

DEPARTMENT OF PHYSICS

Head of the Department:
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I. STAFF

Professors

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II. EQUIPMENT

II.1 Teaching and Research Laboratories

Basic Physics Laboratory
Thermophysical Properties Laboratory

II.2 Special Measuring Instruments and Computers

HP 3497 - Data Acquisition/Control Unit, set of devices for measuring current, voltage, frequency, strain, etc.
HP 3421A Data Acquisition/Control Unit

III. TEACHING

III.1 Graduate Study

Subject	Semester	Hours Per Week		Lecturer
		Lectures	Seminars	
Physics I	1	2	2	J. Zámečník
Physics I	2	2	2	I. Janetka
Physics I	2	2	2	J. Veselský
Physics I	2	3	2	I. Baník
Physics I	2	3	2	J. Lukovičová
Physics II	2	2	2	J. Zámečník
Physics II	3	2	2	I. Janetka
Physics II	3	2	2	J. Veselský
Physics II	3	2	2	J. Lukovičová
Physics III	8	2	2	J. Veselský

III.2 Postgraduate Study

Subject	Semester	Hours Per Semester	Lecturer
Physical Principles of Measurements	1	30	I. Baník
			J. Veselský
Special Aspects of Physics I	1	28	J. Zámečník
Special Aspects of Physics II	2	28	J. Zámečník
Special Aspects of Physics	1	28	I. Baník
			J. Lukovičová
			J. Veselský
Modelling Transport Phenomena	1	28	J. Zámečník
			J. Lukovičová
Physical Fields, Waves	1	28	J. Veselský
			J. Zámečník

IV. RESEARCH TARGETS

- Measuring and testing materials and constructions
- Teaching Physics

V. RESEARCH PROJECTS

Transfer of Heat Through Granular and Porous Materials. Grant No. 1/8334/01 (2001-2003, Veselský J.)

VI. COOPERATION

VI.1 Cooperation in Slovakia

1. Faculty of Electrical Engineering and Information Technology, STU, Bratislava
2. Faculty of Chemical Technology, STU, Bratislava
3. Matej Bel University, Banská Bystrica
4. Faculty of Mathematics and Physics, UK, Bratislava
5. Methodical Centre, Bratislava
6. Methodical Centre, Banská Bystrica

VI.2 International Cooperation

1. Faculty of Civil Engineering, Czech Technical University, Prague, Czech Republic
2. Faculty of Civil Engineering, Technical University, Brno, Czech Republic
3. University of Technology, Esslingen, Germany
4. Politechnika Opole, Poland

VI.2.1 Visitors to the Department

Prof. J. Toman, CTU Prague, Czech Republic
Assoc. Prof. RNDr. Z. Chobola, TU Brno, Czech Republic
Assoc. Prof. P. Schauer, TU Brno, Czech Republic
Assoc. Prof. Ing. L. Pazdera, TU Brno, Czech Republic

VI.2.2 Visits of Staff Members and Postgraduate Students to Foreign Institutions

Assoc. Prof. J. Veselský, Prof. J. Zámečník, Assoc. Prof. I. Baník, Mgr. M. Nevedelová, RNDr. Alena Palacková - TU, Prague, Czech Republic

IX. PUBLICATIONS

IX.1. Journals

- [1] YANETKA, I.: Relativistic Transmissions Through a Symmetrical Pair of Delta Barriers or Delta Wells. *Physica Status Solidi B – Basic Research*. August 2002, Vol. 232, No. 2, pp. 196-208
- [2] BANÍK, I. - BANÍK, R.: Three Optical Illusions. *Mathematics, Physics, Informatics 5*, Vol. 12, Prague 2002, pp. 287-290
- [3] NEVEDELOVÁ, M.: Attractive Picture Exercises in Physics. *Mathematics, Physics, Informatics 4*, Vol. 12, Prague 2002, pp. 224-226
- [4] BANÍK, I.: Cold Atomic Merger – Scepticism and Enthusiasm. *Quark No. 8*, August 2002, pp. 18-19

IX.2. Books and textbooks

- [1] ZÁMEČNÍK, J.: Compendium of Physics 2. Ed. SPN Bratislava 2002 (in Slovak)
- [2] BANÍK, I.: Physics for 2d Grade of High School. –Electric Field, Electric Current. Ed SPN Bratislava 2002

