTF Institute of Materials.

The STU MTF team includes:

Ing. Svetozár Demian

Prof. Ing. Jozef Janovec, DrSc.

Doc. Ing. Mária Dománková, PhD.

Doc. Ing. Bohumil Taraba, PhD. (former employee of STU MTF)

Orange Slovakia Award

RNDr. Marcel Abas, PhD – for publication activity in the field of applied mathematics to solve problems within engineering sciences.

15/11/2013

The award for the Scientific Team of the Year was granted at the 10th Annual Week of Science and Technology in Slovakia to the joint team from the Institute of Materials and Machine Mechanics of the Slovak Academy of Sciences and the STU MTF Institute of Materials for their contribution to research and development in the area of advanced metal materials and composites.

The award for the “Personality of Science and Technology” was granted to Professor Ing. Ľudovít Kupča, CSc. for making a significant contribution to solving theoretical issues of monitoring the state of construction materials of safety-relevant components in nuclear power plants of the VVER type and their successful application in practice.

New Doctor honoris causa, Professors and Associate Professors in 2013

Doctor honoris causa (Dr.h.c.)

Dr. h. c. prof. Dr. Ing. Oliver Moravčík - Doctor honoris causa of the Kalashnikov Izhevsk State Technical University, Russia (22/02/2013)

Professors

Prof. Ing. Marián Soldán, PhD. - Occupational Health and Safety (05/03/2013)

Prof. Ing. Miloš Čambál, CSc. -- Industrial Engineering (26/11/2013)

Visiting professors

Ing. Augustín Gese, CSc. – Automation (20/03/2013)

Dr.h.c. Prof.h.c. Ing. Peter Joehnk, PhD. – Industrial Engineering (20/03/2013)

Associate Professors

doc. Ing. Jaromíra Vaňová, PhD. - Industrial Engineering (26/06/2013)

doc. Ing. Roman Čička, PhD. – Materials (11/12/2013)

doc. RNDr. Miroslav Rusko, PhD. – Occupational Health and Safety (11/12/2013)

doc. Ing. Erika Hodúlová, PhD. - Mechanical Engineering and Materials (11/12/2013)

Professor Emeritus

prof. Ing. Milan Turňa, CSc., EWE., IWE. (11/12/2013)

Research activities in 2013:

15/03/2013

Signing of the agreement for the creation of the 1st University Scientific Park in Slovakia – the project is primarily focused on the area of Materials Engineering in the field of ion and plasma technologies and automation and ICT implementation in industrial processes.

26/03/2013

Seminar on intellectual property protection presented by Ing. Lucia Bocková from the Institute of Industrial Property SR.

08/04/2013

Granting of awards to the successful applicants for financial support within the “Young Researcher of 2013” programme. For STU MTF: Ing. Lenka Blinová, Ing. Martin Kováč, Ing. Pavol Konopka, Ing. Eva Babalová, PhD., Ing. Tomáš Škulavík, PhD., Ing. Paulína Zacková, Ing. Jaroslav Jančár, Ing. Ivan Michalec, Ing. Michal Ondruška, Ing. Tomáš Kramár, Ing. Radovan Holubek.

22/04/2013

Colloquium to celebrate the occasion of the 80th birthday of prof. Dr. Ing. Marcel Žitňanský, DrSc., the STU Professor Emeritus, devoted to the long-life work of the honouree and his contribution to the development of foundry technologies and progressive materials in Slovakia.

17/05/2013

Opening Ceremony of the University Scientific Park building site.

21 – 24/05/2013

TECHFÓRUM 2013 – STU MTF participated in the 20th Annual International Mechanical Engineering Fair in Nitra, with the aim to present the output of research and development workplaces of engineering universities and their collaboration with practice. The Fair represented the major display of mechanical engineering production in Slovakia. Presentation of welding schools, including the welding school of the STU MTF Institute of Production technologies took place in a special pavilion of the Fair.

01-12/09/2013

The international summer school event "Selected issues of safety engineering and utilisation of nuclear power plants within the context of the EU power policy" took place within the ERASMUS programme framework (Education and Culture DG, Life-long Learning Programme). The coordinator of the summer school was the University of Wroclaw and the hosting sub-coordinator the STU MTF Institute of Safety and Environmental Engineering in Trnava.

