I. STAFF

Professors
Ján Melicher, PhD. +421 2 59274 348 jan.melicher@stuba.sk

Associate Professors
Ernest Bučko, PhD. +421 2 59274 534 ernest.bucko@stuba.sk
Ján Hefty, PhD. +421 2 59274 533 jan.hefty@stuba.sk
Marcel Mojzeš, PhD. +421 2 59274 536 marcel.mojzes@stuba.sk

Senior Lecturers
Peter Černý, PhD. +421 2 59274 343 peter.cerny@stuba.sk
Lubomíra Gerhátová, PhD. +421 2 59274 344 lubomira.gerhatova@stuba.sk
Ladislav Husár, PhD. +421 2 59274 531 ladislav.husar@stuba.sk
Jana Chalachanová, PhD. +421 2 59274 297 jana.chalachanova@stuba.sk
Juraj Janák, PhD. +421 2 59274 537 juraj.janak@stuba.sk

Lecturers
Ivana Ivanová +421 2 59274 297 ivana.ivanova@stuba.sk
Peter Korčák +421 2 59274 342 peter.korcak@stuba.sk
Ľubica Valachovičová +421 2 59274 342 lubica.valachovicova@stuba.sk

Research Fellows
Renáta Ďuráčiová, PhD. +421 2 59274 297 galgon@space.vm.stuba.sk
Miriam Bunčiaková +421 2 59274 270 kuchtova@svf.stuba.sk
Robert Čunderlík, PhD. +421 2 59274 538 robert.cunderlik@stuba.sk
Miroslava Igondová +421 2 57294 339 (Mýtna ul., 4.p.) miroslava.igondova@stuba.sk
Juraj Papco +421 2 59274 345 juraj.papco@stuba.sk

Technical Staff
Miroslav Bednár +421 2 59274 270
Mária Eisenbergová +421 2 59274 341 eisenber@stuba.sk
Katarína Igondová (secretary) +421 2 59274 535 katarina.igondova@stuba.sk

Doctoral Students
Juraj Bezručka +421 2 57294 339 (Mýtna ul., 4.p.) juraj.bezrucka@stuba.sk
Ján Ferko +421 2 59274 345 jan.ferko@stuba.sk
Michal Hrčka +421 2 57294 339 (Mýtna ul., 4.p.) michal.hrcka@stuba.sk
Marián Kováč +421 2 57294 339 (Mýtna ul., 4.p.) kovac_m@pobox.sk
Vladimír Stromček +421 2 59274 297 vladimir.stromcek@stuba.sk

I.1 Teaching activities

The Department’s teaching activity provides the theoretical background for geodesy as a science concerning the geometric shape of the Earth and its gravity field. This is accompanied by the theory of measurements, methods of positioning, data processing, statistical analysis and informatics. Both theoretical and practical aspects are considered, emphasising current and
future trends in geodesy. The Department covers education in subjects concerning geometric geodesy, physical geodesy, geodetic astronomy, satellite geodesy, statistical processing of measurements, geoinformatics and computer science.

II. EQUIPMENT

II.1 Teaching and Research Laboratories

Observatory for Geodetic Astronomy - A research laboratory oriented towards geodetic positioning methods using natural and artificial celestial bodies and their integration with terrestrial geodetic methods.

Laboratory for Geodesy and Metrology - A research and educational workplace directed at the development of terrestrial measurement methods and techniques, laboratory tests, and calibration and comparison of geodetic instruments and devices.

Laboratory for Geoinformatics - Serves as a research and educational workplace focusing on applications of computer technologies for Geographical Information Systems and Land Information Systems.

The Modra-Piesok Geodynamic Reference Control Site is used for permanent positioning by the GPS method and for absolute and relative measurements of gravity acceleration as a part of international geodynamic research projects. The permanent GPS observations at Modra-Piesok are included in the European Reference Frame that is used for construction and maintenance of geodetic networks in Europe.

