I. STAFF

Professors
Prof. RNDr. Igor Bock, PhD., Prof. RNDr. Zdenka Riečanová, PhD.

Associate Professors
Doc. RNDr. Jana Galanová, PhD., Doc. Mgr. Gejza Jenča, PhD.,
Doc. RNDr. Ľubomír Marko, PhD., Doc. RNDr. Vladimír Olejček, PhD.,
Doc. RNDr. Ladislav Satko, PhD., Doc. RNDr. Peter Volauf, PhD.,
Doc. RNDr. Michal Zajac, PhD., Doc. RNDr. Igor Zuzák, PhD.
RNDr. Igor Brilla, PhD., RNDr. Karla Čipková, PhD.,
RNDr. Peter Kaprálik, PhD., RNDr. Mária Kečkemétyová, PhD.,
RNDr. Hana Lichardová, PhD., RNDr. Ivica Marínová, PhD.,
Mgr. Dávid Pancza, PhD., RNDr. Elena Pastuchová, PhD.,
Mgr. Marcel Polakovič, PhD., RNDr. Boris Rudolf, PhD.

Research Worker
RNDr. Anton Galan

Technical Staff
Gabriela Grúňová (secretary)

PhD. Student
Mgr. Katarína Mosná

II. EQUIPMENT

None

III. TEACHING

III1 Undergraduate Study (Bc.)

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

Calculus I (1st sem., 4-1h) M. Kečkemétyová
Z. Riečanová
L. Satko
I. Zuzčák

Logic Systems (1st sem., 4-1h) J. Galanová
V. Olejček
M. Polakovič
I. Zuzčák

Calculus II (2nd sem., 4-1h) Z. Riečanová
B. Rudolf
L. Satko
I. Zuzčák
<table>
<thead>
<tr>
<th>Course</th>
<th>Semester</th>
<th>Credits</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>Linear Algebra I</td>
<td>1st sem., 2-2h</td>
<td>M. Zajac</td>
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<tr>
<td>Linear Algebra II</td>
<td>2nd sem., 2-2h</td>
<td>M. Zajac</td>
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<tr>
<td>Calculus II</td>
<td>2nd sem., 3-3h</td>
<td>I. Bock</td>
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<td>Calculus III</td>
<td>3rd sem., 3-2h</td>
<td>L. Marko</td>
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<tr>
<td>Numerical and Statistical Computations</td>
<td>3rd sem. 3-2h</td>
<td>P. Volauf</td>
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<td>Discrete Mathematics and Logic</td>
<td>3rd sem. 3-2h</td>
<td>G. Jenča</td>
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<td>Numerical and Statistical Computations</td>
<td>4th sem. 3-2h</td>
<td>V. Olejček</td>
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<tr>
<td>Statistical Methods in Informatics</td>
<td>4th sem. 2-2h</td>
<td>E. Pastuchová</td>
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<tr>
<td>Ordinary Differential Equations</td>
<td>3rd sem. 2-2h</td>
<td>E. Marko</td>
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<td>Partial Differential Equations</td>
<td>4th sem. 2-2h</td>
<td>I. Bock</td>
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<tr>
<td>Matrix Algorithms</td>
<td>4th sem. 2-2h</td>
<td>P. Volauf</td>
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<tr>
<td>Probability and Statistics</td>
<td>4th sem., 2-2h</td>
<td>P. Volauf</td>
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<tr>
<td>Operational Systems</td>
<td>5th sem. 2-2h</td>
<td>G. Jenča</td>
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<tr>
<td>Linear Algebra and Linear Programming</td>
<td>6th sem. 2-2h</td>
<td>M. Zajac</td>
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<tr>
<td>Discrete Mathematics</td>
<td>6th sem. 3-2h</td>
<td>J. Galanová</td>
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### III.2 Graduate Study (Ing.)

<table>
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<tr>
<th>Course</th>
<th>Semester</th>
<th>Credits</th>
<th>Instructor</th>
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<tr>
<td>Coding Theory</td>
<td>1st sem., 3-1h</td>
<td>K. Čípková</td>
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<tr>
<td>Differential and Difference Equations</td>
<td>1st sem., 2-2h</td>
<td>B. Rudolf</td>
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<td>Differential Systems and Stability</td>
<td>1st sem., 2-2h</td>
<td>I. Bock</td>
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<td>Partial Differential Equations</td>
<td>1st sem., 3-1h</td>
<td>I. Bock</td>
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<td>Mathematical Logic</td>
<td>1st sem., 3-1h</td>
<td>J. Galanová</td>
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<td>Probability and Statistics</td>
<td>1st sem., 3-1h</td>
<td>I. Marinová</td>
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<tr>
<td>Theory of Fuzzy Systems</td>
<td>1st sem., 3-1h</td>
<td>P. Volauf</td>
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<td>Functional Analysis I</td>
<td>1st sem., 2-2h</td>
<td>M. Zajac</td>
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<td>Algebra</td>
<td>2nd sem. 2-2h</td>
<td>G. Jenča</td>
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<td>Graph Theory</td>
<td>2nd sem., 3-1h</td>
<td>J. Galanová</td>
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<td>Differential and Difference Systems</td>
<td>2nd sem., 2-2h</td>
<td>I. Bock</td>
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<td>Stochastic Models</td>
<td>2nd sem., 2-2h</td>
<td>V. Olejček</td>
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<td>Functional Analysis II</td>
<td>2nd sem., 2-2h</td>
<td>M. Zajac</td>
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### III.3 Undergraduate Study (Bc. Distance Education Method)

