

DEPARTMENT OF ELECTRICAL MACHINES AND DEVICES

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

Head of Department

Doc. Ing. Ľudovít Hüttner, PhD.

e-mail: ludovit.huttner@stuba.sk

Tel.: +421-2-602 91 471

+421-918 640 418

Fax: +421-2-654 20 415

I. STAFF

Professors	Prof. Ing. Ľudovít Klug, PhD.
Associate Professors	Doc. Ing. Ľudovít Hüttner, PhD., Doc. Ing. Ferdinand Valent, PhD.
Assistant Professors	Ing. Ladislav Borba, PhD., Ing. Michal Duč-Anci, PhD., Ing. Ľudovít Jurčacko
Technical Staff	Jana Jusková (secretary), Jozef Hubač
PhD. Students	Ing. Vladimír Kujan, Ing. Dárius Tavalý, Ing. Vladimír Halička, Ing. Miloš Glása, Ing. Milan Uhrík, Ing. Igor Kertész

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

III.3 Undergraduate Study (Bc. Distance Education Method)

Electric Machines	(3rd year)	E. Hüttner
Electric Apparatus and Distribution Stations	(6th sem., 3-2h)	E. Hüttner, F. Janíček

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

- Optimization of Windings for Disc-Type Motors for Electric Vehicles. Contract No.7022, STU Bratislava, SR; 19.10.2010

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, Michalovce
- 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

- Vice-chairman of Common Departmental Committee of Scientific Department 26- 32- 9 Electromechanical Energy Conversion in Slovak Republic (L. Hüttner)
- Member of Common Departmental Committee of Scientific Department 26-32-9 Electromechanical Energy Conversion in Slovak Republic (F. Valent)
- Members of Common Departmental Committee of Scientific Department 5.2.11 Electromechanical Energy Conversion at STU FEI (L. Klug, L. Hüttner, F. Valent)
- Member of Common Departmental Committee of Scientific Department 5.2.11 Electromechanical Energy Conversion at University of Žilina (L. Hüttner)

V.4 Membership in International Organizations and Societies

- IEE (L. Hüttner, F. Valent)
- Member of Editorial Board of the Journal 'Electrical Machines Building and Electrical Equipment', Odessa National Polytechnic University, Ukraine (L. Hüttner)

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] Badinka, M.: Cylindrical Fuses (L. Hüttner)
- [2] Čech, M.: Analysis of Strain in Transformer's Construction (P. Kmotřík)
- [3] Daňko, P.: Current-Limiting Action of Circuit Protection Devices (F. Valent)
- [4] Hrnčiar, P.: Examination of the Rupturing Capacity of Modular Circuit Breakers (L. Hüttner)
- [5] Kertész, I.: New Trends in Equipment to Protect against Surges in Low-Voltage Distribution (L. Jurčácko)
- [6] Novomeský, O.: Four-Quadrant Frequency Converter (L. Borba)
- [7] Slabý, M.: Synchronous Generator for Small Power Plant (M. Duč-Anci)

VII. OTHER ACTIVITIES

- the accredited educational activity 'The Electrical Minimum' (L. Klug, L. Hüttner, L. Borba)

VIII. PUBLICATIONS

VIII.1 Journals

- [1] DUČ-ANCI, M. - NOVOMESKÝ, O.: Frequency Converter for Power Systems. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16, Special Issue (2010), p. 189-193. (in Slovak)
- [2] DUČ-ANCI, M. - UHRÍK, M.: Inverter Circuits of Frequency Converters. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16, No. 6 (2010), p. 35-37. (in Slovak)

- [3] DUČ-ANCI, M. - UHRÍK, M.: Transient Phenomena in a Synchronous Generator. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16. No. 4 (2010), p. 38-40. (in Slovak)
- [4] GLASA, M.: Possibilities for Protection of Buildings Against OverVoltage Effects. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16, No. 6 (2010), Suppl. Volt, p. 5-7. (in Slovak)
- [5] HÜTTNER, L. - BADINKA, M.: Testing of Low Voltage Cylindrical Fuse-Link. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16, Special Issue (2010), p. 203-207. (in Slovak)
- [6] UHRÍK, M. - DUČ-ANCI, M.: Defectoscopy of Squirrel Cage Windings in Asynchronous Motors. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16. No. 4 (2010), Suppl. Volt, p. 2-4. (in Slovak)
- [7] UHRÍK, M. - ŠÁLY, V.: Impact of Stator Lamination on Disk Generator Losses in Wind Powered Energy Plant Sources. In: Energetika. - ISSN 0375-8842. - Vol. 60 (2010), p. 650-653. (in Slovak)
- [8] UHRÍK, M.: Windings of Disc Type Motors. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16, No. 6 (2010), p. 10-11. (in Slovak)