II. 2 Special Measuring Instruments and Computers

<table>
<thead>
<tr>
<th>Instrument Type</th>
<th>Brand/Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total station</td>
<td>Topcon GTS-6</td>
</tr>
<tr>
<td>Electronic theodolite</td>
<td>Wild T 2000</td>
</tr>
<tr>
<td>Electronic distance meters</td>
<td>DI 2000, Di 5</td>
</tr>
<tr>
<td>GPS receivers</td>
<td>TRIMBLE5700</td>
</tr>
<tr>
<td></td>
<td>TRIMBLE 4000 SSE, TRIMBLE 4000 SSi (two units), Geoexplorer II, MARCH IIE (two units)</td>
</tr>
<tr>
<td>Levelling instruments</td>
<td>Wild Na 2000, Zeiss Ni 002 (three units)</td>
</tr>
<tr>
<td>Astronomical instruments</td>
<td>Wild T4, Circumzenithal RIGTC 100/1000, Circumzenithal RIGTC 50/500</td>
</tr>
<tr>
<td>Gravity meters</td>
<td>Worden, Scintrex CG2</td>
</tr>
<tr>
<td>Laserinterferometric comparator</td>
<td>LIK</td>
</tr>
</tbody>
</table>
III. TEACHING

III.1 Graduate Study

<table>
<thead>
<tr>
<th>Subject</th>
<th>Semester</th>
<th>Hours Per Week</th>
<th>Lecturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science</td>
<td>1</td>
<td>2 – 3</td>
<td>P. Černý</td>
</tr>
<tr>
<td>Geoinformatics</td>
<td>3</td>
<td>3 – 3</td>
<td>J. Chalachanová</td>
</tr>
<tr>
<td>Errors and Survey Adjustment Theory I.</td>
<td>3</td>
<td>3 – 2</td>
<td>J. Hefty</td>
</tr>
<tr>
<td>Errors and Survey Adjustment Theory II.</td>
<td>4</td>
<td>2 – 2</td>
<td>J. Hefty</td>
</tr>
<tr>
<td>Computer Programming</td>
<td>4</td>
<td>2 – 3</td>
<td>P. Černý</td>
</tr>
<tr>
<td>Physical Geodesy</td>
<td>5</td>
<td>2 – 2</td>
<td>M. Mojzeš</td>
</tr>
<tr>
<td>Geodetic Networks</td>
<td>5</td>
<td>3 – 3</td>
<td>E. Bučko</td>
</tr>
<tr>
<td>Land Information Systems</td>
<td>5</td>
<td>2 – 2</td>
<td>J. Chalachanová</td>
</tr>
<tr>
<td>Geometric Geodesy I.</td>
<td>5</td>
<td>3 – 2</td>
<td>M. Mojzeš</td>
</tr>
<tr>
<td>Geometric Geodesy II.</td>
<td>6</td>
<td>3 – 3</td>
<td>M. Mojzeš</td>
</tr>
<tr>
<td>Field Education in Geodetic Controls</td>
<td>6</td>
<td>2 weeks</td>
<td>E. Bučko</td>
</tr>
<tr>
<td>Geodetic Astronomy and Space Geodesy I.</td>
<td>7</td>
<td>2 – 3</td>
<td>L. Husár</td>
</tr>
<tr>
<td>Geodetic Astronomy and Space Geodesy II.</td>
<td>8</td>
<td>3 – 2</td>
<td>J. Melicher</td>
</tr>
<tr>
<td>Specialised Field Education</td>
<td>9</td>
<td>2 weeks</td>
<td>L. Husár</td>
</tr>
<tr>
<td>Special Seminar</td>
<td>9</td>
<td>0 – 3</td>
<td>Dep.Theor.Geod.</td>
</tr>
<tr>
<td>Databases and Information Systems in Geodesy</td>
<td>10</td>
<td>2 – 2</td>
<td>J. Chalachanová</td>
</tr>
<tr>
<td>Geodetic GPS Technologies</td>
<td>8</td>
<td>2 – 2</td>
<td>E. Bučko,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>J. Hefty</td>
</tr>
<tr>
<td>Analysis of GIS Spatial Data</td>
<td>8</td>
<td>2 - 2</td>
<td>J. Chalachanová</td>
</tr>
<tr>
<td>Satellite Geodesy</td>
<td>9</td>
<td>2 - 2</td>
<td>J. Hefty</td>
</tr>
<tr>
<td>Geodetic and Satellite Technologies in GIS</td>
<td>9</td>
<td>2 - 2</td>
<td>E. Bučko,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>J. Hefty</td>
</tr>
<tr>
<td>Mathematical Methods of Data Processing</td>
<td>7</td>
<td>2 - 2</td>
<td>J. Hefty</td>
</tr>
<tr>
<td>Integrated Geodesy</td>
<td>8</td>
<td>2 - 2</td>
<td>L. Gerhátová,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>J. Janák</td>
</tr>
<tr>
<td>Geoid Determination Theory</td>
<td>7</td>
<td>2 - 2</td>
<td>M. Mojzeš</td>
</tr>
<tr>
<td>Geodynamics</td>
<td>9</td>
<td>2 - 2</td>
<td>M. Mojzeš</td>
</tr>
</tbody>
</table>