IX.3. Conferences

- [1] BALAŽOVJECH, M.: The Trivial Error in Bolstein's. Proof. In: Novák, J. and Mikš, A. Proceedings of International Workshop on Physical and Material Engineering 2002. Prague 2002. Prague: Czech Technical University in Prague, Faculty of Civil Engineering, Department of Physics, 2002, pp. 7-8. ISBN 80-01-02579-9
- [2] BANÍK, I.: Low-Energy Nuclear Transmutation in Deuterised Solids. In: Novák, J. and Mikš, A. Proceedings of International Workshop on Physical and Material Engineering 2002. Prague 2002. Prague: Czech Technical University in Prague, Faculty of Civil Engineering, Department of Physics, 2002, pp. 9-14. ISBN 80-01-02579-9
- [3] GREGUŠ, J.: The CAM Study of Quantum Critical Phenomena and Some Promising Results. In: Novák, J. and Mikš, A. Proceedings of International Workshop on Physical and Material Engineering 2002. Prague 2002. Prague: Czech Technical University in Prague, Faculty of Civil Engineering, Department of Physics, 2002, pp. 37-42. ISBN 80-01-02579-9.
- [4] NEVEDELOVÁ, M.: Physics and Pictorial Excercises. In Novák, J. and Mikš, A. Proceedings of international workshop on Physical and Material Engineering 2002. Prague 2002. Prague: Czech Technical University in Prague, Faculty of Civil Engineering, Department of Physics, 2002, pp. 83-84. ISBN 80-01-02579-9
- [5] NEVEDELOVÁ, M.: Experiments with Membranes. In: Novák, J. and Mikš, A. Proceedings of International Workshop on Physical and Material Engineering 2002. Prague 2002. Prague: Czech Technical University in Prague, Faculty of Civil Engineering, Department of Physics, 2002, pp. 85-86. ISBN 80-01-02579-9
- [6] PALACKOVÁ, A.: Thermogradient as a Driving Force of Indoor Radon Entry. In: Novák, J. and Mikš, A. Proceedings of International Workshop on Physical and Material Engineering 2002. Prague 2002. Prague: Czech Technical University in Prague, Faculty of Civil Engineering, Department of Physics, 2002, pp. 97-98. ISBN 80-01-02579-9
- [7] VESELSKÝ, J. and BANÍK, I.: Physical Properties of Silica Fume Solids. In: Novák, J. and Mikš, A. Proceedings of International Workshop on Physical and Material Engineering 2002. Prague 2002. Prague: Czech Technical University in Prague, Faculty of Civil Engineering, Department of Physics, 2002, pp. 123-126. ISBN 80-01-02579-9
- [8] YANETKA, I.: The Double Delta-Function Potential Embedded in a Crystalline Lattice. In: Novák, J. and Mikš, A. Proceedings of International Workshop on Physical and Material Engineering 2002. Prague 2002. Prague: Czech Technical University in Prague, Faculty of Civil Engineering, Department of Physics, 2002, pp. 127-130, ISBN 80-01-02579-9
- [9] YANETKA, I.: The Transmission Coefficient for the Double Delta-Function Potential Embedded in a Crystalline Lattice. In: Novák, J. and Mikš, A. Proceedings of International Workshop on Physical and Material Engineering 2002. Prague 2002. Prague: Czech Technical University in Prague, Faculty of Civil Engineering, Department of Physics, 2002,

- pp. 131-134, ISBN 80-01-02579-9
- [10] YANETKA, I.: Graphic Representation of the Transmission Coefficient for the Double Delta-Function Potential Embedded in a Crystalline Lattice. In: Novák, J. and Mikš, A. Proceedings of International Workshop on Physical and Material Engineering 2002. Prague 2002. Prague: Czech Technical University, Prague, Faculty of Civil Engineering, Department of Physics, 2002, pp. 135-138, ISBN 80-01-02579-9
- [11] ZÁMEČNÍK, J.: Calculation of an Antinoise Screen. In: Novák, J. and Mikš, A. Proceedings of International Workshop on Physical and Material Engineering 2002. Prague 2002. Prague: Czech Technical University in Prague, Faculty of Civil Engineering, Department of Physics, 2002, pp. 139-142. ISBN 80-01-02579-9
- [12] LUKOVIČOVÁ, J., ZÁMEČNÍK, J.: Inverse Heat and Mass Transfer Problem of Determining Cross-Coefficients. In: Vozár, L. Thermophysics 2002. Meeting of the Thermophysical Society, Working Group of the Slovak Physics Society, Constantine the Philosopher University in Nitra, Faculty of Natural Sciences, Nitra, October 23, 2002
- [13] BANÍK, R. - BANÍK, I.: Three-Phase System in Academic Teaching. In: Krajco, J., Acta Universitatis Matthiae Belii. UMB Banská Bystrica 2002, pp. 27-54, ISBN 80-8055-687-3
- [14] BANÍK, R. - BANÍK, I.: Return to Cool Atomic Merger? In: Hajdukova, T. Soltesova Days 2002. December 4 - 5, 2002, Bratislava 2002, pp. 9-14, ISBN 80-7164-350-5
- [15] BANÍK, R. - BANÍK, I.: Physics at Slovak Basic and High Schools. In: Hajdukova, T. Soltesova Days 2002. December 4 - 5, 2002, Bratislava 2002, pp. 58 - 60, ISBN 80-7164-350-5
- [16] BANÍK, R. - BANÍK, I.: Interesting Electrolysis. In: Fair Wrinkle Teacher Physics. Prague 28 -30 Sept. 2002, MFF UK Prague (Proceedings to be published)