11/09/2013

Colloquium to celebrate the jubilee of prof. Ing. Dáša Hrivňáková, CSc.

11 – 14/09/2013

FORMING 2013, 20th International Research Conference.

27/09/2013

Participation of STU MTF in the "Night of researchers" event as part of the 9th Annual European Festival of Science.

20/11/2013

MTF Open Science: Lecture on the Nobel Prize for physics 2013 awarded to François Englert and Peter W. Higgs "for the theoretical discovery of a mechanism that contributes to our understanding of the origin of mass of subatomic particles, and which was recently confirmed through the discovery of the predicted fundamental particle by the ATLAS and CMS experiments at the CERN's Large Hadron Collider" - on Higgs'-Boson and CERN. Presenter: doc. RNDr. Vladimír Černý, CSc.

26/11, 03/12, 10/12 and 17/12/2013

Co-operation of STU MTF with practice presented in the media – discussion with the Faculty management representatives and selected employees about the topic of co-operation with practice and the Faculty scientific potential, is featured by the regional TV channel.

05/12/2013

The Implementation Protocol for the Agreement of co-operation with IFW Dresden for the period 2013 - 2015 is signed by the Faculty Dean and Professor Janovec, Director of the Institute of Materials, and Dr.h.c. prof. Dr. habil. Jurgen Eckert and Dr.h.c. Rolf Pfrengle, both directors and members of the Institute Presidium on 05/12/2013 at IFW i.V. Dresden. The signatories also discussed the possibilities of common participation in future projects within HORIZON 2020.

09/12/2013

Television programme on a Slovak TV channel: a programme about Science and Technology, devoted to the research of progressive materials and the team of prof. Ing. Jozef Janovec, DrSc.

10/12/2013

MTF Open Science: Lecture on the Nobel Prize for Chemistry for 2013 awarded to Martin Karplus, Michael Levitt and Arieh Warshel "for the development of multiscale models for complex chemical systems". Presenter: prof. RNDr. Ivan Černusák, DrSc.

Overview of conferences organised at STU MTF in 2013:

21/03/2013 – Student Research Conference

09/04/2013 – 17th ESAB seminar on Welding and Weldability

12-16/05/2013 – International Doctoral Seminar (IDS)

11-14/09/2013 – Co-organiser of a scientific conference “Forming 2013”

24-25/10/ 2013 – Slovak Conference of Doctoral Students organised by the Association of Doctoral Students of Slovakia in co-operation with the STU in Bratislava.

Research Focus

The research orientation of the Faculty of Materials Science and Technology corresponds with its pedagogic profile and the long-term orientation of STU. As amended by Section 30, Paragraph 1, Sub-paragraph c of Act 131/2002 of the Coll. relating to Universities and as amended by other acts, the Faculty Scientific Board evaluates the faculty activity in the field of science and technology once a year.

The scientific and research activity of MTF STU research and pedagogical staff is carried out in the following forms:

- projects of basic research
- projects solved within international programmes
- projects of international collaboration
- projects of applied research and development
- projects of contractual research

The research content is focused on the following areas:

- materials research with a focus on the research, development and technological processing of the basic and new kinds of technical materials,
- research, development and optimisation of new technologies of industrial production oriented particularly on the technological processing of modern technical materials and ecologically clean processes and products and the numerical simulation of technological processes,
- process identification, automation and control, as well as information support for technological, production and organisation systems,
- research and verification of managerial control principles and their organisation structures,
- quality control and certification of processes and products,
- safety and reliability of technological equipment and systems, while emphasising the analysis methods and systems synthesis,

The STU Faculty of Materials Science and Technology in Trnava was evaluated in four areas of research in the complex accreditation of activities. The research areas related to the faculty study programmes are:

Research area	Evaluation
Mechanical Engineering	A
Metallurgy and Materials	A
Information Sciences, Automation and Telecommunication	B
Engineering and Technology	B+

Research activities

In 2013, research projects under the VEGA, KEGA, APVV and other programmes were conducted at the Faculty. The number of projects in 2013 from the particular agencies, grant schemes and contractual research are as follows:

	Number
VEGA projects (Basic research grant agency)	23
KEGA projects (Cultural and education agency)	8
APVV (Agency for support of research and development)	9
7th Framework Programme	1
Other foreign projects	4
Projects of contractual research	14

Foreign relations

STU MTF forms cooperation on the basis of good partnership relations which are typified by mutual cooperation, profit in the area of research activities, or experience in education.

