

**DEPARTMENT OF MECHANICS**

<http://www.elf.stuba.sk/departments/kmech/kmech.html>

**Head of Department**

**Prof. Ing. Justín Murín, DrSc.**

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**I. STAFF**

Professors	Prof. Ing. Justín Murín, DrSc.
Associate Professors	Doc. Ing. Branislav Hučko, PhD., Doc. Ing. Ján Veselovský, PhD.
Assistant Professors	Ing. Vladimír Kutiš, PhD., Ing. Róbert Fric, PhD.
Research Worker	Ing. Andrej Kalaš, PhD.,
Part-time Workers	Doc. Ing. Miroslav Vereš, PhD., Ing. Peter Kmotrík
Technical Staff	Katarína Beringerová (secretary), František Erdödy
PhD. Students	Ing. Vladimír Ďuriš, Ing. Miroslav Kropáč, Ing. Miloš Remiš, Ing. Branislav Böhmer, Ing. Michal Masný, Ing. Vladimír Goga, Ing. Viktor Královič, Ing. Marcel Virág, Dipl. Ing. Rolf Seemann

**II. EQUIPMENT**

**II.1 Teaching and Research Laboratories**

- Laboratory of Thermopower Machines and Devices
- Laboratory of Mechanics of Strength and Deformable Bodies
- Centre of Designing and Computational Mechanics

**II.2 Special Measuring Instruments, Software and Computers**

- Boiler Gas Analyser Industrial Combustion Optimiser Neotronics
- Experimental Impulse Turbine F800 - Hilton, Ltd. England
- Hewlett-Packard PC Workstations Kayak
- Advantech PC-LabCard PCI 1710 with equipment
- Mathematica 5.2
- Matlab R14
- Catia V5
- SolidEdge V19
- ANSYS
- Adams
- AutoCAD

**III. TEACHING**

**III.1 Undergraduate Study (Bc.)**

Subject, semester, hours per week for lectures and for seminars or practical exercises, name of lecturer

Basis of Engineering and Technical Documentation	(1st sem., 2-2h)	J. Veselovský M. Vereš A. Kalaš
CAD in Technical Documentation	(opt.sem., 1-3h)	J. Veselovský

Mechanics	(5th sem., 3-2h)	J. Murín
Introduction to Modelling and Simulation	(5th sem., 3-2h)	V. Kutíš
Thermomechanics	(6th sem., 3-2h)	J. Murín
Structural Elements and Systems	(6th sem., 3-2h)	B. Hučko
Designing by Higher CAD Systems	(8th sem., 1-3h)	B. Hučko

**Distance study**

Basis of Engineering and Technical Documentation	(1st sem.)	J. Veselovský
Mechanics and Thermomechanics	(5th sem.)	J. Murín
Power Engineering Software	(6th sem.)	B. Hučko
Power Plant I	(6th sem.)	B. Hučko

**III.2 Graduate Study (Ing.)**

Nuclear Power Facilities II	(1st sem., 2-2h)	B. Hučko
Applied Mechanics	(2nd sem., 2-2h)	J. Murín
Designing of Luminaires	(2nd sem., 3-2h)	J. Veselovský
Numerical Solution of Field Theory Problems	(2nd sem., 3-2h)	J. Murín

**Distance study**

Applied Mechanics	(1st sem.)	J. Murín
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**IV. RESEARCH PROJECTS**

- Bar Finite Element with Varying Parameters for Multiphysical Computations. G 1/1100/04, J. Murín
- Stress and Deformation Analyses in Thin Micro- and Nano-Systems and Devices Containing Piezoelectric Elements, Inverse Piezoelectric Problem. G 1/0149/03, B. Hučko
- Research of Psychologic and Physiologic Glare. G 3114/06, principal investigator: A. Smola – KEE, co-workers: J. Murín, J. Veselovský – KMECH
- Theoretical Fundamentals of the Power System Stability in the Interconnected European System. G 1/3092/06, principal investigator: F. Janiček – KEE, co-workers: J. Murín, J. – KMECH

**V. COOPERATION****V.1 Cooperation in Slovakia**

- VÚJE a.s., Trnava
- Sova a.s., Bratislava
- JE Jaslovské Bohunice
- JE Mochovce
- Sjf ŽU Žilina
- Škoda Auto Slovakia, Bratislava
- Institute of Construction and Architecture, Slovak Academy of Sciences
- IPT Pezinok

- OMS Senica
- EGU Bratislava
- ZSE, a.s.

## **V.2 International Cooperation**

- Energovýzkum s.r.o., Brno, CzR
- Technical University Vienna, Austria
- Technical University Ilmenau, Germany
- University College of Swansea, United Kingdom
- FSB University Zagreb, Croatia
- TU Rijeka, Croatia
- TU Novi Sad, Serbia
- TU Niš, Serbia

## **V.3 Membership in Slovak Organizations and Societies**

- Co-chairman in Slovak Society for Mechanics (J. Murín)
- Technical Committees of SUTN Fasteners, Technical drawings (J.Veselovský)

## **V.4 Membership in International Organizations and Societies**

- B. Hučko, J. Murín: Central European Association for Computational Mechanics
- J. Murín: Institute of Structural Mechanics, TU Vienna, Austria
- J. Veselovský: ISO Technical Committee 1, ISO Technical Committee 2

## **VI. THESES**

### **VI.1 Master Theses**

Master theses supervised at the Department of Mechanics. The names of supervisors are in brackets.

- [1] Z. Šlavková: Sledovanie stavu vyhoreného paliva na medzisklade paliva SE-VYZ JE-BO (V.Slugeň, B.Hučko).

### **VI.2 Doctoral Theses**

- [1] R. Fric: Diagnostics of heating in selected lighting devices (J. Murín).  
[2] A. Kalaš: Design of sensors for non-electric quantity measurement (V. Smieško, B. Hučko).  
[3] M. Kropáč: Development and realization computer methods for design and analysis of light distribution parts of the optical systems (J. Murín).

## **VII. OTHER ACTIVITIES**

- Membership in the editorial board of journal : Mechanical Engineering (J. Murín)
- Membership in the Scientific Editorial Advisory Board of journal: Engineering Review, Croatia (M. Vereš)

## **VIII. PUBLICATIONS**

### **VIII.1 Journals**

**VIII.2 Conferences**

**VIII.3 Books**

**VIII.4 Textbook**

**VIII.5 Standards**