

DEPARTMENT OF ELECTRICAL MACHINES AND DEVICES

<http://www.kesp.elf.stuba.sk/>

Head of Department

Doc. Ing. Ludovít Hüttner, PhD.
e-mail: ludovit.huttner@stuba.sk

Tel.: +421-2-602 91 471
+421-918 640 418
Fax: +421-2-654 20 415

STAFF

Professors	Prof. Ing. Ladislav Hruškovič, DrSc., Prof. Ing. Ludovít Klug, PhD.
Associate Professors	Doc. Ing. Ludovít Hüttner, PhD., Doc. Ing. Neitus Lipták, PhD., Doc. Ing. Ferdinand Valent, PhD.
Assistant Professors	Ing. Ladislav Borba, PhD., Ing. Ludovít Jurčacko, Ing. Michal Duč-Anci, PhD.
Technical Staff	Jana Jusková (secretary), Jozef Hubač
PhD. Students	Ing. Vladimír Kujan, Ing. Dáriuš Tavalý, Ing. Vladimír Halička

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- Laboratory for Testing and Measurement of Electric Machines
- Laboratory of Special Electric Machines
- Laboratory of Short Circuit Tests (with a high current generator source 35 kA, 2 MVA, 440 V)
- Laboratory of Short Circuit Tests (with a capacitor source)
- Laboratory of Controlled Drives and Servosystems
- Laboratory of Power Electronics
- Common laboratories Schneider – FEI STU –FIIT STU

II.2 Special Measuring Instruments and Computers

- Lucas-Nülle didactic equipment for subjects Power Electronics and Controlled Drives
- SIMOVERT, SIMOREG and VONSCH power converters
- Laboratory stands with digital signal processors TMS 320 C 50
- Computers room Schneider – FEI STU –FIIT STU

III. TEACHING

III.1 Undergraduate Study (Bc.)

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

Electric Machines	(5th sem., 3-2h)	E. Klug
Electric Apparatus and Distribution Stations	(6th sem., 3-2h)	F. Valent, F. Janíček
Automotive electrotechnics	(5th sem., 2-2h)	E. Hüttner,

M. Duč-Anci,
A. Smola, J. Lelák

III.2 Graduate Study (Ing.)

Electric Drives and Power Electronics	(1st sem., 2-2h)	L. Borba
Selected Chapters from Electric Apparatus	(1st sem., 2-2h)	F. Valent
Special Electric Machines	(2nd sem., 3-2h)	E. Klug
CAD of Electric Power Equipment	(3rd sem., 2-2h)	E. Klug, E. Hüttner
Electronic Energy Converters	(2nd sem., 2-2h)	L. Borba
Electric Traction Systems	(3rd sem., 2-2h)	L. Borba
Utilisation of Electrical Energy	(3rd sem., 2-2h)	E. Hüttner, A.

Smola

Electric Heating Devices	(3rd sem., 2-2h)	E. Hüttner
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III.3 Undergraduate Study (Bc. Distance Education Method)

Electric Machines	(3rd year)	E. Hüttner
Electric Apparatus	(4th year)	E. Hüttner
Utilisation of Electrical Energy	(4th year)	E. Hüttner, A.

Smola

Electric Apparatus and Distribution Stations	(6th sem., 3-2h)	E. Hüttner, F. Janíček
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III.4 Graduate Study (Ing. Distance Education Method)

Electric Drives and Power Electronics	(1st year)	L. Borba
Utilisation of Electrical Energy	(2nd year)	E. Hüttner, A.

Smola

IV. RESEARCH PROJECTS

- Theoretical analysis of the power system stability in the interconnected European system. VEGA 1/3092/06, F. Janíček
- Research and development of new generation of electrical linear drives with high accuracy of positioning. APVV-99-031205, EVPÚ Nová Dubnica, SR, J. Kuchta

V. COOPERATION

V.1 Cooperation in Slovakia

- ELOSYS Trenčín
- KIWA Ltd. Nitra
- Siemens Ltd. Bratislava
- TU Košice
- ŽU Žilina
- LEGRAND Slovakia
- MOELLER Slovakia
- OEZ Slovakia
- SCHNEIDER-ELECTRIC, Ltd.
- BSH Drives and Pumps, Michľovce