The active cooperation of our constitution, reflected in agreements concluded with foreign partners, is proof of the necessity for searching new partnerships and cooperation.

Institutes which signed contracts of cooperation with the Faculty:

Agreements on cooperation with Foreign Partners

Foreign Partner	Country	City/Town
Helmholtz-Zentrum Dresden-Rossendorf	Germany	Dresden-Rossendorf
Technical University of Brandenburg	Germany	Cottbus
Leibniz-Institute for Solid State and Materials Research Dresden	Germany	Dresden
Faculty of Machining, University in Ljubljana	Slovenia	Ljubljana
The National Research University of Information Technologies, Mechanics and Optics, Saing-Petersburg	Russia	Saint-Petersburg
Institute of Energy in Moscow	Russia	Moscow
Buehler GmbH	Germany	Düsseldorf
Ukrainian Academy of Engineering and Pedagogy	Ukraine	Charkov
Faculty of Applied Informatics and Robotechnology, UGATU UFA	Russia	Ufa
Faculty of Economics, Management and Finances UGATU UFA	Russia	Ufa
National Institute of R & D for Materials Physics	Romania	Bucharest
Faculty of Physics, University of Bucharest	Romania	Bucharest
Faculty of Organisation and Informatics Varaždin, University of Zagreb	Croatia	Zagreb
Bekaert, Zwevegem	Belgium	Zwevegem
Faculty of Machine Building, Technical University of Cluj-Napoca	Romania	Cluj-Napoca
Institute of Technology	Poland	Radoma
Innovation Centre for Diagnostics and the Application of Materials, Czech Technical University Prague	Czech Republic	Prague
University of Miskolc	Hungary	Miskolc
Institute for Systematic Coaching and Organisation Advisory	Germany	Berlin
Faculty of Economics and Management of University of Zielona Góra	Poland	Zielona Góra
Faculty for Management	Serbia	Novi Sad
Faculty of Information Technologies and Telecommunication of	Russia	Stavropol

North-Caucasian State Technical University		
Faculty of Mining and Metallurgical Engineering of Amirkabir University of Technology	Islamic Republic of Iran	Teheran
Izhevsk State Technical University of Kalashnikov	Russia	Izhevsk
Hochschule Mannheim University of Applied Sciences	Germany	Mannheim
Vocational Higher Education School in Sulechów	Poland	Sulechów
Institution of Education, Gomel State University of Francysk Skarina	Belarus	Gomel

Visits of foreign guests at STU MTF in the year 2013:

05/03/2013

Visit of the guests from Széchenyi István University Győr, Hungary and University of Maribor, Slovenia.

11-12/03/2013

Visit of Prof. Nigel J. Holden of the Leeds Business School, United Kingdom.

09/04/2013

Meeting between representatives of the Portuguese Embassy, enterprises in the Plastic-working industry from Portugal and Slovakia, as well as the Slovak Chamber of Commerce and Industry and the Automotive Cluster West Slovakia.

15/04/2013

Negotiations by the Faculty representatives with Prof. E. BABULAK, D. Sc., Ph.D., FRSA, FBCS. - College of Information and Communication Engineering, Sung Kyun Kwan University (SKKU), Suwon, Korea.

29/04/2013

Visit of a delegation from Egypt - Prof. Ahmed Khairy, President of the Egypt-Japanese University for Science and Technology, Prof. Roushdy Zahran, Vice-president of the Alexandria University, Prof. Ekram Fateen, Deputy-director of the National Research Centre in Cairo and Prof. Abu – Youssef Morsy, attaché in Vienna.

12/06/2013

Visit of a delegation from the Université Lille (France): François-Olivier Seys, Vice-rector for International Relations, Prof. Rudolphe Astori, Coordinator of International Relations for the Department of Machine Engineering and Maria Eksler, Manager for International Relations.

24/06/2013

Visit of a delegation from the Gomel State University of Francysk Skorina – Rector prof. Ing. Alexander Rogachev, DrSc., and doc. Ing. Sergej Chachomov, CSc., Vice-rector for Pedagogy.

13/11/2013

Lecture by Paweł Kuźdowicz of the Faculty of Economics and Management, University Zielona Góra on “Logistics Controlling with ERP System. Modelling Value Stream Flows in the Supply Chain of Industrial Enterprise”.