VIII.2 Conference Proceedings

- [1] DUČ-ANCI, M. - UHRÍK, M.: Simulation Analysis of Selected Transient Phenomena in a Generator. In: Power Engineering 2010. Control of Power Systems: 9th International Scientific Conference CPS. Tatranské Matliare, SR, 18.-20.5. 2010. - Bratislava: STU, 2010. - ISBN 978-80-89402-25-0, CD-Rom. (in English)
- [2] DUČ-ANCI, M. - UHRÍK, M.: Simulatory Assessment of Synchronous Generator Stability. In: ISEM 2010. XVIII. International Symposium on Electric Machinery in Prague: Prague, Czech Republic, 8.-9.9.2010. - Prague: ČVUT, 2010. - ISBN 978-80-01-04621-0. - p. 42-48. (in English)
- [3] DUČ-ANCI, M.: Solution of High Current Circuits. In: Technical Computing Bratislava 2010: 18th Annual Conference Proceedings. Bratislava, Slovak Republic, 20.10.2010. - Bratislava: RT Systems, 2010. - ISBN 978-80-970519-0-7. - CD-Rom. (in English)
- [4] GLASA, M.: Protection of Residential Areas and Buildings from the Effect of Atmospheric Overvoltages. In: Power Engineering 2010. Energy, Ecology, Economy: 9th International Scientific Conference. Tatranské Matliare, Slovakia, 18.-20.5. 2010. - Bratislava: STU, 2010. - ISBN 978-80-89402-23-6, CD-Rom. (in English)
- [5] GLASA, M.: The Importance of Overvoltage Protection in Low Voltage Distribution. In: ELITECH'10: 12th Conference of Doctoral Students. Bratislava, Slovak Republic, 26.5.2010. - Bratislava: STU, 2010. - ISBN 978-80-227-3303-8. - CD-Rom. (in English)
- [6] KASNÁR, F. - BORBA, L.: Additional Conditioning of Pulse Converter of Electric Locomotive. In: ŠVOČ 2010: Proceedings of Selected Works. - Bratislava: FEI STU, 2010. - ISBN 978-80-227-3286-4. - CD-Rom. (in Slovak)

- [7] UHRÍK, M. - DUČ-ANCI, M.: Detection of Damaged Rotor Bars and Their Influence on Performance Characteristics of Induction Motors. In: ISEM 2010. XVIII. International Symposium on Electric Machinery in Prague: Prague, Czech Republic, 8.-9.9.2010. - Prague: ČVUT, 2010. - ISBN 978-80-01-04621-0. - p. 121-126. (in English)
- [8] UHRÍK, M.: Detection of Faulty Rotor Bars in Cage Induction Motors. In: ELITECH'10: 12th Conference of Doctoral Students. Bratislava, Slovak Republic, 26.5.2010. - Bratislava: STU, 2010. - ISBN 978-80-227-3303-8. - CD-Rom. (in English)
- [9] UHRÍK, M. - DUČ-ANCI, M.: The Identification of Selected Parameters of Synchronous Machine Using the Simulation. In: Power Engineering 2010. Control of Power Systems: 9th International Scientific Conference CPS. Tatranské Matliare, SR, 18.-20.5. 2010. - Bratislava: STU, 2010. - ISBN 978-80-89402-25-0, CD-Rom. (in English)
- [10] UHRÍK, M.: The Possibility of Utilization of Permanent Magnets in the Sources of Wind Power Plants. In: Power Engineering 2010. Energy, Ecology, Economy: 9th International Scientific Conference. Tatranské Matliare, Slovakia, 18.-20.5. 2010. - Bratislava: STU, 2010. - ISBN 978-80-89402-23-6, CD-Rom. (in English)