

DEPARTMENT OF ELECTRICAL MACHINES AND DEVICES

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Head of Department

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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. Dáriuš Tavalý, Ing. Vladimír Halička, Ing. Miloš Glása, Ing. Milan Uhrík |

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. Janiček |

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

- Research and development of new generation of electrical linear drives with high accuracy of positioning. APVV-99-031205, EVPÚ Nová Dubnica, SR

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

- E. Hüttner.: Vice-chairman of Common departmental committee of scientific department 26- 32- 9 Electromechanical Energy Conversion in Slovak Republic
- F. Valent.: Member of Common departmental committee of scientific department 26-32-9 Electromechanical Energy Conversion in Slovak Republic
- E. Klug, E. Hüttner, 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] Bukšár, B.: Brushless synchronous machine with extraordinary stator winding (E. Klug)
- [2] Chudiváni, J.: Brushless motor with electronic commutation (E. Klug)
- [3] Glasa, M.: Surge Arresters (F. Valent)
- [4] Paprčka, T.: Installation circuit breaker (F. Valent)

VII. OTHER ACTIVITIES

none

VIII. PUBLICATIONS

VIII.1 Journals

- [1] DUČ-ANCI, M.: Analysis of Cooling of Contact Bridge. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 15, Special Issue (2009), p. 25-27. (in Slovak)
- [2] DUČ-ANCI, M.: Analysis of Recovery Voltage Course. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 15, Special Issue (2009), p. 28-32. (in Slovak)
- [3] DUČ-ANCI, M.: Simulation of Operating Characteristics of Series Motor. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 15, No. 6 (2009), p. 34-36. (in Slovak)

VIII.2 Conference Proceedings

- [1] DUČ-ANCI, M.: Magnetisation Characteristic of a DC Series Motor and Its Impact on the Accuracy of Simulation of the Motor Operating Modes. In: ISEM 2009. 17th International Symposium on Electric Machinery in Prague: Prague, Czech Republic, 9.-10.9.2009. - Prague: ČVUT, 2009. - ISBN 978-80-01-04417-9. - p. 42-50. (in English)

- [2] HÜTTNER, L., DUČ-ANCI, M.: Modelling a Magnetic Field of Switchgear Subsystems. In: 18th Symposium on Physics of Switching Arc. Invited Lectures and Contributed Papers: Brno, Czech Republic 7.-11.9.2009. - Brno: University of Technology, 2009. - ISBN 978-80-214-3793-7. - p. 202-205. (in English)

- [3] HÜTTNER, L., DUČ-ANCI, M.: The Evaluation of Thermal Analysis Methods and the Prospects of the Switchgear Current Path Optimization. In: 18th Symposium on Physics of Switching Arc. Invited Lectures and Contributed Papers: Brno, Czech Republic 7.-11.9.2009. - Brno: University of Technology, 2009. - ISBN 978-80-214-3793-7. - p. 198-201. (in English)