- PHOENIX CONTACT, Košice
- CHIRANA Medical, Stará Turá
- SCHRACK Technik

V.2 International Cooperation

- DEHN+SOHNE, Neumarkt, Germany
- OEZ Letohrad, CzR
- HESS TRADING, Sudoměřice, CzR
- M.SCHNEIDER, Vienna, Austria,
- PHOENIX CONTACT, Brno, CzR
- ČVUT Praha, CzR
- VUT Brno, CzR
- VŠB Ostrava, CzR
- ZČU Plzeň, CzR

V.3 Membership in Slovak Organizations and Societies

- E. Hüttner.: Vice-chairman of Common departmental committee of scientific department 26-32- 9 Electromechanical Energy Conversion in Slovak Republic
- N. Lipták, F. Valent.: Members of Common departmental committee of scientific department 26-32-9 Electromechanical Energy Conversion in Slovak Republic
- E. Klug, E. Hüttner, N. Lipták, F. Valent: Members of Common departmental committee of scientific department 5.2.11 Electromechanical Energy Conversion at STU FEI
- E. Hüttner.: Member of Common departmental committee of scientific department 5.2.11 Electromechanical Energy Conversion at University of Žilina

V.4 Membership in International Organizations and Societies

- E. Hüttner, F. Valent: IEE
- E. Hüttner: Member of Editorial board of the journal 'Electrical machines building and electrical equipment', Odessa National Polytechnic University, Ukraine

V.5 Contracts

none _____

VI. THESES

VI.1 Masters Theses

Masters theses supervised at the Department of Electric Machines and Devices. The names of supervisors are in brackets.

- [1] J. Chovanec: Brushless engine with permanent magnets for washing machine (E.Klug)
- [2] B. Klich: Device for surge guarding (E.Jurčacko)
- [3] J. Kršák: Layout of thermal releases of Miniature Circuit Breakers (MCB's) (F.Valent)
- [4] B.Hindra: High speed permanent magnet synchronous motor (E.Klug)

VI.2 Doctoral Theses

- [1] M. Duč-Anci: Using computer methods at solution of problems of electrical low voltage devices

VII. OTHER ACTIVITIES

none

VIII. PUBLICATIONS

VIII.1 Journals

- [1] DUČ-ANCI, M.: Modeling of Magnetic Field in Electromagnet. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 14, Special Issue (2008), p. 77-80. (in Slovak)
- [2] KLUG, L., DUČ-ANCI, M.: Design Problem of the Permanent Magnet Synchronous Motor. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 14, Special Issue (2008), p. 136-138. (in Slovak)

VIII.2 Conference Proceedings

- [1] HÜTTNER, L., JURČACKO, L., VALENT, F.: Investigation of Short-Circuit Current Breaking of Miniature Circuit Breaker up to 125 A. In: Control of Power Systems '08: 8th International Conference. Štrbské Pleso, Slovak Republic, 11.-13.6.2008. - Bratislava: STU, 2008. - ISBN 978-80-227-2883-6. - CD-Rom. (in English)
- [2] KLUG, L., DUČ-ANCI, M.: Design Problem of Permanent Magnet Synchronous Motor. In: ISEM 2008. XVI. International Symposium on Electric Machinery in Prague: Prague, Czech Republic, 10.-11.9.2008. - Prague: ČVUT, 2008. - ISBN 978-80-01-04172-7. - p. 146-150. (in English)
- [3] KLUG, L., DUČ-ANCI, M.: Magnetic Field of the Armature Winding of Permanent Magnet Synchronous Motors with Concentrated Coils on the Stator. In: ISEM 2008. XVI. International Symposium on Electric Machinery in Prague: Prague, Czech Republic, 10.-11.9.2008. - Prague: ČVUT, 2008. - ISBN 978-80-01-04172-7. - p. 151-154. (in English)
- [4] VALENT, F., JURČACKO, L.: The Properties of Low-Voltage Fuses at the Lighting Current Stress. In: Control of Power Systems '08: 8th International Conference. Štrbské Pleso, Slovak Republic, 11.-13.6.2008. - Bratislava: STU, 2008. - ISBN 978-80-227-2883-6. - CD-Rom. (in English)