13/11/2013

Visit of Professor William Lucas of University of Cambridge, United Kingdom.

09/12/2013

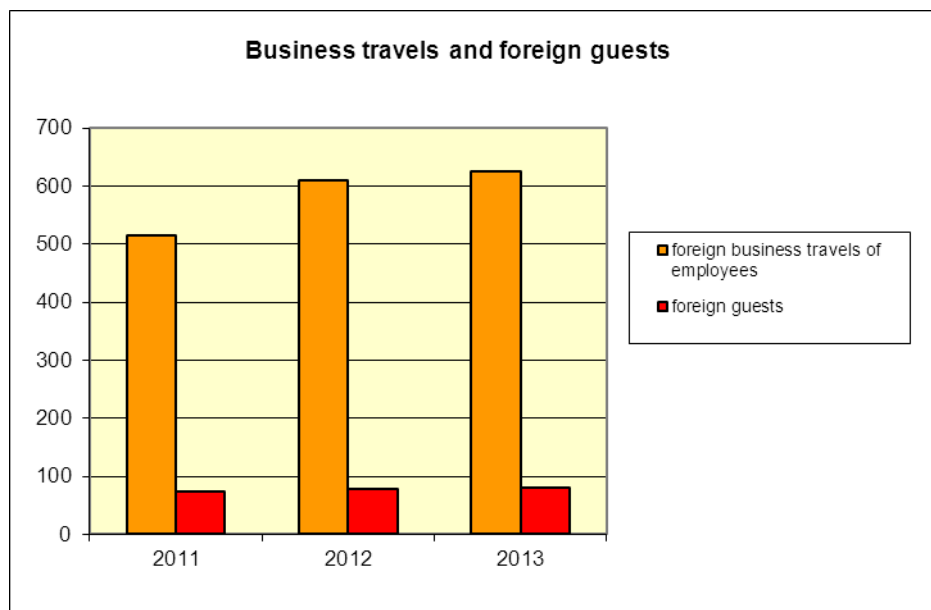
Visit of his Excellency Alexander Ben-Zvi, Ambassador of the state of Israel. Discussion with the Faculty representatives on the co-operation possibilities in the field of research; visiting the laboratories of the Faculty Institutes.

Student Exchanges

STU MTF students participate in exchange programmes of short-term and also long-term scholarships. In 2013, the Faculty had 26 agreements in the Erasmus programme. The dominant Erasmus partners are the institutions in Poland (8 agreements), Germany (3 agreements), Czech Republic (4 agreements), and Hungary (3 agreements).

Business travels and foreign guests

The development of relations with international partners in the last three years is reflected in the number of foreign guests and business travels of the Faculty employees to foreign institutes.



Membership of Slovak and international organisations

On an international level, the faculty cooperated with significant scientific and technical organisations in the last year. STU MTF is an institutional member of six professional international organisations. Employees of the faculty are active in different Slovak (130 individual memberships) and also international organisations (53 individual memberships) in different positions, from members to chairs, vice-chairs and members of boards.

Membership in international professional organisations

International Institute of Welding

Association for Heat Treatment of Metals

International Society for Engineering Pedagogy

European Platform of Women Scientists
European Network Education and Training in Occupational Safety and Health
European Alliance for Innovation

Memberships in Slovak professional organisations

Scientific Society for Metals
Slovak Natural Gas and Crude Oil Union
Slovak Chamber of Commerce and Industry
Slovak Society for Quality
Automobile Cluster
Slovak Society of Ergonomics
Slovak Society of Maintenance
Slovak Association of Libraries
Slovak Society for Cybernetics and Informatics, Slovak Academy of Sciences
Association of Machining Industry of the Slovak Republic

Approved rights to provide habilitations and grant academic titles

According to the Act No. 131/2002 of Coll. relating to universities and modification, and completion of some laws as amended, the Faculty of Materials Science and Technology, Slovak University of Technology in Bratislava is entitled to carry out the habilitation process and academic promotion of professors in the following study fields:

5.2.7	Mechanical Engineering and Materials
5.2.14	Automation
5.2.26	Materials
5.2.50	Production Machines
5.2.52	Industrial Engineering
8.3.5	Occupational Health and Safety