<table>
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<tr>
<th>Course</th>
<th>Year</th>
<th>Credits</th>
<th>Instructor</th>
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<tr>
<td>Mathematics I</td>
<td>1st year</td>
<td>E. Marko</td>
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<tr>
<td>Logic Systems</td>
<td>1st year</td>
<td>D. Panza</td>
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<td>Mathematics II</td>
<td>1st year</td>
<td>I. Brilla</td>
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<tr>
<td>Mathematics III</td>
<td>2nd year</td>
<td>E. Marko</td>
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<tr>
<td>Mathematics IV</td>
<td>2nd year</td>
<td>E. Marko</td>
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<tr>
<td>Mathematics V</td>
<td>3rd year</td>
<td>I. Brilla</td>
<td></td>
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</tbody>
</table>
III.4 Graduate Study (Ing. Distance Education Method)

Mathematics (1st year)  I. Bock

IV. RESEARCH PROJECTS

- Study of algebraic and topological properties of quantum structures and their sets of states. G 1/3025/06, Z. Riečanová
- Quantum logics and effect algebras with applications in quantum computing. APVV(SK-CN-01706), Z. Riečanová
- Probabilistic and algebraic uncertainty methods for quantum structures APVV-0071-06 (A.Dvurečenskij, MU SAV; deputy Z. Riečanová)
- The analysis of dynamical mathematical models of elastic and viscoelastic structures acting under contact conditions. G 1/4214/07, I. Bock

V. COOPERATION

V.1 Cooperation in Slovakia

- Mathematical Institute, Slovak Academy of Sciences, Bratislava
- Faculty of Mathematics, Physics and Informatics, Comenius University, Bratislava
- Department of Mathematics, Faculty of Civil Engineering, STU, Bratislava
- Department of Mathematics, Faculty of Mechanical Engineering, STU, Bratislava
- Institute of Information Engineering, Automation and Mathematics, Faculty of Chemical and Food Technology, STU, Bratislava
- Faculty of Informatics and Information Technology, STU, Bratislava
- Military Academy, Liptovský Mikuláš
- Faculty of Natural Sciences, University of Transport and Communications, Žilina

V.2 International Cooperation

- Abt. für Mathematik III, Universität Ulm, Germany
- Institut für Algebra und Computermathematik TU Vienna, Austria
- Department of Mathematics, FEE CTU, Prague, CzR
- Academy of Sciences of the Czech Republic, Prague, CzR
- Department of Mathematics, Faculty of Natural Sciences of MU, Brno, CzR
- Department of Mathematics, Univ. Louis Pasteur, Strasbourg, France
- Math. Institute, Polish Academy of Sciences, Warsaw, Poland
- Department of Mathematics, Brunel University, Uxbridge, UK

V.3 Membership in International Organizations and Societies

- ISIMM - International Society for the Interaction of Mechanics and Mathematics (I.Brilla)
- IQSA - International Quantum Structures Association (Z.Riečanová, V.Olejček, G.Jenča)
- Bernoulli Society - (Z.Riečanová, V.Olejček)
- AMS - American Mathematical Society (I.Bock, V.Olejček, Z.Riečanová)
- IACM - International Association for Computational Mechanics (I.Brilla, L.Marko)
- Emmy Noether Society - (Z.Riečanová, I.Marinová, E.Pastuchová, G.Jenča)
- GAMM - Gesellschaft für Angewandte Mathematik und Mechanik (I.Bock)
- ISSMO - Society for Structural and Multidisciplinary Optimization (I.Bock)
- SIAM - Society for Industrial and Applied Mathematics (V.Olejček, L.Satko)
VI. THESES

none.

VII. OTHER ACTIVITIES

- Organizing of the conference in applied mathematics ISCAM'2007, April 20-21, 2007, Bratislava
- Department is a coeditor of Tatra Mountains Mathematical Publications
- Z. Riečanová: member of editorial board of Tatra Mountains Mathematical Publications
- M. Zajac, I. Bock: members of editorial board of Mathematica Slovaca
- I. Bock, M. Zajac: reviewers for Mathematical Reviews
- I. Bock, M. Zajac: reviewers for Zentralblatt für Mathematik

The department supervises the postgraduate study in:
- Boolean Algebras and Boolean Functions
- Differential Equations in Mathematical Physics
- Functional Analysis
- Quantum Structures
- Ordinary Differential Equations and Variational Calculus

VIII. PUBLICATIONS

VIII.1 Journals


VIII.2 Conference Proceedings


VIII.3 Book


VIII.4 Part of book


VIII.5 Textbook