V. RESEARCH PROJECTS

1. Application of Effective Methods for Solving Boundary Value Problems in Geodesy. VEGA Project 1/1433/04. Leader: Assoc. Prof. Marcel Mojzeš, PhD.
3. Standardization and Inter-Operability of Geographical Information. VEGA Project 1/1035/04. Leader: Jana Faixová-Chalachanová, PhD.
VI. COOPERATION

VI.1 Cooperation in Slovakia
1. Ministry of Transport, Post and Telecommunications of the Slovak Republic, Bratislava
2. Ministry of Agriculture, Bratislava
3. Ministry of the Environment, Bratislava
4. Authority of Geodesy, Cartography and Cadastre, Bratislava
5. Geodetic and Cartographic Institute, Bratislava
6. Research Institute of Geodesy and Cartography, Bratislava
7. Railways of the Slovak Republic, Bratislava
8. Air Traffic Control Administration of the Slovak Republic, Bratislava
9. Geophysical Institute of the Slovak Academy of Science, Bratislava
10. Faculty of Mathematics and Physics of Comenius University, Bratislava
11. Dionýz Štúr State Geological Institute, Bratislava

VI.2 International Cooperation
1. Warsaw University of Technology, Poland
2. FÖMI - Satellite Geodetic Observatory, Penc, Hungary
3. Technical University of Budapest, Hungary
4. Technical University of Vienna, Austria
5. Faculty of Mining and Geology, Mining University, Ostrava, Czech Republic
6. Institute of Cartography and Geodesy, Frankfurt am Main, Germany
7. Czech Technical University, Prague, Czech Republic
8. Technical University of Brno, Czech Republic
9. Technical University of Dresden, Germany
10. Department of Geodesy and Geomatics Engineering, University of New Brunswick, Fredericton, Canada

VII. THESES

VII.1 Graduate Theses

<table>
<thead>
<tr>
<th>No.</th>
<th>Student’s Name</th>
<th>Title</th>
<th>Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M. Beliansky</td>
<td>Analysis of the Processing of Digital Terrain Models</td>
<td>J. Chalachanová</td>
</tr>
<tr>
<td>2</td>
<td>J. Bezručka</td>
<td>Ionosphere Modelling from Permanent GPS Measurements</td>
<td>J. Hefty</td>
</tr>
<tr>
<td>3</td>
<td>J. Bokesová</td>
<td>Proposed Database Structure in Context of Building National Spatial Infrastructure</td>
<td>J. Chalachanová</td>
</tr>
<tr>
<td>4</td>
<td>M. Both</td>
<td>Determination of GPS Differential Corrections by Surface Interpolation</td>
<td>J. Hefty</td>
</tr>
<tr>
<td>5</td>
<td>M. Danišová</td>
<td>Using Tensors and Tensor Calculus in Geodesy</td>
<td>J. Janák</td>
</tr>
<tr>
<td>6</td>
<td>B. Droščák</td>
<td>Joint Analysis of Angular Measurements in National Astronomical-Geodetic Network and National Trigonometric Network of the 1st Order Using GPS Measurements</td>
<td>J. Hefty</td>
</tr>
</tbody>
</table>
7. Z. Fašková  Joint Processing of Terrestrial and Satellite Measurements  Ľ. Gerháťová
8. J. Furdek  Analysis of Gravity Mapping  Ľ. Gerháťová
9. L. Galbavý  Testing the Reliability and Integration of Heterogeneous Data for GIS  P. Černý
10. J. Gallo  Dynamic Modelling of Objects in Geo-Space  J. Chalachanová
11. D. Hanus  Accuracy Analysis of Distance and Position Measured by GPS Phase Measurements in Relation to Observation Time  J. Melicher
12. Š. Kolštrom  Estimation of Parameters of Local GPS Network  E. Bučko
14. V. Murcin  Determination of Astronomical Deflections of the Vertical in the Sub-Tatra Region  L. Husár
17. P. Podolan  Evaluation of Repeated Measurements at the Hlohovec Baseline  E. Bučko
18. M. Roháček  Terrain Correction and Its Practical Determination  J. Janák
19. M. Šimek  Geometry on Curved Reference Surfaces in Geodesy  L. Husár
20. J. Valach  Computer Subroutine for Generation of Errors with a Quasi-Normal Distribution  P. Černý

IX. PUBLICATIONS

IX.1 Journals


IX.2 Books and Textbooks


IX.3 Conferences


